Exceptional Learner Program Guide

Developed by and for:

The Regional Districts of
Frankford, Lafayette
and
Sussex-Wantage Schools

Revised 2015-2016
Implementation 2016-2017

Table of Contents

Credits

Grateful recognition is made to the following individuals for their level of expertise and dedicated work.

Members:

Robin Neimis: Frankford

Liz Culmone: Frankford

Alice Sensale: Lafayette

Lynda Campana: Sussex Wantage

Appreciation to the following members for their organization and guidance:

Dr. Genene Meli Lafayette & Frankford
and
Patrick Higgins Sussex-Wantage

Exceptional Learner Philosophy

The Frankford, Lafayette and Sussex-Wantage Boards of Education recognize their responsibility to identify exceptional learners within the school district and to provide these pupils appropriate instructional adaptations and services. To that end, each such pupil in the school districts will be identified and offered appropriate educational programs and services.

For purposes of this policy, exceptional learners will be defined as those exceptionally able pupils who possess or demonstrate high levels of abilities in one or more content areas, when compared to their chronological peers in the district and who require modification of their educational program if they are able to achieve in accordance with their capabilities. The classroom teacher in collaboration with the Exceptional Learner educator will contribute to the identification of exceptional learner students and may work together to develop appropriate curricular and instructional modifications to differentiate in one or more of the following areas: content areas, learning processes, student products and learning environments as referenced in the NAGC Standards. (NAGC, 2010)

Exceptional learners require specifically designed educational programs to help students realize their potential to become effective individuals and contribute to society to the fullest extent of their inherent abilities as referenced in NAGC Standard 1: Learning and Development. These students benefit from the stimulation of working closely with other high-ability pupils through pullout programs, advanced coursework, enrichment activities, and community based opportunities. It is important to provide appropriate challenges and opportunities and the Regional Exceptional Learner Program Guide acknowledges the distinctiveness of exceptional learners and is designed to

address the academic, social and emotional facets of the individual to provide an array of educational programs and choices. It is essential that the program is flexible in order to address areas of uniqueness and commonality in the student population. Programs designed to serve the needs of the exceptional learner population may also benefit a larger number of students through enrichment opportunities based on the fluid movement of students through the program focused on interests and abilities. Dovetailing with NAGC Standard 3: Curriculum Planning and Instruction and Standard 5 Programming; The Regional Exceptional Learner Program responds to each exceptional learners' gifts and talents by designing, selecting, adapting and indicating relevant curriculum opportunities to ensure individual student success.

The Regional Exceptional Learner Program recognizes and values the expertise of a trained educator for the exceptional learner as referenced in the NAGC Standard 6 Professional Development. This educator should seek continuous professional development opportunities and training to meet the unique needs of the exceptional learner, act as an advocate for this specific population of students and serve as a resource for the classroom teacher.

Program Goals and Objectives

- To provide opportunities for the expansion of academic attainments and intellectual skills

- To recognize the unique abilities and needs of each exceptional learner

- To provide an educational program that will stimulate intellectual curiosity, independence and responsibility

- To encourage the exceptional learner to contribute in a meaningful way to the school, community and society

- To emphasize the value and commitment to excellence in the academic, creative and social endeavors of the exceptional learner

- To foster the characteristics necessary for self-motivation, continuous learning, creativity and problem solving

- To foster the well-being of the exceptional learner through self-awareness

- To develop and foster positive social and leadership skills

- To provide advocacy of the specialized needs of the exceptional learner in all areas of the school community

Identification Process

The Regional Districts of Lafayette, Frankford and Sussex-Wantage Schools identify exceptional learners through a comprehensive and cohesive process to determine eligibility for appropriate educational services. We use a variety of criteria for the identification and selection of exceptional learners to provide a spectrum of services for identified and eligible students.

Based on the National Association for Gifted Children Standard 2: Assessment and The New Jersey Department of Education's Gifted and Talented Requirements N.J.A.C. 6A: 8-3.1 (a) 5, nominations for the Exceptional Learner Program are accepted from multiple sources and are screened using multiple measures that may include but are not limited to:

- Professional staff recommendations
- Parent recommendations
- Student input and self-assessment
- Performance assessment
- Standardized test scores
- Portfolios
- Community advocate recommendations
- School performance
- Task commitment
- Motivation
- Creativity
- Talents
- Strengths
- Interests

The data for eligibility is compiled and evaluated to determine candidacy to the Exceptional Learner Program. The identification and nomination process is ongoing and fluid; students may enter or exit the program throughout their K-8 educational experience based on their changing educational needs.

Classroom Support

Exceptionally able students' needs should also be addressed within the confines of the regular classroom setting. Differentiating instruction allows the teacher to create a curriculum that addresses the academic diversity of the classroom. As Tomlinson (1995) points out, the design of differentiated instruction should be concept focused; it should not be about adding more problems of extra work for those students who have mastered the concept. "A class is not differentiated when assignments are the same for all learners and the adjustments consist of varying the level of difficulty of questions for certain student, grading some students harder than others, or letting students who finish early play games for enrichment, asking students to do more of what they already now is hollow" Tomlinson (1995).

Suggestions for differentiation of instruction that may be utilized by a classroom teacher to address the exceptional learner can take place in a collaborative team meeting. Suggestions for differentiation are obviously unique to the individual students, the class, the teacher and the topic, however, a variety of suggestions and strategies follow and all content specific adaptations from the New Jersey Curriculum Frameworks are attached.

- Compacting
- Alternative learning activities/Adjustment
- Interest based
- Concept based
- Principle driven
- Independent study
- Mentor or Internships
- Alternative resources/Texts
- Cluster grouping
- Practical application of ideas
- Transformed application
- Multi-faceted tasks
- Adjustment in pace

Social and Emotional Needs of the Exceptional Learner

Many of the social and emotional needs of the exceptional learner are parallel to those of their peers; however, there are certain needs that are more likely to occur in the exceptional learner population. The Regional Districts of Frankford, Lafayette and Sussex-Wantage recognize the possible need for socio-emotional counseling for the exceptional learner and reference the National Association for Gifted Children's Standards (see appendix). In addition, the support of the guidance departments and child study teams are viable resources for the social and emotional needs of these students. A summary adapted from Webb (1994) of 'typical' issues that affect the exceptional learner population is outlined below.

1. **Peer Relations**
   a. **Acquires/retains information quickly:** is often impatient with others
   b. **Inquisitive:** often embarrasses oneself in the confines of the regular classroom due to excessive interest
   c. **Intrinsically motivated:** strong will is often an issue while working in collaborative groups
   d. **High expectations:** intolerant of peers
   e. **Sensitive:** often devastated by peer rejection and criticism
   f. **Independent:** nonconformists, dislikes group work
   g. **Strong sense of humor/vocabulary:** peers misunderstand humor and vocabulary which alienates child

2. **Teacher/School relations**
   a. **Acquires/retains information quickly:** dislikes classroom routines, impatient with teacher
   b. **Inquisitive:** will often ask 'too many' or inappropriate questions of the teacher
   c. **Seeks cause and effect relations:** dislikes unclear or illogical classroom activities
   d. **Creative/inventive:** often seen as 'out of step' with class
   e. **Intense concentration:** will often obsess over an activity and therefore fall behind in other areas
   f. **Diverse interests:** often appears disorganized or scattered
   g. **Non-conformists:** challenge traditions, rituals, and expectations
   h. **Educational experiences:** require different experiences, often is expected to conform to the expectations of the average child
   i. **Underachiever:** performance does not reflect ability

3. **Image of Oneself**
   a. **Excessive self-criticism**
   b. **Avoidance of risk taking for fear of failing**
   c. **Diverse interest:** can lead to over involvement and therefore stress for the individual and family

    d. **Perfectionism:** set unrealistically high expectations for themselves that lead to issues of time management and emotional intensity

    e. **Underachiever:** Does not consistently show interest in reaching fullest potential

4. **Family Relations**
    a. **Depression:** angry with oneself or a situation of which they have no control
    b. **Siblings:** is intolerant with siblings and comparative of siblings abilities
    c. **Parents:** feel unsupported or picked on, often reject parental input
    d. **Perfectionism:** obsessing over assignments and activities leads to stress among family members
    e. **Non-Conformist:** challenge traditions, rituals and expectations

Evaluation Philosophy

Failure is an important facet of adventurous research and achievement, and students benefit from learning early that not all outcomes are guaranteed to be "A's", nor even would they be "graded" in that way at all. Self-evaluation experiences are transferable to adult life and they are a part of the Exceptional Learner Program. A goal is to make students comfortable with a fair, criteria based evaluation, including the setting of criteria and rubrics for evaluation.

The students are encouraged to evaluate their own work, to set criteria for judging the quality of work, and get the all-important experience of self-evaluation, and important component of the self-actualized, adult who will achieve at extraordinary levels. Students must experience evaluation and assessment beyond "handing it in to the teacher for a grade".

Students' work in the Exceptional Learner Program is evaluated, but students do not receive grades on their report cards unless the projects or activities are a part of the regular classroom curriculum or a replacement class. Some units within the regular classroom are evaluated and may be graded and count toward the final grade for that marking period. As often as possible, however, students are encouraged to experience some self-evaluation, along with teacher evaluations.

Parallel Programs

The following is a list (not limited to) of school, county, region, statewide and national opportunities and additional activities in which the exceptional learners are encouraged to participate.

- Concert band
- Instrumental
- Chorus
- Theater/Play/Musical/Dance
- Student Council
- Newspaper
- Yearbook
- Sports
- Environmental Club
- Chess Club and/or tournament
- Science Club
- Art Enrichment or Challenge Art
- Peer Tutoring
- Invention Convention
- Restaurant Simulation
- Tech Trek through Sussex County Technical School
- Solar Sprint Car
- Brain Quest

- 4-H Clubs
- Community Service Activities
- Beautification programs
- Teen Arts
- STOP/REBEL/STAND
- Video club
- Web Page Club
- Poetry and Writing Club
- National Spelling Bee
- National Geography Contest
- National Science Competition
- Literary Magazine
- Boy or Girl Scouts
- TREP$
- STEAM/Robotics/LEGO
- Academic Bowl
- Any community provided activity

Holocaust Education

The Regional Districts of Frankford, Lafayette, and Sussex Wantage address the Act regarding genocide education in the public schools, supplementing chapter 35 of Title 18A of the New Jersey Statutes, through the resources provided by the New Jersey Commission on Holocaust Education, Character Education Curriculum, AntiBullying Programs, Health and Physical Education Curriculum, School Guidance programs, English Language Arts, Social Studies Curriculum, as well as through the daily modeling and discussion of good character, ethics, and moral behavior.

2a. Every Board of Education shall include instruction of all elementary and secondary school pupils on the Holocaust and genocides in an appropriate place in the curriculum.

2b. The instruction shall enable pupils to identify and analyze applicable theories concerning human nature and behavior; to understand that genocide is a consequence of prejudice and discrimination; and, to understand that issues of moral dilemma and conscience have a profound impact on life. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

Resources are provided to all educators through open source resources, purchased programs and materials, assemblies for students, and professional development for educators.

The New Jersey Commission on Holocaust Education, to promote Holocaust education in the State of New Jersey, can be accessed through the following links:
http://www.state.nj.us/education/holocaust/

  K-4 Curriculum Guide:
    Caring Makes a Difference

  5-8 Curriculum Guide:
    To Honor All Children, part one
    To Honor All Children, part two
    To Honor All Children, part three
    To Honor All Children, part four

Standard 8: Technology

"In this ever-changing digital world where citizenship is being re-imagined, our students must be able to harness the power of technology to live, solve problems and learn in college, on the job and throughout their lives." (http://www.state.nj.us/education/aps/cccs/tech/ 2016).   To address these demands, the Regional Districts of Frankford, Lafayette, and Sussex Wantage address the 8.1 & 8.2 Technology Standards through an integrative process to meet individual classroom and student needs to provide students with the necessary skills for college and career readiness.

The technology standards, mission, and vision are addressed and infused within all the content areas, as "the power of technology discretely supports all curricular areas and multiple levels of mastery for all students." (NJ Department of Education Standard 8: Technology http://www.state.nj.us/education/aps/cccs/tech/)

New Jersey's Technology Standards consist of 8.1 Educational Technology and 8.2 Technology, Engineering, Design and Computational Thinking, through the Exceptional Learner Program's philosophy and implementation the design process, computational thinking, critical thinking, problem solving and individualized programming will build upon the knowledge and skills students will need to effectively navigate through the present and future.

The 2014 Technology Standards

8.1 Educational Technology

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

Standard 9: 21st Century Life and Careers

In today's global society, students need to be lifelong learners who have the knowledge and skills to adapt to an evolving workplace and world. To address these demands, the Regional Districts of Frankford, Lafayette, and Sussex Wantage address the 21st Century Life and Career Standards through an integrative process to meet individual classroom and student needs to assist in student understanding and creating the ability for success in their future careers and to achieve financial independence.

As stated on the NJ Department of Education Standard 9: 21st Century Life and Careers website: http://www.state.nj.us/education/aps/cccs/career/ The mission, vision and standards are addressed in the content areas.

Mission: 21st century life and career skills enable students to make informed decisions that prepare them to engage as active citizens in a dynamic global society and to successfully meet the challenges and opportunities of the 21st century global workplace.

Vision: To integrate 21st Century life and career skills across the K-12 curriculum and in Career and Technical Education (CTE) programs to foster a population that:
- Continually self-reflects and seeks to improve the essential life and career practices that lead to success.
- Uses effective communication and collaboration skills and resources to interact with a global society.
- Is financially literate and financially responsible at home and in the broader community.
- Is knowledgeable about careers and can plan, execute, and alter career goals in response to changing societal and economic conditions.
- Seeks to attain skill and content mastery to achieve success in a chosen career path.

The Standards: Standard 9 is composed of the Career Ready Practices and Standard 9.1 and 9.2.
The 12 Career Ready Practices
These practices outline the skills that all individuals need to have to truly be adaptable, reflective, and proactive in life and careers. These are researched practices that are essential to career readiness.

9.1 Personal Financial Literacy
This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers.

9.2 Career Awareness, Exploration, and Preparation
This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements

Appendices

New Jersey Core Curriculum Content Standards

Gifted and Talented Requirements

On June 1, 2005 the State Board of Education readopted with amendments N.J.A.C. 6A: 8, Standards and Assessment for Student Achievement, which includes more specific requirements for gifted and talented programs. Changes to the regulations are highlighted below in **bold**.

The regulations define gifted and talented students as:

Those students who possess or demonstrate high levels of ability, in one or more content areas, when compared to their chronological peers in the local district and who require modification of their educational program if they are to achieve in accordance with their capabilities.

Key Points

- All public schools must have a board-approved gifted and talented program.

- Students are to be compared with their peers in the local school district.

- District boards of education shall make provisions for an ongoing K-12 identification process for gifted and talented students that includes **multiple measures,** including but not limited to, achievement test scores, grades, student performance or products, intelligence testing, parent, student and/or teacher recommendation, and other appropriate measures.

- The regulations do not establish state-level criteria for giftedness (such as an IQ score or grade point average). Specific tests are not required to be used to identify gifted and talented students.

- Local school districts should ensure that the identification methodology used is developmentally appropriate, non-discriminatory, and related to the programs and services offered (e.g., use math achievement to identify students for a math program).

- N.J.A.C. 6A: 8-3.1(a)5 ii requires local district boards of education **to provide appropriate K-12 educational services for gifted and talented students.** Therefore, the identification process and appropriate educational challenges must begin in kindergarten.

- The rules require district boards of education to develop appropriate curricular and instructional modifications for gifted students. Programs must address appropriate content, process, products, and learning environment.

- **District boards of education shall take into consideration the** *PreK-Grade 12 Gifted Program Standards of the National Association for Gifted Children* **(NAGC) in developing programs for gifted and talented students. The NAGC standards establish requisite and exemplary gifted program standards and can be accessed at NAGC Standard.**

- Each curriculum framework developed by the department provides general as well as content-specific information on gifted education (e.g., terminology, examples of appropriate practices). The frameworks can be accessed at http://www.nj.gov/education/archive/frameworks/ or athttp://www.nj.gov/education/aps/cccs.

- Local school districts will continue to be monitored as part of the regular school district evaluation process. Board-approved policies and procedures must be made available.

2010 *Pre-K-Grade 12 Gifted Programming Standards*

Gifted Education Programming Standard 1: Learning and Development

Introduction

For teachers and other educators in PreK-12 settings to be effective in working with learners with gifts and talents, they must understand the characteristics and needs of the population for whom they are planning curriculum, instruction, assessment, programs, and services. These characteristics provide the rationale for differentiation in programs, grouping, and services for this population and are translated into appropriate differentiation choices made at curricular and program levels in schools and school districts. While cognitive growth is important in such programs, affective development is also necessary. Thus many of the characteristics addressed in this standard emphasize affective development linked to self-understanding and social awareness.

N A G C
Standards

Standard 1: Learning and Development

Description: Educators, recognizing the learning and developmental differences of students with gifts and talents, promote ongoing self-understanding, awareness of their needs, and cognitive and affective growth of these students in school, home, and community settings to ensure specific student outcomes.

Student Outcomes	Evidence-Based Practices
1.1. Self-Understanding. Students with gifts and talents demonstrate self-knowledge with respect to their interests, strengths, identities, and needs in socio-emotional development and in intellectual, academic, creative, leadership, and artistic domains.	1.1.1. Educators engage students with gifts and talents in identifying interests, strengths, and gifts.
	1.1.2. Educators assist students with gifts and talents in developing identities supportive of achievement.
1.2. Self-Understanding. Students with gifts and talents possess a developmentally appropriate understanding of how they learn and grow; they recognize the influences of their beliefs, traditions, and values on their learning and behavior.	1.2.1. Educators develop activities that match each student's developmental level and culture-based learning needs.
1.3. Self-Understanding. Students with gifts and talents demonstrate understanding of and respect for similarities and differences between themselves and their peer group and others in the general population.	1.3.1. Educators provide a variety of research-based grouping practices for students with gifts and talents that allow them to interact with individuals of various gifts, talents, abilities, and strengths.
	1.3.2. Educators model respect for individuals with diverse abilities, strengths, and goals.
1.4. Awareness of Needs. Students with gifts and talents access resources from the community to support cognitive and affective needs, including social interactions with others having similar interests and abilities or experiences, including same-age peers and mentors or experts.	1.4.1. Educators provide role models (e.g., through mentors, bibliotherapy) for students with gifts and talents that match their abilities and interests.
	1.4.2. Educators identify out-of-school learning opportunities that match students' abilities and interests.
1.5. Awareness of Needs. Students' families and communities understand similarities and differences with respect to the development and characteristics of advanced and typical learners and support students with gifts and talents' needs.	1.5.1. Educators collaborate with families in accessing resources to develop their child's talents.
1.6. Cognitive and Affective Growth. Students with gifts and talents benefit from meaningful and challenging learning activities addressing their unique characteristics and needs.	1.6.1. Educators design interventions for students to develop cognitive and affective growth that is based on research of effective practices.
	1.6.2. Educators develop specialized intervention services for students with gifts and talents who are underachieving and are now learning and developing their talents.
1.7. Cognitive and Affective Growth. Students with gifts and talents recognize their preferred approaches to learning and expand their repertoire.	1.7.1. Teachers enable students to identify their preferred approaches to learning, accommodate these preferences, and expand them.
1.8. Cognitive and Affective Growth. Students with gifts and talents identify future career goals that match their talents and abilities and resources needed to meet those goals (e.g., higher education opportunities, mentors, financial support).	1.8.1. Educators provide students with college and career guidance that is consistent with their strengths.
	1.8.2. Teachers and counselors implement a curriculum scope and sequence that contains person/social awareness and adjustment, academic planning, and vocational and career awareness.

Gifted Education Programming Standard 2: Assessment

Introduction

Knowledge about all forms of assessment is essential for educators of students with gifts and talents. It is integral to identification, assessing each student's learning progress, and evaluation of programming. Educators need to establish a challenging environment and collect multiple types of assessment information so that all students are able to demonstrate their gifts and talents. Educators' understanding of non-biased, technically adequate, and equitable approaches enables them to identify students who represent diverse backgrounds. They also differentiate their curriculum and instruction by using pre- and post-, performance-based, product-based, and out-of-level assessments. As a result of each educator's use of ongoing assessments, students with gifts and talents demonstrate advanced and complex learning. Using these student progress data, educators then evaluate services and make adjustments to one or more of the school's programming components so that student performance is improved.

Standard 2: Assessment	
Description: Assessments provide information about identification, learning progress and outcomes, and evaluation of programming for students with gifts and talents in all domains.	
Student Outcomes	**Evidence-Based Practices**
2.1. *Identification*. All students in grades PK-12 have equal access to a comprehensive assessment system that allows them to demonstrate diverse characteristics and behaviors that are associated with giftedness.	2.1.1. Educators develop environments and instructional activities that encourage students to express diverse characteristics and behaviors that are associated with giftedness.
	2.1.2. Educators provide parents/guardians with information regarding diverse characteristics and behaviors that are associated with giftedness.
2.2. *Identification*. Each student reveals his or her exceptionalities or potential through assessment evidence so that appropriate instructional accommodations and modifications can be provided.	2.2.1. Educators establish comprehensive, cohesive, and ongoing procedures for identifying and serving students with gifts and talents. These provisions include informed consent, committee review, student retention, student reassessment, student exiting, and appeals procedures for both entry and exit from gifted program services.
	2.2.2. Educators select and use multiple assessments that measure diverse abilities, talents, and strengths that are based on current theories, models, and research.
	2.2.3 Assessments provide qualitative and quantitative information from a variety of sources, including off-level testing, are nonbiased and equitable, and are technically adequate for the purpose.
	2.2.4. Educators have knowledge of student exceptionalities and collect assessment data while adjusting curriculum and instruction to learn about each student's developmental level and aptitude for learning.
	2.2.5. Educators interpret multiple assessments in different domains and understand the uses and limitations of the assessments in identifying the needs of students with gifts and talents.
	2.2.6. Educators inform all parents/guardians about the identification process. Teachers obtain parental/guardian permission for assessments, use culturally sensitive checklists, and elicit evidence regarding the child's interests and potential outside of the classroom setting.
2.3. *Identification*. Students with identified needs represent diverse backgrounds and reflect the total student population of the district.	2.3.1. Educators select and use non-biased and equitable approaches for identifying students with gifts and talents, which may include using locally developed norms or assessment tools in the child's native language or in nonverbal formats.
	2.3.2. Educators understand and implement district and state policies designed to foster equity in gifted programming and services.
	2.3.3. Educators provide parents/guardians with information in their native language regarding diverse behaviors and characteristics that are associated with giftedness and with information that explains the nature and purpose of gifted programming options.
2.4. *Learning Progress and Outcomes*. Students with gifts and talents demonstrate advanced and complex learning as a result of using multiple, appropriate, and ongoing assessments.	2.4.1. Educators use differentiated pre- and post- performance-based assessments to measure the progress of students with gifts and talents.
	2.4.2. Educators use differentiated product-based assessments to measure the progress of students with gifts and talents.
	2.4.3. Educators use off-level standardized assessments to measure the progress of students with gifts and talents.

	2.4.4. Educators use and interpret qualitative and quantitative assessment information to develop a profile of the strengths and weaknesses of each student with gifts and talents to plan appropriate intervention.
	2.4.5. Educators communicate and interpret assessment information to students with gifts and talents and their parents/guardians.
2.5. *Evaluation of Programming*. Students identified with gifts and talents demonstrate important learning progress as a result of programming and services.	2.5.1. Educators ensure that the assessments used in the identification and evaluation processes are reliable and valid for each instrument's purpose, allow for above-grade-level performance, and allow for diverse perspectives.
	2.5.2. Educators ensure that the assessment of the progress of students with gifts and talents uses multiple indicators that measure mastery of content, higher level thinking skills, achievement in specific program areas, and affective growth.
	2.5.3. Educators assess the quantity, quality, and appropriateness of the programming and services provided for students with gifts and talents by disaggregating assessment data and yearly progress data and making the results public.
2.6. *Evaluation of Programming*. Students identified with gifts and talents have increased access and they show significant learning progress as a result of improving components of gifted education programming.	2.6.1. Administrators provide the necessary time and resources to implement an annual evaluation plan developed by persons with expertise in program evaluation and gifted education.
	2.6.2. The evaluation plan is purposeful and evaluates how student-level outcomes are influenced by one or more of the following components of gifted education programming: (a) identification, (b) curriculum, (c) instructional programming and services, (d) ongoing assessment of student learning, (e) counseling and guidance programs, (f) teacher qualifications and professional development, (g) parent/guardian and community involvement, (h) programming resources, and (i) programming design, management, and delivery.
	2.6.3. Educators disseminate the results of the evaluation, orally and in written form, and explain how they will use the results.

Gifted Education Programming Standard 3: Curriculum Planning and Instruction

Introduction

Assessment is an integral component of the curriculum planning process. The information obtained from multiple types of assessments informs decisions about curriculum content, instructional strategies, and resources that will support the growth of students with gifts and talents. Educators develop and use a comprehensive and sequenced core curriculum that is aligned with local, state, and national standards, then differentiate and expand it. In order to meet the unique needs of students with gifts and talents, this curriculum must emphasize advanced, conceptually challenging, in-depth, distinctive, and complex content within cognitive, affective, aesthetic, social, and leadership domains. Educators must possess a repertoire of evidence-based instructional strategies in delivering the curriculum (a) to develop talent, enhance learning, and provide students with the knowledge and skills to become independent, self-aware learners, and (b) to give students the tools to contribute to a multicultural, diverse society. The curriculum, instructional strategies, and materials and resources must engage a variety of learners using culturally responsive practices.

NAGC Standards

Standard 3: Curriculum Planning and Instruction

Description: Educators apply the theory and research-based models of curriculum and instruction related to students with gifts and talents and respond to their needs by planning, selecting, adapting, and creating culturally relevant curriculum and by using a repertoire of evidence-based instructional strategies to ensure specific student outcomes.

Student Outcomes	Evidence-Based Practices
3.1. *Curriculum Planning*. Students with gifts and talents demonstrate growth commensurate with aptitude during the school year.	3.1.1. Educators use local, state, and national standards to align and expand curriculum and instructional plans.
	3.1.2. Educators design and use a comprehensive and continuous scope and sequence to develop differentiated plans for PK-12 students with gifts and talents.
	3.1.3. Educators adapt, modify, or replace the core or standard curriculum to meet the needs of students with gifts and talents and those with special needs such as twice-exceptional, highly gifted, and English language learners.
	3.1.4. Educators design differentiated curricula that incorporate advanced, conceptually challenging, in-depth, distinctive, and complex content for students with gifts and talents.
	3.1.5. Educators use a balanced assessment system, including pre-assessment and formative assessment, to identify students' needs, develop differentiated education plans, and adjust plans based on continual progress monitoring.
	3.1.6. Educators use pre-assessments and pace instruction based on the learning rates of students with gifts and talents and accelerate and compact learning as appropriate.
	3.1.7. Educators use information and technologies, including assistive technologies, to individualize for students with gifts and talents, including those who are twice-exceptional.
3.2. *Talent Development*. Students with gifts and talents become more competent in multiple talent areas and across dimensions of learning.	3.2.1. Educators design curricula in cognitive, affective, aesthetic, social, and leadership domains that are challenging and effective for students with gifts and talents.
	3.2.2. Educators use metacognitive models to meet the needs of students with gifts and talents.
3.3. *Talent Development*. Students with gifts and talents develop their abilities in their domain of talent and/or area of interest.	3.3.1. Educators select, adapt, and use a repertoire of instructional strategies and materials that differentiate for students with gifts and talents and that respond to diversity.
	3.3.2. Educators use school and community resources that support differentiation.
	3.3.3. Educators provide opportunities for students with gifts and talents to explore, develop, or research their areas of interest and/or talent.
3.4. *Instructional Strategies*. Students with gifts and talents become independent investigators.	3.4.1. Educators use critical-thinking strategies to meet the needs of students with gifts and talents.
	3.4.2. Educators use creative-thinking strategies to meet the needs of students with gifts and talents.
	3.4.3. Educators use problem-solving model strategies to meet the needs of students with gifts and talents.

	3.4.4. Educators use inquiry models to meet the needs of students with gifts and talents.
3.5. _Culturally Relevant Curriculum_. Students with gifts and talents develop knowledge and skills for living and being productive in a multicultural, diverse, and global society.	3.5.1. Educators develop and use challenging, culturally responsive curriculum to engage all students with gifts and talents.
	3.5.2. Educators integrate career exploration experiences into learning opportunities for students with gifts and talents, e.g. biography study or speakers.
	3.5.3. Educators use curriculum for deep explorations of cultures, languages, and social issues related to diversity.
3.6. _Resources_. Students with gifts and talents benefit from gifted education programming that provides a variety of high quality resources and materials.	3.6.1. Teachers and administrators demonstrate familiarity with sources for high quality resources and materials that are appropriate for learners with gifts and talents.

Gifted Education Programming Standard 4: Learning Environments

Introduction

Effective educators of students with gifts and talents create safe learning environments that foster emotional well-being, positive social interaction, leadership for social change, and cultural understanding for success in a diverse society. Knowledge of the impact of giftedness and diversity on social-emotional development enables educators of students with gifts and talents to design environments that encourage independence, motivation, and self-efficacy of individuals from all backgrounds. They understand the role of language and communication in talent development and the ways in which culture affects communication and behavior. They use relevant strategies and technologies to enhance oral, written, and artistic communication of learners whose needs vary based on exceptionality, language proficiency, and cultural and linguistic differences. They recognize the value of multilingualism in today's global community.

Standard 4: Learning Environments

Description: Learning environments foster personal and social responsibility, multicultural competence, and interpersonal and technical communication skills for leadership in the 21st century to ensure specific student outcomes.

Student Outcomes	Evidence-Based Practices
4.1. *Personal Competence*. Students with gifts and talents demonstrate growth in personal competence and dispositions for exceptional academic and creative productivity. These include self-awareness, self-advocacy, self-efficacy, confidence, motivation, resilience, independence, curiosity, and risk taking.	4.1.1. Educators maintain high expectations for all students with gifts and talents as evidenced in meaningful and challenging activities.
	4.1.2. Educators provide opportunities for self-exploration, development and pursuit of interests, and development of identities supportive of achievement, e.g., through mentors and role models.
	4.1.3. Educators create environments that support trust among diverse learners.
	4.1.4. Educators provide feedback that focuses on effort, on evidence of potential to meet high standards, and on mistakes as learning opportunities.
	4.1.5. Educators provide examples of positive coping skills and opportunities to apply them.
4.2. *Social Competence*. Students with gifts and talents develop social competence manifested in positive peer relationships and social interactions.	4.2.1. Educators understand the needs of students with gifts and talents for both solitude and social interaction.
	4.2.2. Educators provide opportunities for interaction with intellectual and artistic/creative peers as well as with chronological-age peers.
	4.2.3. Educators assess and provide instruction on social skills needed for school, community, and the world of work.
4.3. *Leadership*. Students with gifts and talents demonstrate personal and social responsibility and leadership skills.	4.3.1 Educators establish a safe and welcoming climate for addressing social issues and developing personal responsibility.
	4.3.2. Educators provide environments for developing many forms of leadership and leadership skills.
	4.3.3. Educators promote opportunities for leadership in community settings to effect positive change.
4.4. *Cultural Competence*. Students with gifts and talents value their own and others' language, heritage, and circumstance. They possess skills in communicating, teaming, and collaborating with diverse individuals and across diverse groups.[1] They use positive strategies to address social issues, including discrimination and stereotyping.	4.4.1. Educators model appreciation for and sensitivity to students' diverse backgrounds and languages.
	4.4.2. Educators censure discriminatory language and behavior and model appropriate strategies.
	4.4.3. Educators provide structured opportunities to collaborate with diverse peers on a common goal.
4.5. *Communication Competence*. Students with gifts and talents develop competence in interpersonal and technical communication skills. They demonstrate advanced oral and written skills, balanced biliteracy or multiliteracy, and creative expression. They display fluency with technologies that support effective communication	4.5.1. Educators provide opportunities for advanced development and maintenance of first and second language(s).
	4.5.2. Educators provide resources to enhance oral, written, and artistic forms of communication, recognizing students' cultural context.
	4.5.3. Educators ensure access to advanced communication tools, including assistive technologies, and use of these tools for expressing higher-level thinking and creative productivity.

---

[1] Differences among groups of people and individuals based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographical area.

Gifted Education Programming Standard 5: Programming

Introduction

The term programming refers to a continuum of services that address students with gifts and talents' needs in all settings. Educators develop policies and procedures to guide and sustain all components of comprehensive and aligned programming and services for PreK-12 students with gifts and talents. Educators use a variety of programming options such as acceleration and enrichment in varied grouping arrangements (cluster grouping, resource rooms, special classes, special schools) and within individualized learning options (independent study, mentorships, online courses, internships) to enhance students' performance in cognitive and affective areas and to assist them in identifying future career goals. They augment and integrate current technologies within these learning opportunities to increase access to high level programming such as distance learning courses and to increase connections to resources outside of the school walls. In implementing services, educators in gifted, general, special education programs, and related professional services collaborate with one another and parents/guardians and community members to ensure that students' diverse learning needs are met. Administrators demonstrate their support of these programming options by allocating sufficient resources so that all students within gifts and talents receive appropriate educational services.

Standard 5: Programming

Description: Educators are aware of empirical evidence regarding (a) the cognitive, creative, and affective development of learners with gifts and talents, and (b) programming that meets their concomitant needs. Educators use this expertise systematically and collaboratively to develop, implement, and effectively manage comprehensive services for students with a variety of gifts and talents to ensure specific student outcomes.

Student Outcomes	Evidence-Based Practices
5.1. _Variety of Programming_. Students with gifts and talents participate in a variety of evidence-based programming options that enhance performance in cognitive and affective areas.	5.1.1. Educators regularly use multiple alternative approaches to accelerate learning.
	5.1.2. Educators regularly use enrichment options to extend and deepen learning opportunities within and outside of the school setting.
	5.1.3. Educators regularly use multiple forms of grouping, including clusters, resource rooms, special classes, or special schools.
	5.1.4. Educators regularly use individualized learning options such as mentorships, internships, online courses, and independent study.
	5.1.5. Educators regularly use current technologies, including online learning options and assistive technologies to enhance access to high-level programming.
	5.1.6. Administrators demonstrate support for gifted programs through equitable allocation of resources and demonstrated willingness to ensure that learners with gifts and talents receive appropriate educational services.
5.2. _Coordinated Services_. Students with gifts and talents demonstrate progress as a result of the shared commitment and coordinated services of gifted education, general education, special education, and related professional services, such as school counselors, school psychologists, and social workers.	5.2.1. Educators in gifted, general, and special education programs, as well as those in specialized areas, collaboratively plan, develop, and implement services for learners with gifts and talents.
5.3. _Collaboration_. Students with gifts and talents' learning is enhanced by regular collaboration among families, community, and the school.	5.3.1. Educators regularly engage families and community members for planning, programming, evaluating, and advocating.
5.4. _Resources_. Students with gifts and talents participate in gifted education programming that is adequately funded to meet student needs and program goals.	5.4.1. Administrators track expenditures at the school level to verify appropriate and sufficient funding for gifted programming and services.
5.5. _Comprehensiveness_. Students with gifts and talents develop their potential through comprehensive, aligned programming and services.	5.5.1. Educators develop thoughtful, multi-year program plans in relevant student talent areas, PK-12.
5.6. _Policies and Procedures_. Students with gifts and talents participate in regular and gifted education programs that are guided by clear policies and procedures that provide for their advanced learning needs (e.g., early entrance, acceleration, credit in lieu of enrollment).	5.6.1. Educators create policies and procedures to guide and sustain all components of the program, including assessment, identification, acceleration practices, and grouping practices, that is built on an evidence-based foundation in gifted education.
5.7. _Career Pathways_. Students with gifts and talents identify future career goals and the talent development pathways to reach those goals.	5.7.1. Educators provide professional guidance and counseling for individual student strengths, interests, and values.
	5.7.2. Educators facilitate mentorships, internships, and vocational programming experiences that match student interests and aptitudes.

7

National Association for Gifted Children • 1331 H Street, NW, Suite 1001 • Washington, DC 20005 • 202.785.4268 • www.nagc.org

9-21-10

Gifted Education Programming Standard 6: Professional Development

Introduction

Professional development is essential for all educators involved in the development and implementation of gifted programs and services. Professional development is the intentional development of professional expertise as outlined by the NAGC-CEC teacher preparation standards and is an ongoing part of gifted educators' professional and ethical practice. Professional development may take many forms ranging from district-sponsored workshops and courses, university courses, professional conferences, independent studies, and presentations by external consultants and should be based on systematic needs assessments and professional reflection. Students participating in gifted education programs and services are taught by teachers with developed expertise in gifted education. Gifted education program services are developed and supported by administrators, coordinators, curriculum specialists, general education, special education, and gifted education teachers who have developed expertise in gifted education. Since students with gifts and talents spend much of their time within general education classrooms, general education teachers need to receive professional development in gifted education that enables them to recognize the characteristics of giftedness in diverse populations, understand the school or district referral and identification process, and possess an array of high quality, research-based differentiation strategies that challenge students. Services for students with gifts and talents are enhanced by guidance and counseling professionals with expertise in gifted education.

Standard 6: Professional Development

Description: All educators (administrators, teachers, counselors, and other instructional support staff) build their knowledge and skills using the NAGC-CEC Teacher Standards for Gifted and Talented Education and the National Staff Development Standards. They formally assess professional development needs related to the standards, develop and monitor plans, systematically engage in training to meet the identified needs, and demonstrate mastery of standard. They access resources to provide for release time, funding for continuing education, and substitute support. These practices are judged through the assessment of relevant student outcomes.

Student Outcomes	Evidence-Based Practices
6.1. *Talent Development*. Students develop their talents and gifts as a result of interacting with educators who meet the national teacher preparation standards in gifted education.	6.1.1. Educators systematically participate in ongoing, research-supported professional development that addresses the foundations of gifted education, characteristics of students with gifts and talents, assessment, curriculum planning and instruction, learning environments, and programming.
	6.1.2. The school district provides professional development for teachers that models how to develop environments and instructional activities that encourage students to express diverse characteristics and behaviors that are associated with giftedness.
	6.1.3. Educators participate in ongoing professional development addressing key issues such as anti-intellectualism and trends in gifted education such as equity and access.
	6.1.4. Administrators provide human and material resources needed for professional development in gifted education (e.g. release time, funding for continuing education, substitute support, webinars, or mentors).
	6.1.5. Educators use their awareness of organizations and publications relevant to gifted education to promote learning for students with gifts and talents.
6.2. *Socio-emotional Development*. Students with gifts and talents develop socially and emotionally as a result of educators who have participated in professional development aligned with national standards in gifted education and National Staff Development Standards.	6.2.1. Educators participate in ongoing professional development to support the social and emotional needs of students with gifts and talents.
6.3. *Lifelong Learners*. Students develop their gifts and talents as a result of educators who are life-long learners, participating in ongoing professional development and continuing education opportunities.	6.3.1. Educators assess their instructional practices and continue their education in school district staff development, professional organizations, and higher education settings based on these assessments.
	6.3.2. Educators participate in professional development that is sustained over time, that includes regular follow-up, and that seeks evidence of impact on teacher practice and on student learning.
	6.3.3. Educators use multiple modes of professional development delivery including online courses, online and electronic communities, face-to-face workshops, professional learning communities, and book talks.
	6.3.4. Educators identify and address areas for personal growth for teaching students with gifts and talents in their professional development plans.
6.4. *Ethics*. Students develop their gifts and talents as a result of educators who are ethical in their practices.	6.4.1. Educators respond to cultural and personal frames of reference when teaching students with gifts and talents.
	6.4.2. Educators comply with rules, policies, and standards of ethical practice.

New Jersey Cross-Content Workplace Readiness Curriculum Framework

A Road Map for Learning

New Jersey Cross–Content Workplace Readiness Curriculum Framework: A Road Map for Learning

A Document in Support of the Cross–Content Workplace Readiness Standards

DONALD T. DIFRANCESCO
Acting Governor

VITO A. GAGLIARDI, SR.
Commissioner of Education

JAY DOOLAN
Acting Assistant Commissioner of Education
Division of Academic and Career Standards

ROBERT J. RIEHS
Acting Director
Office of Standards and Professional Development

THOMAS A. HENRY
Director
Office of School-to-Career and College Initiatives

ANN DIGIACOMO
Workplace Readiness and Framework Project Coordinator
Office of Standards and Professional Development

WILLIAM D. MILLER
Framework Project Coordinator
Retired AT&T District Manager

Acknowledgments

The New Jersey Department of Education gratefully acknowledges the thoughtful contributions and outstanding efforts of the many educators, parents, business people, and citizens who have worked on this framework project. We especially wish to note with appreciation those who served on the advisory board, the writing team, and those who served as weavers (see the list of framework contributors at the back of the document). We also acknowledge the reuse and adaptation of materials from the Core Curriculum Content Frameworks.

State Board of Education

MAUD DAHME...Annandale
President

RONALD K. BUTCHER...Pitman
Vice President

DONALD C. ADDISON, JR. ....Trenton

JEAN D. ALEXANDER..Absecon

MARGARET F. BARTLETT ....Pine Beach

S. DAVID BRANDT ....Cherry Hill

ANNE S. DILLMAN..Perth Amboy

ORLANDO EDREIRA ....Elizabeth

ARNOLD HYNDMAN...Belvidere

THOMAS P. McGOUGH..Florham Park

DANIEL J. P. MORONEY ....Cedar Grove

SAMUEL J. PODIETZ ....Lumberton Township

ROBERTA H. VAN ANDA ....Rumson

Vito A. Gagliardi, Sr., Commissioner
Secretary, State Board of Education

Table of Contents

List of Tables

List of Figures

Historical Background

On May 1, 1996, the State Board of Education adopted Core Curriculum Content Standards, including standards in seven academic content areas and Cross-Content Workplace Readiness Standards that apply to all subject areas. Since the adoption of these standards, frameworks have been developed to assist local districts in the implementation of the standards. In June 1999, the New Jersey Department of Education convened a committee of distinguished K-12 educators, representatives of higher education, and professionals in the workplace. The committee was charged with designing a Cross-Content Workplace Readiness Curriculum Framework for New Jersey, in accordance with N.J.A.C. 6A:8-3.2(a)1.

The Need for Workplace Readiness

As stated in the Core Curriculum Content Standards document (page iv), we live in an age of exploding knowledge and rapid change in technology, information exchange, and communications. The changes that are taking place in our society have increased the demand for internationally competitive workers. Because today's students will be employed through the middle of the twenty-first century, they will need increasingly advanced levels of knowledge and skill. To gain and retain high-wage employment that provides job satisfaction, they will also need to continue to learn throughout their lives. The role of the educational system is to deliver instructional programs that provide a world-class education for students entering a complex, rapidly changing, highly competitive, interdependent world.

In a 1992 national report, the Secretary's Commission on Achieving Necessary Skills (SCANS) identified several concepts students need to master to be successful in the world of work. The SCANS Workplace Competencies include the productive use of resources, interpersonal skills, information, systems, and technology. The SCANS Foundation Skills include basic skills, thinking skills, and personal qualities.

To compete in a global, information-based economy, students must be able to solve problems, reason effectively, and make logical connections. The world of work they enter will feature products and factories that are designed by mathematical models and computer simulations, computers that control production processes and plants, and robots. Our state and country need people with the skills to develop and manage new technologies.

The Intent and Content of the Framework

The intent of this framework is to support the educational reform that was initiated by the New Jersey Core Curriculum Content Standards. The standards seek to generate higher levels of achievement for all students and to assist districts in the development of curriculum that fosters lifelong learning skills and the skills necessary for an effective transition into the workplace and/or postsecondary education. This framework emphasizes interdisciplinary and systems approaches and the integration of the Cross-Content Workplace Readiness Standards into the academic areas. It is designed to provide guidance for the infusion of the Cross-Content Workplace Readiness Standards into the school district's curriculum and teachers' lesson plans. It is *not* intended to be a substitute for the district curriculum. The sample activities included in the framework are offered as ideas to help educators revise or create their own activities in support of the standards. The standards have specified results but not the means of achieving them, affirming the importance of local district decision-making and discretion. The local district is in the best position to choose the curriculum designs and instructional strategies that are most appropriate for its students. For this reason, the activities included in the framework are to be considered merely as examples. They are not mandated.

A Systems Approach
to Cross-Content Workplace Readiness

Chapter 1 describes the design model for implementing the Cross-Content Workplace Readiness Standards. The framework uses interdisciplinary and integrated instruction, which combines several academic content disciplines in a common lesson or activity. Processes for systems thinking and design are introduced, and their relationships to each other are established. These processes can be followed by educators to create specific instructional programs and to guide students in completing project-based assignments.

Project-Based Learning

Chapter 2 describes the learning process and the steps to project-based learning, and offers reasons for implementing project-based learning. A comparison of traditional instruction and project-based instruction is presented.

Portfolios

Chapter 3 guides teachers and counselors in the purpose, structure, assessment, and reliability of career development and project-specific portfolios for the implementation of Cross-Content Workplace Readiness Standards. Portfolios provide a documented, cumulative record in many areas of student achievement. They are particularly useful in demonstrating career-planning and workplace readiness skills.

Vignettes

The vignettes in chapter 4 present a number of scenarios that illustrate the interdisciplinary systems thinking approach. While they are presented in general grade-level categories, the scenarios can be adapted to other developmental levels through the creativity of the teacher/facilitator.

Best Practices

The best practices section in chapter 5 has been included to identify innovative and dynamic models. Contact information is provided so that educators are able to gather more information about practices that lead to high attainment of the standards.

Activities

To strengthen the linkages between the academic content areas and the Cross-Content Workplace Readiness Standards, thematic problem statements in chapter 6 have been designed to include interdisciplinary approaches to workplace readiness. Teachers may adopt, adapt or replace the activities presented here with ideas of their own.

Adaptations for Special Populations

Instructional adaptations for special populations are provided in chapter 7. Experts in the education of the specific populations provided the input for these adaptations.

Chapter 1

A Systems Approach to Cross–Content Workplace Readiness

Preface

According to Robert Reich, former U.S. Secretary of Labor in *The Work of Nations*, the current U.S. educational system is based on an industrial model of production and an eighteenth-century model of knowledge compartmentalized into discrete disciplines. This instills a mental model in students that the world is made up of discrete components, each capable of being understood in isolation. Most formal education perpetuates a fallacy of compartmentalizing systems, offering up facts and figures in bite-size units of social studies, language, mathematics, and science, as if each were distinct and unrelated to the others. To discover new opportunities, one must be capable of seeing the whole and understanding the processes by which parts of reality are linked together. Issues in the real world rarely emerge in a predefined, neatly separable way.

As society becomes more complex, traditional education becomes less relevant because of its fragmentary nature. A more effective and engaging approach to educating can be found in the combination of *integrated instruction* and *a systems approach*. The result is a highly motivating and engaging frame for learning. Such an approach encompasses experiential education, through which students learn by the following means: by doing, by helping to select and design projects, by researching possible solutions from a wide variety of resources, by presenting their work to outside review panels, and, finally, by evaluating their work on their own terms. Academic content is integrated into all of these activities so that students' education is structured to meet the requirements of the standards. The intent of this framework is to demonstrate a path to bring these ideas to fruition.

Systems and Systems Thinking: How Things Really Work

A **system** is an arrangement of interacting, interrelated, or interdependent parts, rules, and principles designed to be unified to work as a whole — for example, the solar system; a political system; a system of government; office systems; a method, plan, or process; a mechanized or electronic system. All the parts of the system are related to the same overall process, procedure, or structure, yet they are (most likely) different from one another and often perform completely different functions.

Systems thinking is defined as a way of thinking about, as well as a language for describing and understanding, the forces and interrelationships that shape the behavior of systems. Systems thinking helps us change systems more effectively, and act in tune with the larger processes of the natural and economic world. It articulates the interrelationships of the complex elements of real-life situations as they evolve over time.

Complex systems include all or some of the following characteristics:
- self-stabilizing
- goal-seeking
- program-following
- self-reprogramming
- environment-modifying
- self-replicating
- self-maintaining and repairing
- self-reorganizing
- self-programming

Complex systems often exhibit behaviors that include anticipating changes in the environment, inertia or initial resistance to change. Since education is a complex system, the framework presented here is a step forward in a journey that will take time.

Design: The Creativity of Work

Design is the fusion of imagination and action. It is defined by the following characteristics or attributes (International Technology Education Association, 2000):

- purposeful in intent
- based on certain functional, constraining, schedule, or cost requirements
- systematic in approach or processes used to accomplish the design
- creative
- many possible solutions

Design becomes a context for learning. It allows students to apply content-area concepts and skills. A design and problem-solving approach emphasizes students' active participation. They are asked to make deliberate choices, to think critically about problems, and then to act by designing and implementing potential solutions. These are transferable skills that support life-long learning and problem solving.

The actual thought processes used in design will vary from person to person and will differ with varying contexts. Therefore, a global design process cannot be modeled with complete accuracy. Any design process is merely a generic guide that assists students through the many phases of designing.

A simple design process includes the following steps: analysis, synthesis, and evaluation. Teachers will need to break down these steps according to the developmental levels of the learners. Opposite are the steps in models for elementary and high school levels.

Elementary Level:
- ▶ What is the problem?
- ▶ Think of some solutions (brainstorm).
- ▶ Select a possible solution.
- ▶ Implement and test the solution.

High School Level:
- ▶ Analyze and investigate a real-world situation.
- ▶ Frame a design brief.
- ▶ Gather information.
- ▶ Generate alternative solutions.
- ▶ Choose a solution.
- ▶ Conduct developmental work.
- ▶ Produce a prototype.
- ▶ Test and evaluate the prototype.
- ▶ Redesign and re-implement the solution.

One cannot design effectively without an understanding of systems and the application of systems thinking in the design process. Figure 1.1 shows the relationship between design and systems thinking.

Figure 1.1

DESIGN AND SYSTEMS THINKING

Design   Systems Thinking

How do I find out?   *How does this work?*
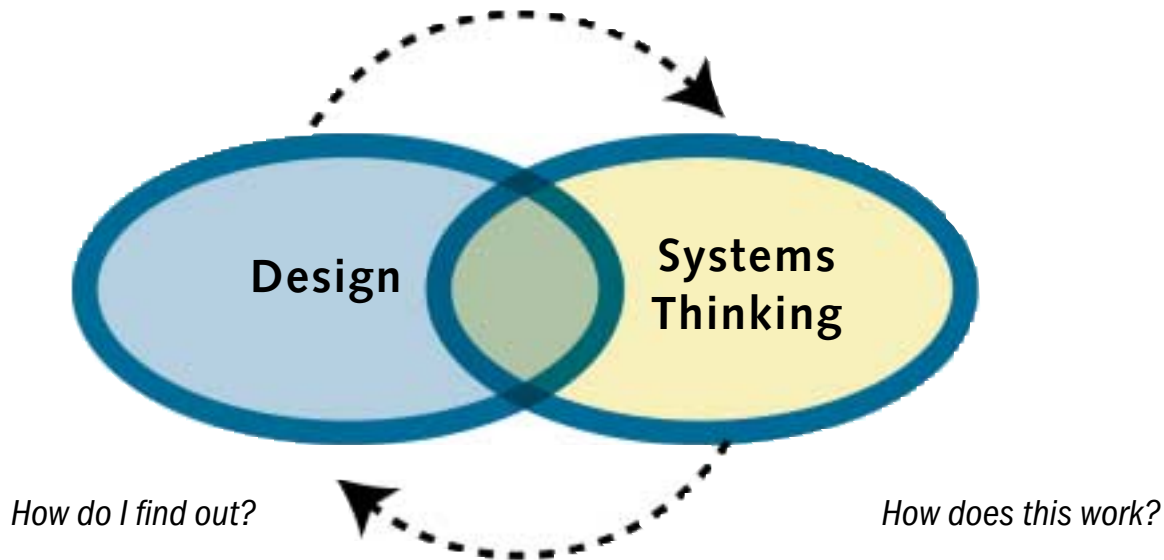
In other words, a systems thinking approach is the best way to present how things in the world really work in an interconnected, interdisciplinary way. Design is about what one does with this understanding for example, to devise courses of action that will replace existing things with better ones.

Curriculum Approaches

To help prepare students for a rapidly changing world, the State Board of Education adopted five workplace readiness standards to be integrated with the seven content areas. These standards define the skills that students need as they pursue college, careers, and adult responsibilities as citizens. The Cross-Content Workplace Readiness Standards include: 1) career planning and workplace

skills; 2) use of technology, information, and other tools; 3) critical thinking, decision making and problem solving; 4) self-management; and 5) safety principles.

Unlike the cumulative progress indicators for the other content areas, the workplace readiness indicators are not organized by grade-level clusters because, in addition to crossing all content areas, they also cross grade levels. Teachers and counselors should integrate these concepts into all programs in content-specific and developmentally appropriate ways. To strengthen the linkages between the content areas and cross-content workplace readiness, framework activities and scenarios include interdisciplinary and integrative approaches to workplace readiness.

H. Lynn Erickson makes the following observation about integrated curricula in *Stirring the Head, Heart, and Soul: Redefining Curriculum and Instruction*:

> Curriculum integration is the organization of content under a common, abstract concept such as interdependence or conflict. The goal of integrated curricula is to illuminate more clearly the concept under study in relation to a significant theme, problem or issue, through the application of higher-level thought processes as students analyze, synthesize, and generalize from information to knowledge.

Teachers will find that there are many stages of instruction leading to the integrated approach. Teachers are asked to take steps to move the instructional classroom toward integrative levels. The systems thinking method will help students comprehend complex realities and design will help them improve them.

This framework is designed to illustrate a path for the integration of cross-content workplace readiness standards. It is also designed to be usable within the constraints of the existing educational structure.

Figure 1.2

ILLUSTRATION OF APPROACHES

Stovepipe Disciplines

Interdisciplinary Approach

Integrated Approach
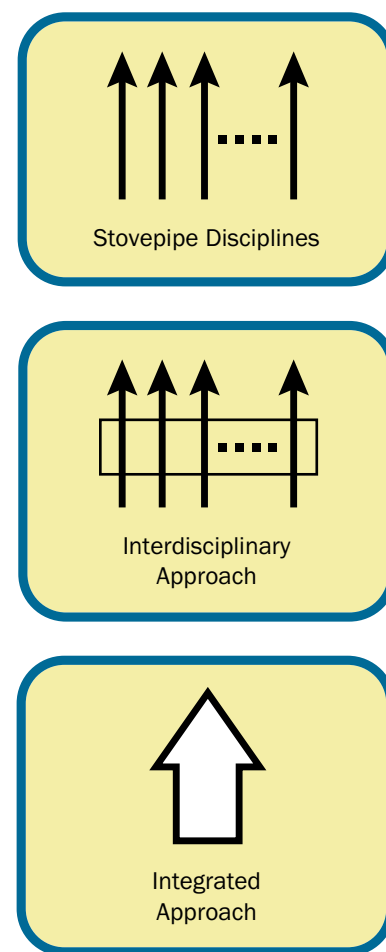
A Model For Cross-Content Workplace Readiness

Knowledge is increasing at an exponential rate. This poses a dilemma for an educational system that uses a model of discrete disciplines and a finite amount of "teaching" time. The key question is how to impart ever increasing knowledge over this finite amount of time. One solution is to move from the traditional approach in which the teacher imparts knowledge to a new approach in which the teacher is in the role of facilitator of learning. Table 1.1 compares the characteristics of classrooms in these two scenarios as defined by Jacqueline and Martin G. Brooks in *The Search of Understanding: The Case for Constructivist Classrooms* (1993).

Table 1.1
COMPARISON OF TEACHER ROLES

Teacher Imparts Knowledge	Teacher Is a Facilitator of Learning
• Curriculum is presented part to whole, with emphasis on basic skills	• Curriculum is presented whole to part with emphasis on big concepts
• Strict adherence to fixed curriculum is highly valued	• Pursuit of student questions is highly valued
• Curricular activities rely heavily on textbooks and workbooks	• Curricular activities rely heavily on primary sources of data and manipulative materials
• Students are viewed as "blank slates" onto which information is etched by the teacher	• Students are viewed as thinkers with emerging theories about the world
• Teachers generally behave in a didactic manner disseminating information to students	• Teachers generally behave in an interactive manner, mediating the environment for students
• Techers seek the correct answer to validate student learning	• Teachers seek the students' point of view in order to understand students' present conceptions for use in subsequent lessons
• Assessment of student learning is viewed as separate from teaching and occurs almost entirely through testing	• Assessment of student learning is interwoven with teaching and occurs through teacher observations of students at work and through student exhibitions and portfolios
• Students primarily work alone	• Students primarily work in groups

Table 1.2

SUMMATIVE AND FORMATIVE ASSESSMENT

Summative	Formative
• Educator-developed assessment	• Student-developed assessment
• Learning ends with assessment	• Assessment guides future learning
• Assessment used for judging/tracking	• Assessment is used for feedback
• Assumes a "bell curve" model	• Criterion referenced
• Uses "paper and pencil" tests	• Uses rubrics
• Focus on recall/recognition	• Iterative process
	• Portfolio/Performance-oriented

The following project illustrates how the aspects discussed above can be applied in classrooms today.

Pyramid Reconstruction: A Systems Thinking Project

The Pyramid Project can be scaled as a content-area activity, an interdisciplinary activity, or an integrative activity. Students may work individually, collaboratively, or cooperatively, or they may use a variety of approaches appropriate to the project tasks.

The primary goal of the Pyramid Project is to engage students in grades K to 12 in activities that emphasize problem solving, critical thinking, systems thinking, and communication processes. The teacher and students work together to define the problem. Examples of problems include the following:

- How can a heavy object be moved up an inclined plane?
- What aspects of the system in existence at the time enabled the Great Pyramids of Egypt to be built? Which aspects of that system are still in existence today?
- Develop alternative methods of building the pyramids within specified constraints, for example, limited human, natural, and economic resources and realistic distances for moving large stones.

Background

The Great Pyramids at Giza, built more than 4500 years ago, continue to impress engineers and technologists. These tombs are the most famous of the pyramids, but there are more than eighty other pyramids in Egypt. The largest of the three, the Great Pyramid of King Khufu, was built about 2550 B.C. At its peak, it was 481 feet tall and had a square base 756 feet on each side. Approximately 2,300,000 blocks of solid limestone, each weighing about 2.5 tons, were used in its construction.

The pyramids, and the building of them, served a critical societal purpose in ancient Egypt. Many scholars have offered theories on how the Egyptians accomplished construction of the pyramids. However, there is no definitive proof to substantiate their conjectures.

The ancient Egyptians were faced with many problems while building the pyramids at Giza. One of the challenges they faced was to find a way to move the heavy blocks of stone into position to build the pyramid. The largest pyramid at Giza is more than 450 feet high and required more than two million stones.

Regarding the form of labor, the theory that has gained credibility was that the Great Pyramids of Giza were built by "free" labor, rather than by slave labor. Workers willingly gave their time with the expectation of a better afterlife for themselves, as well as for the pharaohs. Other pyramids in other dynasties were most certainly built by slave labor.

The Egyptians needed to be quality workers. Clearly, their finished project is evidence of their ability to work both individually and in teams. The Egyptians understood a great deal about technology and practical problem solving. They were critical thinkers who knew how to make decisions. There was division of labor among the ancient Egyptian workers. For example, there were surveyors, stonecutters, rope pullers, engineers, architects, and designers.

The ancient Egyptians worked on the pyramids only three months of the year, when the Nile River overflowed. The annual overflowing of the Nile was critical for enriching the soil along its bank to provide nutrients for growing crops to feed the population. This annual event set the clock and pace for life in ancient Egypt.

Simulation is a practical educational tool that helps clarify issues in a problem. A common simulation model is a stock-and-flow diagram which translates any situation into visual or quantitative terms. Figure 1.3 is the representation of a simple stock-and-flow model for the labor and material resources needed to build a pyramid. The rate at which the pyramid can be built depends on the number of laborers, labor productivity, and the number of stone blocks available. Students can see the results of varying these parameters, and they can use such a model to discuss the effects of different labor poli-

Figure 1.3

SIMULATION OF LABOR AND MATERIAL RESOURCES NEEDED TO BUILD A PYRAMID OVER A PERIOD OF TIME
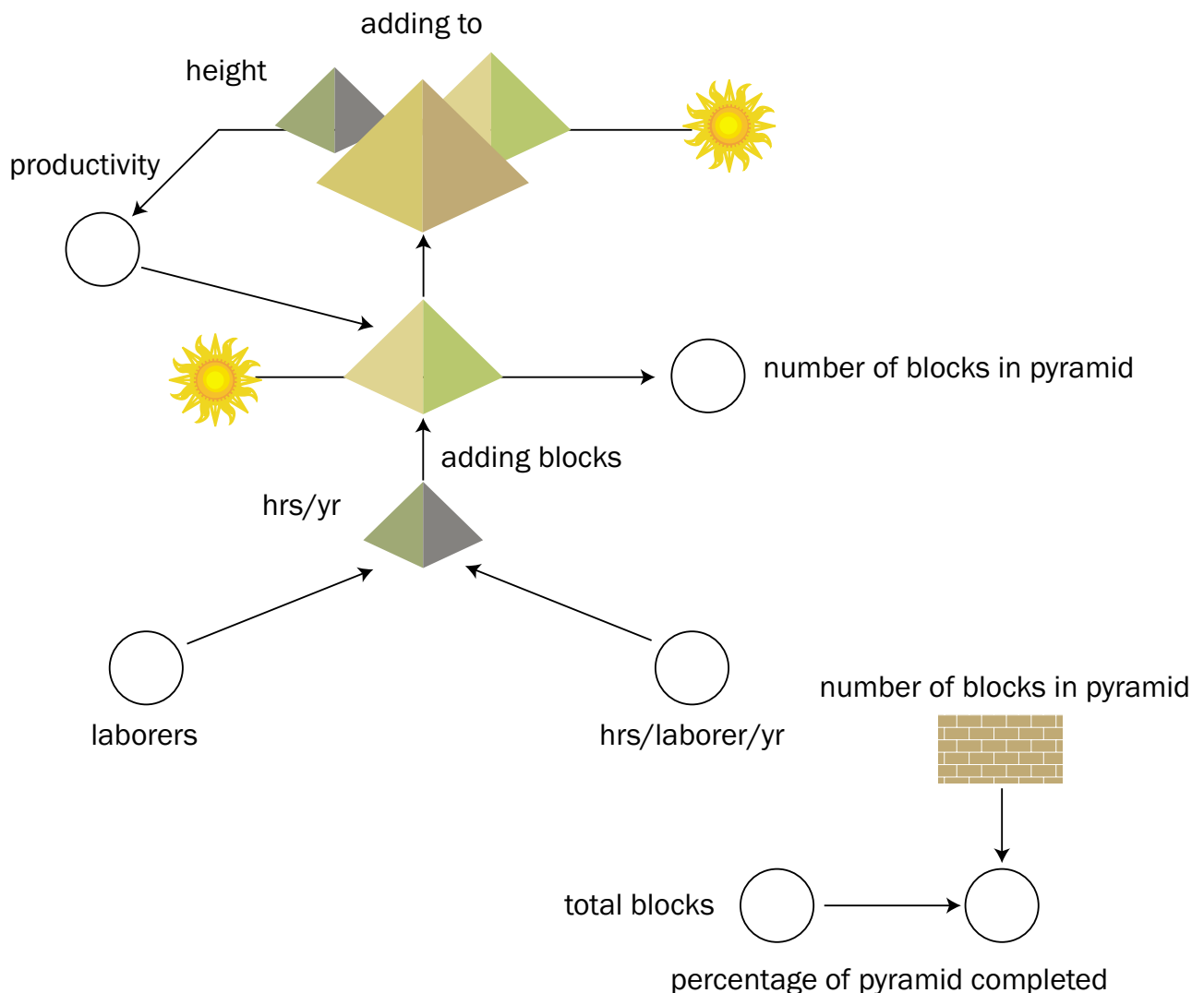
cies on completion of the pyramid. One policy to be assessed could be the enlistment of a workforce of free labor highly motivated to see that the pharaohs' place in the afterlife is secured, thereby securing their own places in the afterlife. Another policy to be assessed could be the use of slave labor, perhaps not so highly motivated.

Table 1.3 summarizes some ways in which the Pyramid Project can be used as a content-area activity, an interdisciplinary activity, or an integrated activity.

Table 1.3
INTERDISCIPLINARY AND INTEGRATED APPROACHES FOR THE PYRAMID PROJECT

Content Area	Interdisciplinary	Integrated
• The problem is to size the amount of labor and the time needed to build the Great Pyramid at Giza, assuming that work is performed for only three months each year. • Contrast the problem with the amount of labor and time needed to build the Great Pyramid using the processes, tools, and technologies available in modern-day America.	• Build on the content-area problem for the amount of labor and time needed to build the Great Pyramid at Giza: develop a plan to recruit workers; plan a diet for the workers and estimate how much food would be required to meet their needs. • Build on the content-area contrast with modern America: propose a plan to recruit workers; estimate how much food would be required; estimate how much energy would be needed to operate tools.	• Build on the interdisciplinary problem by proposing an alternative "year-round worker" scenario and the impact of this alternative on the growing of food. • Build on the interdisciplinary problem by contrasting the effort with the number of workers in the construction industry and farming in modern-day America; project the employment trends of the two groups.

Source: Adapted from Derek Hitchins in a 1995 presentation on "Systems Engineering the Pyramids."

Chapter 2

Project–Based Learning

Learning Process

Project-based learning enhances the learning process. Students and teachers work through a series of ideas that help the students make decisions about their own learning. The learner needs to be aided in understanding self as the curriculum/lesson relates to 1) applying self as a learner to the situation, 2) framing questions, 3) tackling a project, 4) working as part of a team, 5) monitoring individual programs, 6) selecting a career, and 7) developing his/her skills and knowledge in order to be successful in a career choice.

Teachers should encourage each student to document his or her growth through a series of reflections at the conclusion of each stage of the project experience. Depending upon his or her approach to learning, a student may want to keep a video diary, a computer-assisted log, an audio library, a pictorial portfolio, or a record of artifacts.

As students begin an activity, they may engage in the following steps:
- form learning or work teams (cooperative groups);
- develop a mission for each team;
- develop a contract for the group;
- list the tasks to be completed;
- identify the leaders within the learning community;
- develop and implement team reporting procedures;
- coordinate the efforts of each team.

Implementing Project–Based Learning

As teachers implement project-based learning, they may engage in the following steps:

Define your goal: What do you want to achieve?

1 Keep in mind that the project will be student-centered and hands-on and will focus on active learning and the retention of knowledge. Determine which learning standards will be taught.

Build Support: Who can help achieve the goal?

2 Where appropriate, obtain the support of the administrative staff, other teachers, parents, business and industry, and the community.

Research: Is this a real-life problem?

3 Engage in interviews, reading and discussions. Be prepared to record observations at employment sites, follow established code and laws, as well as establish health and safety requirements, and address transportation and travel needs as appropriate for the project.

Determine whether students will work independently or in a group.

4 How many students will be included in the group? How will groups be selected and assessed?

Make a plan:
What should be done next?

5 • List objectives that address the skills that all students need to develop.
   • Create timelines including total project duration and the amount of time to be devoted to the project each week.
• Organize the project.
• Which learning standards are addressed?
• Where do students start?
• What information or experiences do students need before beginning the project?
• What materials will be needed?
• How will students obtain the materials?
• Is the project timeline realistic given the students' other assignments?
• What will students learn from this project? What is different about this project compared with other projects?
• What knowledge and which skills cross disciplines?
• What will happen if the project isn't successful?
• How will students be assessed? What checkpoints are needed? How will the final project be evaluated? By what group of people will the project be evaluated?
• Determine if the project appears to be of interest and if it is engaging and skill rich. Adjust if necessary.
• Delegate responsibilities and assume a mentoring role.
• Foresee problems and develop solutions.
   —Troubleshoot the project.
   —Create samples to determine if realistic.
   —Accept delays and use them to determine what can be done differently.
   —Make modifications.

The Teacher's Role

During the project-based learning process, the teacher begins by playing the role of mentor. The teacher explains the project and then steps back and relinquishes control, acting as an observer. In this role, the teacher needs to feel comfortable with some degree of "creative chaos." The teacher provides the time and the materials needed for conducting the project. In addition, the teacher helps students prepare for participation in the project. Students must learn to identify problems, think through the problem-solving process, meet expectations for social behavior, dress appropriately for the activity; use time appropriately, and show respect for others.

Throughout the project, the teacher provides opportunities for students to reflect on what they have done. Students may keep a journal, perform a group self-evaluation, or answer a set of questions.

Evaluating Project-Based Learning

Assessment instruments might include, but are not limited to the following:
- open-ended rubrics
- observation surveys
- peer rating scales
- self-evaluations
- teacher evaluation checklists and rubrics

High-quality project-based learning results in attainment of goals and objectives in the following areas:
- academic content
- cross-content workplace readiness skills
- occupationally specific skills
- skills for life-long learning

The project-based learning process also requires the following: demonstration of teamwork among participants, reflection on activities, and the design and implementation of portfolio materials.

The Benefits of Project-Based Learning

1. Project-based learning allows teachers and students to focus on in-depth central issues.
   - Content is presented authentically
   - Students deal with content in a relevant and interesting way

2. Students learn to search for answers and solve problems
   - Activities are challenging and constructive
   - Activities adapt to individual learners

3. Students are empowered
   - Project-based learning conditions encourage social, personal and collaborative skills
   - Project-based learning encourages use of technological tools

Table 2.1

TRADITIONAL AND PROJECT-BASED INSTRUCTION COMPARISON

Criteria	Traditional Instruction	Project Based
Content	• Knowledge of facts	• Comprehension of concepts and principles
Scope and Sequence	• Follows fixed curriculum • Move from unit to unit • Narrow, content area focus	• Follows student interests • Large units composed of complex problems or issues • Broad, interdisciplinary focus
Teacher's Role	• Lecturer and director of instruction • Expert	• Resource provider • Advisory/mentor
Assessment	• Products • Test scores • Reproduction of information	• Process and product • Tangible accomplishments • Demonstration of understanding
Classroom materials	• Texts, lectures and presentations • Teacher/book company - developed worksheets and activities	• Direct or original sources, printed materials, interviews, and documents • Data and materials developed by students
Use of technology	• Ancillary, peripheral • Administered by teachers	• Central, integral • Directed by students
Type of student involvement	• Students working alone • Students competing with one another • Students receiving information	• Students working in groups • Students collaborating • Students constructing, contributing, and synthesizing information
Student role	• Carry out instructions • Memorize and repeat facts • Listen, behave, speak only when spoken to	• Carry out self-directed experiences • Discover, integrate, and present ideas • Communicate, show affect, produce, take responsibility
Goals	• Knowledge of facts, terms, and content • Mastery of isolated skills • Breadth of knowledge • Graduates who have knowledge to perform on standardized achievement tests	• Understanding and application of complex ideas and processes • Mastery of integrated skills • Depth of knowledge • Graduates who have the disposition and skills to engage in sustained, autonomous, lifelong learning

Professional Development

To ensure that students will achieve mastery of the Cross-Content Workplace Readiness Standards and indicators, district staff need to integrate these standards into their curricula. Professional development activities focused on incorporating the standards into the curriculum and instruction are key ingredients in that process. The definitions, descriptions, explanations, vignettes and sample activities provided in this document will facilitate district staff development and conversations regarding infusion and integration of Cross-Content Workplace Readiness Standards. The following procedures may be helpful in encouraging staff to work cooperatively and to participate in professional development activities.

- Engage district staff in professional dialogue concerning the integration of the workplace readiness standards into their curriculum activities.

- Review sample activities and vignettes to understand the depth and scope of specific indicators and ways to integrate specific cross-content workplace readiness skills into classroom lessons and units of instruction.

- Identify lessons, projects, and activities included in existing curricula that are modeled after the sample vignettes and activities.

- Group staff by grade level, grade cluster and/or subject area. Use staff development time to meet, design, and revise inter-disciplinary projects, units and/or lessons on an ongoing basis.

- Enlist the help of any teacher-trainers in the district to provide assistance and support to their colleagues in the implementation of the district-designed curriculum projects, units, and lessons which integrate cross-content workplace readiness skills.

- Incorporate these projects and units into written district curriculum as examples of cross-content workplace readiness integration.

Chapter 3

Portfolios

The New Jersey Department of Education defines portfolios as collections of samples of students' work that show progress and achievements in one or more areas over a period of time. Samples for the portfolio may be chosen by the student alone or by the student and the teacher together. Typically, the student includes a written reflection for each sample that explains why the sample was selected. Portfolios may be cumulative and follow the student from grade to grade. Portfolio assessment tools may include among other things collections of student work samples, work folders, and assessment folders.

Portfolios provide a documented, cumulative record of student achievement. Portfolios are particularly useful in demonstrating career-planning and workplace readiness skills. They also provide a strategy for assessing the student's critical-thinking, decision-making, problem-solving and self-management skills. Portfolios can enhance the learning process by offering students the opportunity to evaluate their own work and to create a "collection of work" that best represents the student's growth and development over time. This chapter provides information on the purpose, structure, assessment, and reliability of career-development and project-specific portfolios and explains how teachers and counselors can use portfolios as a tool in the implementation of Cross-Content Workplace Readiness Standards.

Traditional paper-and-pencil tests or selected-response tests that contain multiple-choice, matching, or true-false questions allow students to choose a correct answer from among a limited choice of responses. These traditional kinds of assessment are used extensively in large-scale testing programs and enjoy a long history of psychometric theory and test-development practice. According to Brian M. Stecher et al. in *Using Alternative Assessments in Vocational Education* (1977), portfolios provide an alternative form of assessment that gives students the opportunity to choose or to construct
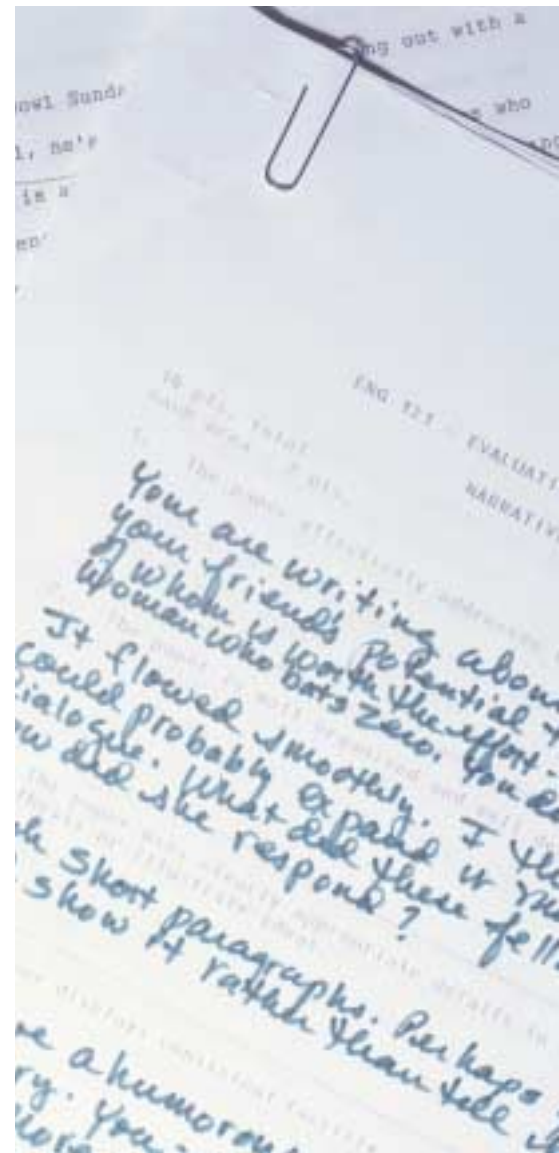
their own responses from a much wider universe of possibilities (Stecher et al., 31). Portfolios and other alternative forms of assessment also provide evidence of a student's critical-thinking and self-management skills that are sometimes difficult to measure using traditional forms of assessment. On the other hand, portfolios are designed to demonstrate a broader range of student work and to contain a variety of components (e.g., student reflection, peer evaluations, and oral presentations).

A portfolio is a collection of work that demonstrates a student's knowledge, skills, and understanding. There is no standardized format. Portfolios may contain a variety of components, such as the following:

- writing samples or reports
- official records (e.g., transcripts, certificates, or grades)
- personal student reflections (e.g., a letter of introduction, a student log, or a journal)

Portfolios may also contain career-development materials including the following:

- resumes
- completed job applications
- letters of recommendation from teachers and employers
- samples of work products

Whether intended for career development or focused on specific projects, portfolios can be designed to present a student's best work or to show how a student's work has evolved over time. Portfolios can also be a comprehensive compilation of a student's work in a given area, for example, a career-development portfolio that spans a student's high school years.

Purpose

The National Center for Research in Vocational Education (NCRVE), in *Getting to Work: A Guide for Better Schools,* suggests that portfolios can be used for a variety of purposes in the classroom:

- To document career development and exploration over time: Students have the opportunity to reflect on their progress in setting goals and making choices.
- To demonstrate the attainment of skills: A student's portfolio can be submitted to a potential employer or to a school if the student is applying for further education and training.

• To improve curriculum: The use of a portfolio can provide a structure and an organizing tool for projects that are sequenced over time. Portfolios give teachers an alternative strategy for evaluating a broader range of student skills and abilities. Through portfolios, teachers can observe student performance over time.

Structure

Portfolios can be structured around a wide range of components that demonstrate student work, reflection, and teacher and peer evaluation. A teacher's decision about the components to be included in students' portfolios should be based on the following questions:

• Which standards does the teacher want to assess through the portfolios?
• For whom will the portfolio be useful?

Mikala Rahn and Gary Hoachlander, in module 4 of *Getting to Work: A Guide for Better Schools* (1995), suggest the following guidelines for selecting portfolio components:

• The components should be connected to the overall purpose of the portfolio.
• Standards and scoring guidelines should be defined for each component and each component should be scored or graded separately.
• Evaluating the overall portfolio is optional. Teachers may decide to grade the portfolio at the end of the year or invite a panel of teachers or employers as outside evaluators.
• Portfolios should be exhibited or housed in a single file or location so that the portfolio can be readily accessible and understood by someone outside the process.
• Students must be aware of the purpose of the overall portfolio and understand the instructions and expectations for each component.

Teachers should select required and optional components of the portfolio according to the guidelines described above.

Components of both project-specific and career-development portfolios can be categorized as follows: academic skills and knowledge, personal development, career development, and exhibits of student work. Table 3.1 shows a small sample of components that fall into each category.

Table 3.1

EXAMPLES OF PORTFOLIO COMPONENTS

Academic Skills and Knowledge
• Research project
• Samples of written work
• Transcripts
• Test scores

Career Development
• Resumé
• Cover letter
• Job application
• References

Personal Development
• Journals
• Logs
• Self-reflection
• Peer reflection

Exhibits of Work
• Artwork
• Oral presentation
• Video
• Display or exhibit

Assessment of Components

The NCRVE recommends that each component be evaluated using a three-step process. If the teacher chooses to evaluate the entire portfolio, a similar three-step process should be used.

- Determine the primary learner outcomes for the component chosen.
- Determine the method of review (e.g., teacher, peer, employer, panel of reviewers).
- Determine the scale for assessing student performance (e.g., a point system, grades A through F, or a weighted scale).

Guiding Questions for Educators in the Use of Portfolios

The following questions were adapted from the Southern Regional Education Board Site Development Guide #10, *Advancing Students' Academic and Technical Achievement by Improving Classroom Assessment.* (See page 160 in the guide.)

- What is the reason for using a portfolio in my classroom? What skills and knowledge do I want students to be able to demonstrate?
- How much time will students be given to develop their portfolios (e.g., a semester, a school year, more than one school year)?
- Will the overall grade for the portfolio be used in more than one course? Are portfolio components assigned from different courses (e.g., English and social studies)?
- What components will be required? Will there be optional components?
- Who will select the work samples to be included in the portfolio?
- What are the consequences of failing to complete the portfolio?
- Will the portfolio document existing work completed for a course or will it include new activities developed specifically for the portfolio?
- Who will evaluate each component? Will students have another chance to complete or pass each component if they do not complete or pass it the first time?
- In what ways will the portfolio be used?

Chapter 4

Vignettes

The following scenarios illustrate the interdisciplinary, systems-thinking, and project-based approach. Although they are presented in elementary, middle, and high school categories, the scenarios can be adapted to other developmental levels through the creativity of the teacher/facilitator.

Elementary School Level

M.A.G.I.C. — Interacting with the Aged

If children do not have the opportunity to become close to their grandparents or other adults, they may develop stereotyped images of the elderly, and, in turn, the elderly may develop stereotyped images of youth. MAGIC (Many Ages—Giving, Interacting, Communicating) brings younger and older people together to share time, concerns, and life experiences. Students in grades three, four, and five visit nursing homes on a regular basis to interact with the elderly. They prepare for their visits with a presentation by the 4-H organization entitled "Walking in my Shoes." Students and nursing home residents participate in arts-and-crafts, musical, and game activities. Upon returning to school, students process the experience with the school counselor, and concerns, joys, and feelings of sadness are shared with each other. Nursing home residents look forward to subsequent visits from their "adopted" grandchildren.

Preparation for this project begins in September with the presentation of "Walking in My Shoes." Nursing home visits begin in October with each visit lasting approximately an hour and a half. Some students are apprehensive about their first nursing home visit and what will be encountered. Discussions about expectations and role-playing activities help students prepare for the experience. Visits by different grade levels continue throughout the school year. Students help plan and implement the events. Students from high school occupational programs may be asked to help younger students prepare for the visits.

An interdisciplinary approach is used. Students create arts-and-crafts gifts to be presented to the elderly during their visual arts class. Musical performances, instrumental and choral, are rehearsed during music classes. Students calculate the cost of the items used to create the arts-and-crafts gift items and develop budgets to get the best value for their dollar. Thank you letters and pen-pal letters are written to nursing home residents, especially when personal relationships are developed through multiple visits. Children learn about experiences, occupations, and recreation from bygone days and compare and contrast these with their own present day experiences.

Students are exposed to various health occupation careers while visiting the nursing home. The exposure may help them identify a career interest. During in-class discussions of what to expect at the nursing home, problems are defined, decisions are made regarding appropriate behavior, and students identify patterns of behavior in elderly people. Positive and negative experiences are shared and possible solutions for future visits are determined. Children work cooperatively with classmates and adults and describe actions that demonstrate respect for the aged. Safety precautions are discussed and practiced to avoid transportation accidents and unsafe situations during nursing home visits.

Students develop a sense of pride and accomplishment in helping and interacting with members of their community. Students also learn the value of service learning and how it promotes their academic achievement in various subjects. Students prepare a written summary of their experience and its positive or negative impact on them.

Community involvement is also emphasized in the project. Local profit and nonprofit businesses donate materials and expertise. For example, the local flower shop donates flowers for the children to create arrangements for the nursing home. Students receive recognition through local newspaper photographs that appear throughout the school year. Students publish information about MAGIC and the nursing home visits in school newsletters that are sent home throughout the school year.

Adapted from MAGIC, developed by Angela Belmont, Service Learning
Coordinator, NJ Learn and Serve America.

Young Consumer Program

Imagine your excitement at being 10 years old with the responsibility of spending $100 on a family grocery order for a week. This is the culminating activity of the Young Consumer program. Fourth-grade students shop in pairs, use calculators, make shopping decisions, weigh products, and read store maps. During the event, students are supervised by parents.

On shopping day, students arrive at the store wearing a Young Consumer T-shirt. A parent is assigned to each pair of students. Some parents volunteer to run the problem-solving stations. Students have 90 minutes to complete their tasks, including checking out. Students can earn up to 1000 points for the following: problem solving, purchasing nutritious food, spending close to their allotted $100, adhering to safety standards, and demonstrating map and communication skills.

The Young Consumer program focuses on a partnership of school administrators, fourth-grade students, and the students' teacher and parents. In addition, a community supermarket becomes an extension of the classroom. As the program is implemented, a facilitator from the Kelloggs Foundation, working through the Middle Atlantic States Consortium (MAC), guides the partners in fulfilling their respective roles. The school administration approves the Young Consumer concept and provides transportation on the day of the event. The community partner hosts the event and provides information about the food industry and the supermarket for the teacher to infuse in lesson plans. The community partner also attends the parent training session. The teacher develops the lesson plans, organizes the parent training session (parent night), and works with the community partner to set a date for the event. The parents attend the parent night session which prepares them to supervise the students on the event day.

See also the "Promoting Industry Awareness" Best Practice.

Middle School Level

The Real Game

The Real Game, a copyrighted program by Bill Barry and Susan Wright licensed to The Real Game Inc., is a hands-on, practical, experiential learning program that allows students to experience various aspects of the working world through role playing and game devices. The program is cross-curricular and designed for middle and junior high school classes (primarily seventh and eighth grades) of up to 40 students. (Additional versions, designed for students from grade three through adult, are also available.) Through a series of interdisciplinary exercises and events guided by teachers or counselors, students become more aware of the world of work and how their actions in school affect their futures. Anecdotal records from New Jersey teachers indicate that student interest in academics increases as they begin to see the relevance of their studies to life.

Unit One: Learning a Living

In the first unit, Learning a Living, the students are given an overview of the Real Game. The game is presented as a journey in career exploration that will bring the students to "assume the mantle of the expert." The students are informed that they will, through a randomly chosen occupation, explore elements of adult life. To assess current knowledge of terminology and other elements related to the work world, students complete a questionnaire which they fill out again at the end of unit five to evaluate their progress. The students play the first round of the Spin Game which is an interdisciplinary, multiple-choice question-and-answer game and form groups which serve as the basis of many subsequent activities for the Real Game program.

Unit Two: Making a Living

In the second unit, Making a Living, the students take on their roles. Four activities help them to gradually imagine themselves as adult workers.

First, the students explore and express their dreams by choosing items on the "wish list" that they would like to have in their adult life. Reality comes into play when students have to balance their

monthly budgets by applying their mathematical skills and assess what they can actually obtain, taking income and chance, represented by Chance Cards, into consideration. The students personalize their activity poster as they gather information on their neighbors' occupations. Elements on the activity poster include transferable skills, annual holidays, gross and net monthly income, income tax, bills, and expenses.

Unit Three: Quality of Life
In unit three, Quality of Life, the students choose leisure and holiday activities, taking into account the profile assigned to them. They examine their necessary daily activities and then choose activities for their free time. The students plan a group holiday, taking into account their budget and the amount of vacation time allotted to each member. This is an exercise in negotiation. Students research specific destinations and a variety of occupations in the travel industry.

Unit Four: Changes and Choices
The five activities in Changes and Choices help students become aware of unexpected elements that occur in the work world and in life. Unforeseen circumstances change the course of the game as students must offer support and assistance to colleagues who are faced with a job loss. Activities, such as group discussions and essays, help students think of positive actions that may bring new possibilities. Finally, the entire class is rendered jobless by large-scale disasters. The students work as a team, offer solutions, and learn how their transferable skills will enable them to grasp other opportunities.

The students then play the second round of the Spin Game so that they may continue to explore occupations, terminology, and the links that exist between their schooling and the work world.

Unit Five: The Personal Journey
The Real Game ends with unit five, The Personal Journey. The students imagine themselves in the future and must reflect on their career journey by talking with individuals in the community. Guest speakers are invited to a career day. These activities enable the students to share their experiences and new knowledge and to gather information on the present work world and a variety of careers.

High School Level

The Corporation Learning Way

The Corporation Learning Way (CLW), developed and copyrighted by John O'Hara, a teacher at Kearny High School, is a pedagogy that incorporates workplace readiness into the core curriculum. Corporation Physics is a high school physics course that uses the Corporation Learning pedagogy. Other disciplines using the Corporation Learning Way include, but are not limited to, English, earth science and social studies.

Using the Corporation Learning Way, students are empowered to take responsibility and leadership roles. Students are taught how to work in teams. They learn to use technology in making presentations. They learn how to stand in front of an audience to deliver a lesson without typical teenage jargon. CLW is a student-centered process that gives students the workplace readiness skills that they will need to enter the workforce of the 21st century upon completing their formal education. It is a process that teaches students how to be life-long learners and provides them with entry-level tools that are essential in business, for example, using technology to communicate ideas and time-management skills.

CLW is a process that is modeled after successful business practices, including teamwork, critical thinking and problem solving, self-management, responsibility, and empowerment. In addition to learning the traditional 3 R's of reading, writing, and arithmetic, students learn the 3 R's of the 21st-century: rigor, responsibility, and relevance.

In Corporation Learning Way, the classroom becomes a corporation, the students become the employees or associates of the firm, and the teacher becomes the CEO. Students write a resumé and a cover letter to apply for a specific team. They list their unique qualifications for the team and provide an alternate team choice. In this manner, students are discouraged from joining their friends' teams, and they can avoid peer pressure to do so by citing their qualifications and background.

Procedures

Imagine a science class with a 14-period, two-week schedule. In a traditional class, the instructor might lecture for five periods during the week and have a double-period lab. In CLW, the instructor presents for the first four periods. The fifth period is a planning period. From period 6 through 12, the students are presenting.

The core curriculum content material is taught at a rigorous, rapid pace by the instructor. After the teacher's presentation, which is an introduction to the material, specialized teams embellish it. Because physics has many components, such as theory, mathematics, laboratory investigations, and use of technology, students apply to be on teams that focus on these areas. They are taught how to prepare a cover letter and a resumé and identify their qualifications for a particular team. Each team is responsible for presenting a specific component of physics to the class approximately once every two weeks. These groups, known as the Quality Team, the Quantity Team, the Lab Team and the WITS (Web, Information, Technology and Speakers Bureau) Team, are a few of the teams used in Corporation Physics.

While students make use of the Internet for research and gathering real-time data, they are not allowed to simply read their notes. They must prepare a computer presentation (e.g., Microsoft® PowerPoint), and they may refer to their notes on a large-screen television connected to the computer. A rubric is used to grade each presentation.

Each team must make an electronic presentation. They must distribute notes of their slides to each student in class. They must also make up a worksheet or some other class activity. The presenting team will grade the activity and record the grades. With seven teams presenting, this provides seven rigorous homework assignments in a two-week period. Students must also publish a company newsletter, design and publish a web page, and be ambassadors for the Corporation Learning process by giving lectures and presentations to the community and school districts.

Three Blind Mice

Three Blind Mice, a program developed at River Dell Regional High School, integrates technological design with language arts literacy and many other areas of the curriculum. Students in grades 9-12 are challenged with the problem of designing and building a mousetrap to successfully capture a live mouse or mice without killing or harming them in any way. The teacher or students select an independent or collaborative approach. First, students gather information about mice to learn their habits, physical attributes, and unique features, electronically and through their library sources. They are given specific design criteria. Although mousetraps are often made of simple materials like cardboard, oaktag and tape, and wood and plastic, students frequently show ingenuity in suggesting unusual materials.

Throughout this technological design process, an English teacher, acting as a language consultant, introduces the students to various selections of poetry and short fiction that involve mice. In some instances, the authors and poets use mice as metaphors which initiates meaningful philosophical discussion. Students analyze and interpret the literary works and express and formulate their own opinions. They make powerful connections between the symbolism and ideas that lie within the poetry and their own real-life situations.

The project culminates on test day. Five live mice arrive on the scene and are placed on a specially constructed barricaded tabletop, along with the student- designed mousetraps. When the mice are released, they scurry for the corners as the students cheer for them to come toward their traps. The students begin to whisper to one another: "My trap is on the wrong side of the table. Uh, oh, I should have designed the ramp differently and placed the door on the other side! Next time..." One scenario might be as one bold mouse cautiously mounts the bread-crumb-covered ramp, all eyes focus on his movements. The creature continues to creep, sniffing and nibbling his way to the top of the ramp, where a Cheese Combo awaits on top of a trapdoor. The mouse moves forward and stands on the trapdoor.

The students stare attentively, astonished that the mouse does not fall, as the feast continues. Then, in one split second, the mouse dashes down the ramp and onto the safety of the table. "The trap door didn't release," moan the owners, already considering how they can improve the design. This culminating test continues all period as many mice escape, making the few that are captured a true prize. Although the period ends, no one wants to leave even to eat lunch.

In Three Blind Mice, students are given the opportunity to solve a genuine problem, starting with research and culminating in thoughtful assessment and revision. This provides experience in brainstorming, planning, designing, making, testing, and evaluating an original product as part of a technological design process. The creative use of language through poetry and fiction allows students to analyze, experience, and apply language to meaningful situations; express formulated opinions; and gain an appreciation and understanding of the power of language. As problems in design construction develop, students interact freely with each other, using critical thinking and discussion skills as they help solve each emergent problem. As a final language arts exercise, the students create and present their own poems or short stories about mice. In producing an original solution to a genuine problem, students find new meaning in the old saying, "Build a better mousetrap and the world will beat a path to your door."
Adapted from River Dell Regional High School.

Structured Learning Experience

A 17-year old senior wants to be given the opportunity to work for pay in a local business as part of the school curriculum. The student knows of a position that is open at a local deli. The school personnel begin to assist the student.

They identify the student's interest areas for employment based on academic preparation, past job-shadowing experiences, past employment experiences, and volunteer experiences. A review of the student's portfolio and a reassessment of previous activities help determine the career focus and determine whether the local deli position is a viable option. If the student's career interest area is not working in food service, the student should be directed to an employment opportunity more closely related to his/her long-term educational and employment interests.

The cooperative education teacher contacts potential employers for the student or the student obtains a promise of employment and notifies the teacher. The teacher inspects the site, if the district has not yet done so. The teacher assists the student with the employment application process, including interviews and paperwork. Once a promise of employment has been obtained, any student/youth under the age of 18 must obtain an employment certificate, commonly called working papers. The student's proposed hours and days of work must be identified on the employment certificate, along with the student's job title and job description. The school principal signs the employment certificate, certifying the age of the student and verifying that the hours of work will not impair the student's school performance or disrupt the student's class schedule. In addition, the district must ensure that the student's work schedule does not violate state or federal child labor laws. The student, parent/guardian, and a physician, who verifies that the student is physically fit for employment, also sign the employment certificate. Once the employment certificate is completed, the student's work site is then registered on the New Jersey Department of Education's electronic work site registration system as required by the Administrative Code for Standards and Assessment for Student Achievement. (Visit the following web site to view the document: http://www.state.nj.us/njded/adopted/standards/index.html).

School personnel work with the student to develop the formal structured learning contract. The contract specifies the progressively higher-order skills to be achieved by the learner. The agreement is signed by the student, the parent/guardian, and school personnel. See the following web site for a sample agreement: http://www.stw.ed.gov/Database/Subject2.cfm?RECNO=562.

General health and safety instruction is necessary for each student. The student receives safety and health training related to the specific position at the work site. The cooperative education teacher maintains written documentation that this student is proficient.

Documentation of insurance is also kept with the student's records. In addition, if a student uses his or her own motor vehicle for transportation to the work site, a copy of his/her motor vehicle insurance should be maintained on file.

The cooperative education teacher provides ongoing support and documents supervision of the learner at the work site for a minimum of 30 minutes every two weeks. The teacher consults the workplace mentor on a regular basis about student conduct and attendance, development of specific occupational skills, and development of general workplace skills. The school teacher/mentor is ultimately responsible for keeping records and ensuring that a grade is issued for credit by the school. The teacher/school needs to verify the number of hours (starting date and completion date) worked and the attainment of the skills identified as part of the learning agreement.

Food Industry Internship Program

Using the Cornell Distance Education Program (DEP), students can participate in the food industry intern program on Monday, Wednesday and Friday afternoons from 1:00 to 4:00 p.m. The intern completes the work-experience portion of the program at his/her sponsoring retail store. On Tuesday and Thursday afternoons they participate in food-industry-related coursework at their high school. The intern's in-store work experience is scheduled to coincide with the coursework. For example, interns taking the Grocery Management and Operations course, a component of the program, should spend their in-store time working in the grocery department.

The intern meets with the in-store supervisor to decide on the number of additional hours per week, making sure that it doesn't exceed state regulations and does not affect academic performance.

The intern performs the jobs the sponsoring company assigns her/him to do as permitted by law for minors. The intern is involved in a management responsibility each week. This training activity helps the intern gain an understanding of management goal-setting and how each job responsibility, if done well, contributes to the success of the total retail operation. Some of these responsibilities include:
- weekly scheduling,
- planning and ordering displays,
- ordering and shelf stocking,
- determining shrink and how it can be reduced.

Chapter 5

Best Practices

Routes to Success: Some Examples That Work

Strategy: Paid Structured Learning

Partner: TECH 2000/Verizon (formerly Bell Atlantic New Jersey)

TECH 2000 is a school-based telecommunications training program for high school juniors and seniors, postsecondary students, and adults returning to school. The program's goal is to create a telecommunications-literate workforce and a school-to-career transition for New Jersey's telecommunications industry. The partnership started as PROJECT SMART at Ocean County Vocational School in 1993. It has been expanded to additional sites in cooperation with the International Brotherhood of Electrical Workers (IBEW) and vocational schools throughout the state. More than 400 students are enrolled in the two-year program, and there are several new sites in the planning stage. To date, a large percentage of students are employed in industry. The program was selected by the U.S. Department of Education as one of the ten best school-to-career programs in the nation in 1996, and it has also received a number of state and local awards. The Mercer County Workforce Investment Board is working to replicate the program for the growing hospitality industry in the state's capital region.

For more information, contact:
Educational Relations – External Affairs
Verizon New Jersey
(973) 649-5011

Strategy: Serving Students with Disabilities

Partner: Atlantic County Special Services School District (ACSSSD)

In partnership with local gaming businesses, ACSSSD provides a comprehensive training program for disabled students. After initial preparation in ACSSSD's school-based component, students have an opportunity to progress into the work-based component, which offers structured learning experiences in various departments. ACSSSD conducts a supervised rotational program that exposes students to the types of positions available in the gaming industry. A full-time teacher is placed at each site to provide support to students and the work-site mentor. Students prepare for work at the casinos by first working at a local nursing home, hospital, or community college under the close supervision of the teacher and employee mentors. The mentors teach work skills, as well as industry culture and norms. As students become more independent and confident, master skills, and develop good work habits, they advance to the next level of training at one of three participating casino/hotel properties in Atlantic City. Students work every day and learn job-specific skills, improve work habits, and develop social skills that are necessary for success in entry-level positions in business and industry. Students either are hired into permanent positions after they participate in training at the work sites, or they find employment elsewhere with the help of the teacher and the service agencies that work with the school.

For more information, contact:
School-to-Career Project Coordinator
Atlantic County Special Services School District
(609) 625-5663

Strategy: Apprenticeship

Partner: International Brotherhood of Carpenters and Joiners

The International Brotherhood of Carpenters and Joiners provided a secondary-level carpentry curriculum to area vocational schools and high schools that offer carpentry programs. The curriculum materials provided by the brotherhood include major tasks and competencies, lists of hand tools and equipment, and health and safety information, all of which can be used alone or in conjunction with the established curriculum. Materials were presented in both floppy disk and CD-ROM formats. Reference materials pertaining to the history of labor-management relations were identified. The unions provided training to classroom teachers of carpentry in the use of the materials. Districts that employ the curriculum materials will ensure that students who successfully complete the program will be competitive in meeting the entrance requirements of the New Jersey unions affiliated with the International Brotherhood of Carpenters and Joiners.

For more information, contact:
Apprenticeship Coordinator
New Jersey Department of Education
(609) 984-5906

Strategy: Apprenticeship

Partner: International Brotherhood of Electrical Workers, LU 351, New Jersey

International Brotherhood of Electrical Workers (IBEW) provides technical assistance to partnering vocational-technical schools to align their electrical curriculum with the IBEW's entrance requirements for apprenticeship. In some instances, districts have implemented the IBEW National Apprenticeship and Training Committee's math book. In others, the IBEW has reviewed the district curriculum to ensure that it includes the math requirements. The IBEW has conducted mock employment interviews for participating students. Students participate in lab activities at the IBEW's apprenticeship and training center. Students use programmable controllers and gain experience in motor control and basic circuitry. Other partnership activities include outreach to two alternative high schools to introduce students to careers in the electrical trades. Students who successfully complete the IBEW's Youth Transitions to Work (YTTW) program are eligible to apply for the local union's electrical apprenticeship program.
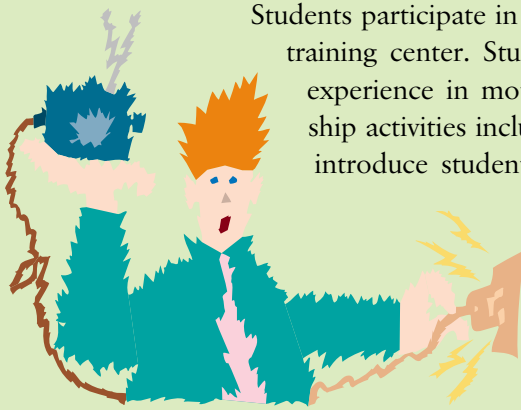
For more information, contact:
Apprenticeship Coordinator
New Jersey Department of Education
(609) 984-5906

Strategy: Career Pathway

Partner: Jersey Shore Hospital

The Monmouth County Vocational School District's medical and health curriculum offers students real-life experiences. In the freshman year, students are introduced to various health careers and volunteer positions through guest speakers and trips to local healthcare facilities, e.g., a local cerebral palsy school or a senior center. In the sophomore year, students participate in a six-week rotation program at a local hospital. Learners are assigned to assist staff and get a firsthand glimpse at the workings of a hospital. In the junior year, students research a specific need in the community and create a plan for addressing the need. All of the students write a grant proposal for their plan. The best proposals are chosen and students collectively work toward implementing the plan in their communities. In the past, a group of students cleaned up and rebuilt a playground at a local child-care center, and another group created a video that informs middle school students about the dangers of drinking and driving. The students' experiences culminate in the senior year when all students participate in an internship program with a local business or healthcare facility. The internships are diverse and have included placements with pediatricians, primary care physicians, hospitals, substance-abuse centers, county human services departments, nutritionists, and a health program for a cable television network.

Students have the opportunity to gain college credit before graduating from high school through a joint program with a university. Character education has been incorporated into the health curriculum, and students study ethics and practice ethical decision making.

Internship performance and job preparation skills are evaluated through a career portfolio and mentor feedback.

For more information, contact:
Monmouth County Vocational School District
(732) 775-0058

Strategy: Career Pathway

Partner: Varies

As early as seventh grade, students and their parents are invited to attend a Career Magnet Fair that highlights district programs from each high school. Upon acceptance into a Career Academy, students are expected to perform at a high academic level and compete for participation in industry training programs, summer internships, and senior year youth apprenticeships. By their junior year of high school, successful students are placed in training programs provided by industry partners. Here they are expected to put their classroom skills into practice in the workplace and also bring back to the classroom the confidence and expertise they have gained from their on-site work assignments. This continues with a summer internship and a senior year youth apprenticeship. Upon completion of all program requirements, students take an industry proficiency test. These are developed by national organizations and approved by the state.

For more information, contact:
School-to-Career Project Director
Jersey City Public Schools
(201) 915-6225

Strategy: Industry Training

Partner: Merrill Lynch

Merrill Lynch provides a comprehensive work-based learning program to Jersey City public shools. Tenth-grade students in the business and marketing magnet program participate in an industry-specific career day with the employer. In the eleventh grade, the students participate in a half-day training program that acquaints students with all aspects of the industry. The employer provides a summer internship for high school seniors that prepares students to successfully obtain employment with Merrill Lynch or to compete in the marketplace.

For more information, contact:
School-to-Career Project Director
Jersey City Public Schools
(201) 915-6225

Strategy: Service Learning/Structured Learning Experience
Partner: Varies

The Pupil Assisted Learning Service (PALS) program is a community-based service learning program that enables students to make a difference by helping others. Tenth-, eleventh-, and twelfth-grade students spend one or two periods of the school day performing service work at one of a variety of sites, which may include large and small businesses, colleges, hospitals, elementary schools, day-care centers, government agencies, theaters, and nursing homes. Students are not paid for their service work, but they receive credit for their participation. PALS teachers work with the students and community sponsors and serve as a link between the school and the community. They match student interests with sponsor needs, counsel students, visit sites, and evaluate learning experiences and students' progress.

For more information, contact:
Lakewood Coordinator
(732) 905-3581

Strategy: Entrepreneurial Activities
Partner: NA

Students and teachers learn a great deal about the world of work by operating the entrepreneurial businesses within their schools. By developing, making, and distributing a product, students gain experience in the many aspects of running a successful business. Eight entrepreneurial programs are operating at four high schools, one vocational-technical school, one middle school, one elementary school, and one special-needs school. Examples of the products distributed include furniture, buttons, gift baskets, crafts and wreaths, popcorn, and embroidered and/or screen-printed activewear. The students are responsible for all aspects of their business, including marketing, advertising, production, accounting, sales, and inventory. Each program is monitored in February, the midway point, and again in June at the end of the program. All profits from the businesses are reinvested into the business funds.

For more information, contact:
Tech-Prep Project Director
Union County College
(908) 965-2999

Strategy: Promoting Industry Awareness

Partners: Wakefern Corporation, Kellogg Foundation, and ShopRite Supermarkets

The Young Consumers Program is based on the belief that learning is everyone's business and that it extends beyond the classroom. During the 1998-1999 school year, two fourth-grade pilot programs were successfully completed at Lopatcong School in Warren County and Penn Beach School in Salem County. The pilot has been expanded to train fourth-grade teachers in Salem and Bergen Counties. The program activities include classroom preparation, family orientation, a compulsory shopping activity, minds-in-motion challenges and communication exercises. In a key program component, students, working in pairs, plan meals and purchase food in a local supermarket to feed a family of four for a week within a fixed budget. Partnerships with community businesses facilitate program activities and field experiences. The pilot programs were sponsored by ShopRite Supermarkets, Progressive Publishing and Mid-Atlantic Consortium (MAC) of Colleges.

For more information, see also the Young Consumer Program vignette or contact:
Ramapo College
Learning Resource Center
(201) 684-7886

Strategy: School-Based Enterprise/ Structured Learning Experience

Partner: Little Egg Harbor Bagel Cart

The Bagel Express School-Based Entrepreneurial Project helps students develop basic business skills. One hundred students from twenty-six middle, junior high, and secondary schools in Atlantic, Cape May, and Cumberland Counties participate in the program. Each location features a custom-made entrepreneurial cart, equipment, inventory, information, and materials to initiate and operate a stand-alone, portable, school-based retail business. Students and staff use computers donated by corporations to access The National Grocers Association Front End Associate Skills and Competency list or the Bagel Express Booklet and Skills checklist. The materials are used to train and certify workers in the retail food industry. Student workers are fully engaged in the learning process and attain many of the identified New Jersey Core Curriculum Content Standards as they serve school-based customers in a true-to-life learning environment. The student participants record entries from daily sales, count money, perform customer service tasks, inventory stock, plan merchandising and marketing activities and complete bank deposits. The profits are reinvested in each enterprise in the form of U.S. savings bonds, stipends, new equipment, class trips, and community-service projects.

For more information, contact:
Eagle Enterprises
Egg Harbor Twp. High School
(609) 653-8804

Strategy: School-Based Enterprise/ Structured Learning Experience

Partner: NA

Several school-based enterprises operate as part of the ATTAIN (Advocating the Teaching of Transition According to Individual Needs) program. Students participate in transitional academic classes and career classes, several of which operate the student enterprises. One class operates a Bagel Express business, which provides students with the opportunity to practice, in a realistic setting, content areas presented in the classroom, e.g., banking, money transactions, bookkeeping, and interpersonal skills. The building-trades class operates a Sheds-R-Us business in which students construct and sell storage sheds and other woodcrafts. The students use equipment, materials, and procedures used at actual construction sites. Development of appropriate work behaviors and attitudes and job-specific skills takes place in this environment. The manufacturing-career class makes and sells contracted items to small businesses or individuals, including boardwalk pieces, novelty candles, seasonal cards, and professional signs. The food-service class operates Snack Attack. Students learn and practice appropriate communication, math, and money-handling skills while preparing and selling special hot food items. The life-skills class operates a produce stand. Students take orders; sort, weigh, bag, and deliver produce; price orders; and collect payments. Students practice customer-service skills and money-handling skills including the use of a cash register. Another group of students produces and sells holiday cards. Students participate in the design and production of the cards, as well as packaging, sales, and distribution. All of the school-based enterprises enable students to have hands-on, realistic vocational experiences. Profits are used to cover the costs of each enterprise and for student activities or individual student compensation.

For more information, contact:
Atlantic County Special Services School District
(609) 625-5663

Strategy: School-Based Learning/ Microsociety

Partner: NA

The Microsociety approach to education uses the school setting to help students develop an understanding of institutions, markets, and jobs. This approach offers students the opportunity to increase their academic knowledge by practicing skills and exploring a variety of career interests. Students are paid "school money" for good attendance, behavior, and work performance. With their accrued money, students can purchase items at regularly scheduled in-school "Mall Days" during which student-made items and donated gifts are sold. In addition to Mall Day purchases, students can buy items from the school store and tickets to special school events on a daily basis. Students also learn to pace their spending and to save for important events.

For more information, contact:
Clifton Avenue Grade School
Lakewood School District
(732) 905-3650

Strategy: Mentoring

Partner: Washington Township Chamber of Commerce

The Washington Township Chamber of Commerce has spearheaded a mentoring program designed to help high school students clarify their career goals through interaction with business leaders. Each student is paired with an employee mentor who helps the student learn specific skills and knowledge. The programs at Washington Township High School and Glassboro High School call for high school juniors and seniors to intern at various Chamber of Commerce employer sites. Internship positions are available in retail businesses, banks, restaurants, health service organizations, local government agencies, and other organizations. The students gain an understanding of the knowledge, competencies, attitudes, and daily activities required to perform the duties of the occupations they choose to pursue.

For more information, contact:
Washington Township High School
Sewell, NJ
(609) 589-8500, ext. 7036

Strategy: Integrating School-Based Learning and Structured Learning

Partner: NA

The Abraham Clark High School Health Occupations program is an academic program for students who have significant interest in pursuing careers in the health field. The program offers three sequential courses. The first course, Health Careers, is an introduction to various techniques, medical terminology, and professions associated with the health-care industry. The course is offered to sophomores and juniors at Abraham Clark High School and in another school district through distance learning (ITV). The second course, Health Occupations, introduces juniors and seniors to the health-care environment while supplementing further classroom instruction with clinical hands-on experience. Students work for two hours each day at an acute health-care facility or a long-term health-care facility. Students shadow a health-care professional and learn about the world of work. The final course, Health Occupations Co-op, is offered to senior students who successfully complete the prerequisite courses, maintain excellent attendance, and demonstrate good citizenship. Co-op students work in a health-related facility and receive compensation for their work.

For more information, contact:
Abraham Clark High School
Roselle, NJ
(908) 298-3367

Strategy: Peer Mentoring

Partner: NA

The Morristown High School's peer mentoring program trains high school students to be mentors. The program provides opportunities for students to make a difference in a child's or a troubled teenager's life. To participate in the program, a student must first complete the United Way of Morris County's twelve-hour Mentor Training program. The United Way program focuses on the roles, rights, and responsibilities of the mentor. Graduates of the program receive a certificate of completion.

For more information, contact:
Morristown High School
(973) 292-4803

Strategy: Guidance and Counseling
Partner: NA

All ninth-grade students meet three times a week in a classroom setting with their guidance counselor. The course covers the following topics: self-esteem; communication; coping with peer pressure; getting along with others; stress and conflict; understanding needs, wants, values, and goals; interest inventories; aptitude inventories; job leads and classified ads; job applications; job interviews; Internet sites and career and college information; vocational guidance; maintaining a career portfolio; current events in the world of work; steps in decision-making; required job skills; responding to constructive criticism; team-building; and work ethics. The various methods of instruction used include group activities, video presentations, research projects, administration of interest and career inventories, application of the Bridges software program, and maintenance of a career portfolio.

Three specific measures are available to document the program success. All ninth-grade students successfully complete the following program components using the Bridges career exploration program: a values inventory, a skills, inventory, an interest inventory, an investigation of suggested careers; requests for career materials; and analysis of career information. A career folder is completed by each student. This folder is updated and revised throughout the student's high school experience. An assessment instrument is administered.

For more information, contact:
High Point Regional High School
Sussex, NJ
(973) 875-8103

Strategy: Guidance and Counseling
Partner: NA

The Individual Career and Academic Plan (ICAP) is an important tool that increases a student's knowledge of the various careers that exist in today's marketplace and his or her awareness of the importance of career planning. This folder follows the student's progress in career development from kindergarten to grade six. Younger students are asked to think about the careers that are of interest to them, and they are encouraged to learn about a variety of careers.

The ICAP folder includes a record of each site visited, the date of the visit, and the activities that occurred at the job site. The student is also given a place to record personal impressions and thoughts about what was heard and seen. Another section of the ICAP folder provides space for the student to keep a record of the careers for which he or she has completed shadowing activities. The final section of the ICAP folder allows students to keep a record of the guest speakers they meet and their impressions of the speaker and the speaker's occupation.

For more information, contact:
STC Project Coordinator
Glassboro Public Schools
(856) 881-6366, ext. 318

Strategy: Job Shadowing
Partner: Varies

A job-shadowing program conducted on February 2, 2000 offered 600 students the opportunity to gain career awareness and explore occupations. In the medical field, students were able to gain firsthand experience in X-ray, radiology, dental, nursing, dietary, emergency, respiratory, EKG, and purchasing departments. One student was able to shadow the chief executive officer of a company that provides counseling services. Students interested in the sciences were able to observe lab technicians, engineers, and others working in the field. Other students spent time with researchers experimenting with new methods to grow crops and with the supermarkets where the mature food was being offered to consumers. At the supermarkets, the students were able to shadow baggers, sandwich makers, stock clerks, pharmacy assistants, and store managers. Students interested in law enforcement spent the day with members of the court system and with state and local police officers. A district-wide eighth grade class spent the day with its community administrators, police force, and maintenance department. The county political system allowed fourteen students (one student from each school district) to shadow the county freeholders. The students were made honorary freeholders and they participated in an actual freeholder meeting. The students spent most of the day with county employees. Before the freeholder meeting, the students and freeholders worked together to prepare for the students' evening presentation.

Field trips conducted throughout the year for students in grades K-12 help introduce a variety of careers. At school, students have access to career magazines, The Real Game activity, and Internet resources.

For further information, contact:
Project Director
Pennsville School District
(856) 540-6203

Strategy: Working with Organized Labor
Partner: Local 54

A teacher and up to eight students with disabilities work at each hotel/casino site. Each student is paired with a nondisabled employee mentor in training positions throughout the hotel, for example, dining-area attendant, line server, wardrobe attendant, environmental services worker, casino scheduling clerk, and administrative services clerk. The partnerships between ACSSSD and the casino/hotel properties and Local 54 have enabled ACSSSD to create "classrooms without walls" within the community, where students can participate in experiential learning and obtain training in a real work environment. The teachers and mentors help students learn specific job skills, appropriate work behaviors, and industry culture and norms. Students are evaluated on a monthly basis using a work-skill evaluation form that was developed in collaboration with the hotel/casino and Local 54. Each student also has a work-site agreement that specifies the roles and responsibilities of the student, parent, teacher, school principal, and employer.

For more information, contact:
Atlantic County Special Services School District
(609) 625-5663

Strategy: Classroom at an Industry Site
Partner: Sheraton Hotel

The Monmouth County Vocational School District's educational collaboration with Pacific Concord Management-Sheraton Hotel resulted in the establishment the Culinary Training Program, an exemplary structured learning experience. Collaboration is evidenced by joint training experiences. School instructors train employers at the work site and employers reciprocate by training instructors as they train their own employees. Hotel partners also invite instructors to attend corporate training sessions or conferences, keeping teaching staff current with industry technologies and skills. Students are trained through a variety of structured learning experiences to evaluate hospitality skills and interests. During shadowing activities, junior and senior high school students visit the hotel and its restaurants to explore hospitality careers. The high school students also receive culinary training provided by hotel mentors. Simulation and application activities using academic skills are included to help students solve daily problems. A seamless student transition from secondary program to college placement is facilitated through the articulation of eight college courses (18.5 credits) with the local and regional colleges.

For more information, contact:
Monmouth County Vocational School District
(732) 431-7943

Strategy: Involvement with a Local Chamber of Commerce
Partner: Cherry Hill Regional Chamber of Commerce
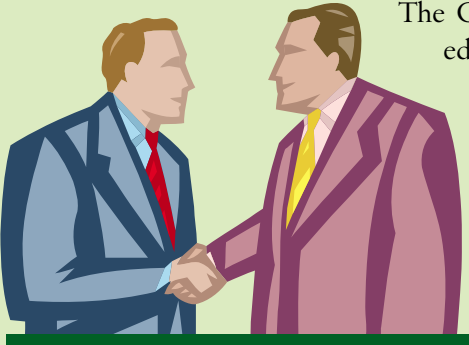
The Cherry Hill Regional Chamber of Commerce created the Career Awareness Program to help students increase understanding of careers through a combination of hands-on experiences, structured visitations, and lectures. The program has three main components as follows: job shadowing, business expos (business tours), and speakers in the classroom. The program components are chaired and implemented by members of the committee, which include the staff of the Cherry Hill Regional Chamber of Commerce, representatives from twelve participating high schools, and executives and management staff from the business community. By the end of the 1999-2000 school year, twenty-two business expos and sixteen allied health expos were held, and 100 students were placed in shadowing experiences. In all, more than 1,200 students were involved in the program. The Cherry Hill program is evidence of the success that can be achieved when the public sector, businesses and schools collaborate.

For more information, contact:
Cherry Hill Regional Chamber of Commerce
c/o (609) 989-7888

Strategy: Involvement with Junior Achievement
Partner: Junior Achievement

Junior Achievement offers several classroom-related instructional units that allow students to apply classroom experiences to work-related projects. Units involve economics, Success Skills 2000, Workplace Internships, Success Now, Company Program, Leadership JA and GLOBE. Economics is a one-semester course in which students learn the fundamental concepts of micro-, macro-, and international economics that are applied in active and engaging ways. Success Skills 2000 helps students acquire competencies and skills necessary for the modern workplace by learning interpersonal skills and problem-solving strategies. Workplace Internships offer students the opportunity to apply job-related skills and develop characteristics for the modern workplace. Success Now engages students in a variety of activities designed to help them develop personal skills appropriate for the workplace and to guide them in their career search. Company Program teaches students how to organize and operate a business enterprise that can be part of a school course or used with school clubs and organizations. Leadership JA helps students become active community leaders by studying about and working in the local economy. GLOBE brings together students from two different nations to form an import/export company that actually engages in international trade.

For more information, contact:
President
Junior Achievement of South Jersey, Inc.
(609) 222-1090

Strategy: Community Connection with Scouts
Partner: Girl Scouts of America or Boy Scouts of America

The school district examines the badge categories for different levels of scouts obtained from a scout leader. After comparing the badges available to the types of programs offered in the district, possible modified programs that might be offered for the scouts can be listed. Narrative descriptions are written that include the event number, date and time, location, age/level, fee (which is usually zero), and registration information. An example of a narrative might be that this program will cover topics designed to introduce you to computer applications, including: computer use in classrooms; commonly used software programs; popular computer games; and reviewing computer magazines for content. If time permits, the information is included in the county scout calendar. By completing the course along with other student-initiated procedures, the student meets the requirements for the badge.

For more information, contact:
Camden County Vocational School District
(856) 767-7000, ext. 5420

Strategy: Out-of-School Youth

Partner: New Jersey Youth Corps

New Jersey Youth Corps has been serving out-of-school youth in NJ since 1985. It is a comprehensive program that ties together several major elements that include counseling, basic skills, community service work, and job placement. Youth Corps enrollees participate full-time by spending one-half day in academic instruction and one-half day in community service work. Community service jobs provide controlled, supervised work situations where corps members can develop maturity skills that are essential for a good prospective employee. Jobs have included such varied activities as building renovations, landscaping, public parks beautification, day care assistance for senior citizens and children, and work in community theatre.

For more information, contact:
NJ Human Services
(609) 588-3898

Professional Development Programs

The Academic-Business Connections Conference

Academic-Business Connections (ABC) is a three-day conference for teachers, counselors, and administrators that encourages partnerships with members of the business community. The conference fosters the creation of innovative and meaningful ways to develop curricula that meet the needs of students in support of their postsecondary goals. The conference facilitates the process through both discussion and practical experience. Educators have the opportunity to learn more about the skills New Jersey employers require. Employers serve as hosts for the event and conduct workshops and business tours to stimulate critical thinking by attendees. Internships with some of the business sponsors are also offered at a later point as an option for selected participants.

For more information, contact:
Marketing and Public Relations Director
NJ Department of Education
(609) 292-7336

New Jersey Department of Labor Teacher Internship Program

For three years, the New Jersey Department of Labor has provided the leadership for a six-week School-to-Career/Employment Service (STC/ES) internship project for selected New Jersey educators. Classroom teachers and guidance counselors attend STC/ES orientation sessions in central-state locations and then spend the remainder of their internship learning about the services provided by local ES office personnel and by sister agencies, such as Vocational Rehabilitation, Unemployment Insurance and JTPA. Interns also complete a minimum of three job-shadowing experiences at local business/organizations and the interns meet with the leadership of their local Workforce Investment Board and STC consortium grantee. The participants develop lesson plans based on the teacher's summer experiences and the Core Curriculum Content Standards for the state.

For more information, contact:
New Jersey Department of Labor
(609) 292-3809

Business in Partnerships

Businesses are important resources in forming partnerships. Major employers often have a specialized human resources staff who can attend partnership meetings and develop and administer student placements. The urgency of running a business, however, also tends to make firms more isolated from the school system, less connected with other companies, and less aware of school initiatives.

The following strategies can help increase business involvement.

Personal Networks. Teachers, administrators, and parents have personal networks within the business community that practitioners can use to help involve businesses. Cultivating these connections builds a sense of community and encourages a culture of participation. To create this kind of network requires thinking of business involvement as a long-term partnership, one that builds trust and fosters relationships based on mutual respect and benefit. Although building upon personal connections is important when recruiting businesses, other approaches also lead to success.

Employment Specialists. A number of local school systems use employment specialists under a variety of job titles to develop partnerships with employers. Schools have found them particularly effective in recruiting businesses. Experience suggests that an employment specialist, acting as an intermediary between school and employer, can develop an understanding of the special needs and concerns of businesses. By devoting time and resources specifically to recruiting employers, employment specialists build relationships with businesses that might otherwise have been overlooked.

Intermediary Organization. The term "intermediary organization" encompasses a wide range of national, state, and local entities with links to employers, which can be called upon to facilitate the development of partnerships. Some businesses do not have internal structures or systems, such as training departments, to initiate and develop partnerships. Intermediary organizations can help fill this role.

Local intermediary organizations can relieve administrative pressures that often limit business involvement, such as coordinating the details of student assignments, providing payroll and benefit services, and providing information on liability issues. In some instances, they are the "employer of record" for participating students. Local intermediary organizations can also enhance the efficiency of an employer recruitment strategy, providing a single channel of communication and access to large number of businesses. An efficient and coordinated strategy ensures that employers do not receive multiple calls from staff members within the same school system — a situation that can create a burden for potential business partners.

Robert Kemmery, principal of Eastern Technical High School in Baltimore County, Maryland, suggests the following strategies for educators looking for business partners:
- Know your school's strengths and the businesses' strengths.
- Draft a business plan.
- Don't start out asking for money.
- Work as equals.
- Use 20 minutes to make the pitch.

Chapter 6

Activities

Strengthening the linkages between the academic content areas and the Cross-Content Workplace Readiness Standards, the following activities illustrate **interdisciplinary** approaches to workplace readiness. The interdisciplinary approach combines several academic content disciplines and workplace readiness in a single lesson or activity that provides the opportunity for students to see the relationships that exist among the disciplines. In addition, the use of a systems approach allows educators to develop an overview perspective, producing a highly motivating and engaging framework for learning. These approaches will result in students who are informed, skilled, productive, confident, lifelong learners and citizens of the twenty-first century.

This chapter provides *sample* activities that flow from a suggested problem statement. The activities are designed to meet the standards and indicators. Teachers may adopt, or adapt the activities or replace them with ideas of their own.

The activities were developed around a problem statement that empowers students to use cooperative learning to arrive at solutions. Links to other standards are included to suggest connections or relationships to other content areas. The problem spirals through the curriculum from grades K-12. The focus statement uses language that is appropriate to the developmental level of learners. Integrated learning develops skills that are salable, marketable, and of realistic value in the workplace. The number of activities selected will be determined by an interdisciplinary team of teachers as they coordinate student cooperative-learning team research and implementation over project timelines. Different problems may be selected at different grade levels to avoid duplication.

Sections A through D, preparation, action, reflection/evaluation, and extension, are included for each problem statement. Many of the items under section A, preparation, are generic to most or all problem statements, so these have been listed separately beginning on page 3. The teacher may engage in the preparation activities as deemed appropriate. Section B lists the actions (including teacher tips) for the learner. These were arranged to flow in a logical order for reading but are not necessarily sequential.   Reflection and evaluation activities, suggested in section C, are designed to allow the learners to contemplate what has been learned and to monitor their progress. The extensions in section D provide ideas for exploring corollaries and tangents.

Also included is a matrix of Cross-Content Workplace Readiness Standards showing related indicators for the activities. The list is illustrative and should not be considered definitive. Implementation will vary across districts and classrooms. (Note that for standard 3, indicator number 15 implies the inclusion of one through fourteen.)

In organizing the student projects, support and approvals may need to be obtained from administrative staff, building maintenance staff, and community and business leaders for activities involving speakers, field trips (transportation), and use of community facilities. The use of thematic problems can be integrated in accordance with district-approved curricula. Critical keys to successful implementation are planning, administrative and community support, and positive public relations outreach.

ACTIVITIES

A. Preparation: The teacher may engage in the following or additional activities as appropriate.

▶ Select and adapt/adopt the selected activities as deemed appropriate for the developmental level of the students.

▶ Enrich students' background knowledge and understanding of the topics and issues.

▶ Collaborate with other teachers and educational specialists to enhance the learner's experience.

▶ Investigate school-board policies and state code requirements.

▶ Secure appropriate administrator approval where necessary.

▶ Incorporate safety principles into the use of all equipment, materials, and movement for all activities.

▶ Prepare lessons around career pathways:
   • Arts and Humanities
   • Health and Human Services
   • Mathematics, Science, and Technology
   • Business and Information

▶ Incorporate current labor-market information on the availability of job opportunities in career pathways.

▶ Collaborate with the library media specialist and other educational specialists as appropriate to identify, secure, and integrate resources (print, non-print, electronic, and people resources).

▶ Contact community or business leaders for information and materials related to the problem statement.

▶ Work with the library media specialist to develop a related bibliography.

▶ Incorporate selected resources and works of literature related to each problem to develop skills and interest.

▶ Investigate software applications designed to assist students in developing and using computer models to understand and explore the problem.

▶ Develop and maintain a list of speakers and potential sites for field trip and/or community connections.

Statement A:

K-4

The local landfills are full. Propose a solution which encompasses local government, local citizens and local businesses.

Focus: Investigate recycling and waste management in the local community and develop an action plan to improve the situation.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.1, 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.3, 4.5, 4.7; Science 5.1, 5.2, 5.4, 5.5, 5.8, 5.12; Social Studies 6.1, 6.4, 6.9; World Languages 7.1

Sample Activities

List of CCWR Standards

	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▸ Listen to a presentation on local recycling efforts and regulations. ▸ Compare recycling and waste management. ▸ List related jobs and duties performed. ▸ Discuss working conditions and personal qualifications.	1, 7		8, 9, 10	3, 6	1, 6, 7, 8
▸ Read or listen to stories about garbage collection and recycling. ▸ Draw vehicles/containers used for recycling and include a motto for the safe disposal of materials. ▸ Develop the motto in the language of people in the community.	1	1	2, 8, 15	6	1, 2, 6, 7
▸ Explore the reasons for recycling. Draw conclusions about its impact on the community and the environment.		1, 3, 8	10	6, 8	
▸ Research the different sources of garbage in the neighborhood; i.e. stores, schools, restaurants, homes, construction sites, factories, etc. and determine how much garbage each source generates. *Teacher Tip: Grades K-2 can actually collect pictures of the kinds of garbage by each source, grades 3-4 can make lists.*		5, 6, 7	1, 3, 4, 5, 7	10	

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Categorize garbage by types and determine how much of each type. Research the amount of time for each type of garbage to decay. Recycle appropriate items into a real or virtual recycling bin, sorting the items into the recycling categories per community regulations. *Teacher Tip: Gather materials for students to categorize by community standards. Gather examples of items that use recycled materials. To control safety issues, it is recommended that the teacher select items to be sorted instead of students bringing items to school.*		5, 6, 7	4, 7, 9	2	1, 4, 6, 7, 8
▶ Brainstorm alternative uses of recyclable materials. ▶ Discuss health and safety issues related to handling and disposing of recycled materials and waste. Discuss industry use of recyclables.	5			9	1, 4, 6, 7, 8, 9
▶ Plan and implement a community service project related to recycling, e.g., collecting previously owned clothing or furniture to be donated to needy families and businesses, participating in adopt a street/highway program.	1, 2, 8		1, 4, 8, 13	2, 6, 7, 9, 11	3, 4, 7
▶ Create a multimedia presentation for the local government demonstrating how the group's ideas will solve one garbage issue. Include a proposal for encouraging recycling.	1	2, 3, 8, 9	1, 4, 8, 10, 14, 15	2, 6, 7, 11	7
▶ Compare and contrast different forms of packaging. ▶ Determine the form that creates the least waste and seems to be the safest.		1, 2, 3, 6, 7, 8, 10			1, 6, 8, 9
▶ Read labels from packaged goods and discuss the incidence of recycled materials used in packaging. ▶ Check for use of recycling symbols.	12				
▶ Create a design using recycled materials. ▶ Critique the designs.		1, 10, 15	3, 5, 11	5, 7	

Sample Activities

List of CCWR Standards

	1	2	3	4	5
C. Reflection/Evaluation					
▶ Monitor disposal of items by the student during one school day. ▶ Calculate the volume of materials and determine shapes and arrangements to minimize space.			7, 8, 9, 12, 13	4, 9	7
▶ Survey the home system of disposal and recommend improvements. ▶ Develop a plan to present to an adult in the home system to improve the situation. ***Teacher Tip: Encourage students not to touch materials but to perform the task by visual inspection.***			1, 2, 7, 10, 11 13		1, 6, 7
D. Extension					
▶ Coordinate the school activities for Earth Day or a schoolwide "Recycle Day."			1, 2, 7 10, 11, 13		1, 6, 7
▶ Create a musical instrument using materials from the home or school, e.g., straws, oatmeal boxes, cardboard tubes.	5		1, 6, 10, 15	3	1, 4
▶ Design and implement an actual system to be used all year to minimize school waste and to creatively dispose of other items. ▶ Construct actual receptacles for waste.	1, 2	1, 2, 7 8	2, 4, 8, 10, 15	2, 3, 9	2, 3, 4 5, 7, 8

5-8

Statement A:

The local landfills are full. Propose a solution which encompasses local government, local citizens and local businesses.

Focus: Develop an action plan for the community.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.4; Comprehensive Health and Physical Education 2.1, 2.2, 2.4; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.4, 4.5, 4.12; Science 5.1, 5.2, 5.3, 5.4, 5.6, 5.7, 5.10, 5.12; Social Studies 6.1, 6.4, 6.9; World Languages 7.1

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Find an article or printed resources related to recycling and bring to class. ▶ Report on individual articles and discuss problems and alternative solutions.		3, 5, 6	4, 5	10	
▶ Research the effects of toxic waste on humans and the environment. ***Teacher Tip: Examine the effects of toxic substances on growth and human development.***		3, 5, 6, 10	4, 5	10	6, 7, 8
▶ Plan a field trip to Sandy Hook or a similar site to examine living organisms on beaches, water and land formations. ▶ Hypothesize the effect of pollutants on living organisms and the environment. ▶ Discuss jobs related to all aspects of the industry observed.	1, 3, 7	2	1, 2, 3, 4, 7, 8, 12	1, 2, 9, 11	7
▶ Form teams to develop, disseminate, and tabulate an opinion survey in the community. ▶ Determine the costs associated with developing and conducting opinion surveys. ▶ Prepare a bid sheet, keeping in mind costs and the profit motive. ▶ Present a sealed bid to the town council or other local group	2, 3	1, 2, 4, 7, 8	1, 4, 8, 12, 15	1, 9, 11	7

Sample Activities   ## List of CCWR Standards

Activities	1	2	3	4	5
who will select the winning "contract." ▶ Develop a visual presentation of the results and display the outcomes.					
▶ Brainstorm some of the possible solutions. ▶ Identify pros and cons.				9	
▶ Develop an action plan to dispose of toxic waste. ▶ Include related safety issues. ▶ Identify some of the regulations that are applicable to handling, transporting and disposing of toxic waste. ▶ Hypothesize why these regulations are necessary. ▶ Describe how the pollutants travel.		1, 2, 5	1, 3, 4, 5, 11, 13, 14	1, 2	1, 2, 5, 6, 8
▶ View and critique a film that depicts a communicable disease or hazardous health risk situation. ▶ Compare and contrast the solutions presented in the film with the research reviewed. ▶ Discuss the role of governmental health agencies in health issues.	3		1, 2, 8, 12	5, 10	1, 5, 6, 7, 8
▶ Investigate employment opportunities in the associated career pathway.	2, 3, 5	2, 3, 5	4, 5	6	
▶ Invite guest speakers from those business, industry, and government agencies.	6, 7	6	10, 12		
▶ Complete a cost analysis for the action plan.	12	2, 3, 7, 8			
▶ Create a multimedia presentation for the action plan. *Teacher Tip: A portion of the plan may be prepared in a different language representing the ethnic groups of the community.*	1	2, 3, 7 9	1, 4, 8, 10, 14 15	2, 6, 7 11	7

Sample Activities

List of CCWR Standards

	1	2	3	4	5
C. Reflection/Evaluation					
▶ Summarize the action plan; present to the people surveyed for their feedback.	5	2, 7, 9	8, 9, 10, 12	1, 2, 3, 4, 9	7
▶ Write a letter to the editor supporting their position and include digital photos.		2, 3, 7, 8	1, 3, 8	5, 9	
D. Extension					
▶ Research procedures for handling spills of toxic materials. ▶ Include information on safety equipment and clothing.	3	2, 3, 5	1, 3, 4, 5	10	1, 5, 6, 7
▶ Videotape examples of damage resulting from pollutants in the community and include footage in a public service announcement for a local television channel.	3	2, 3, 6 7, 8, 9. 10	1, 2, 3 15	1, 2, 3, 9 3, 9	
▶ Contact a governmental agency in another country for information on its solutions to toxic-waste handling.		2, 3, 5, 6	1, 3, 4	10	7

Statement A:

9-12

The local landfills are full. Propose a solution which encompasses local government, local citizens and local businesses.

Focus: Develop an action plan for the community.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.1, 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.5, 4.7, 4.9, 4.12; Science 5.2, 5.2, 5.3, 5.4, 5.5, 5.6, 5.8, 5.9, 5.12; Social Studies 6.1, 6.5, 6.5, 6.12; World Languages 7.1, 7.2

Sample Activities

List of CCWR Standards

	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Brainstorm the types of garbage generated by homes, businesses, and government agencies. ▶ Categorize waste by types and calculate the volume of the waste handled for the community.				9	
▶ Conduct a longitudinal study of incentives and disincentives for recycling products. ▶ Hypothesize forces that are responsible for increased production of waste in the community, state, and world. ▶ Identify public and private agencies that accept items for recycled use and explain the benefits, e.g., eyeglasses, batteries, cars, etc. ***Teacher Tip: Students may want to focus on a study for the school rather than on a study for the entire community.***		2, 3, 4, 5, 6, 7, 8	1, 3, 4, 5, 8, 9, 10, 12	2, 9, 10	
▶ Contact a local waste management firm and gather data on the costs associated with disposing of various types of products. ▶ Analyze the data in a spreadsheet program using algebraic formulas. ▶ Compare costs to consumers and costs to the waste management firm. ▶ Hypothesize the cost for the school, a selected business, a	12	2, 3, 4, 7, 8	2, 3, 4, 5, 8, 9, 10	3	7, 8

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
government agency, and a typical home in the community. ▶ Calculate and chart the actual costs to comply with regulations and implement safety and health precautions.					
▶ Research the issues and find an article that identifies attempts to establish a new waste disposal location/plant. ▶ Examine the pros and cons of developing the site/plant. ▶ Investigate potential hazards the transportation of toxic waste poses to the communities it must pass through and what can be done to prevent accidental spills. ▶ Develop a marketing plan and one public relations piece to convince residents of the need for the site/plant.		1, 2, 3, 5, 6, 7	1, 3, 4, 5, 8, 12, 15	1, 2	
▶ Plan and conduct experiments of various materials e.g., aluminum, newspaper, glass, plastic to determine their properties and the ability to be recycled. *Teacher Tip: Students may need to research the properties of the materials.*		2	1, 2, 3	7, 9	6, 8
▶ Create a table comparing the advantages and the disadvantages of incineration as a disposal method.		2,4	4, 5, 8, 9, 12	10	6, 8
▶ Create a visual presentation on safe ways of disposing of various materials or products.		2, 8	1, 8, 15		5, 6, 7 8
▶ Develop and execute a plan for assisting a community organization that redistributes previously used materials to other residents. *Teacher Tip: Plan a volunteer or community-service project and have students add an entry on their participation to their resumés.*	1, 3, 5, 8, 10	2, 3, 7	10	1, 2, 3, 6, 9	7
▶ Design and develop an object that uses recycled materials as the energy source.		1, 2, 3, 8	1, 2, 3, 6, 10, 11, 14, 15	1, 2, 11	4, 7
▶ Trace the issue of waste disposal through past eras. Include information on health and sanitation issues.		3, 5, 6, 7	4, 5	10	

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Compare current waste quantities and disposal techniques around the world. **Teacher Tip: Recommend communications via the Internet that might include native languages.**		3, 5, 6, 7	3, 4, 5, 8, 9	10	
▶ Prepare a proposal for the community that will maximize the reuse of unwanted products, as well as minimize the amount of waste to be disposed.		2, 3, 5, 6, 7, 8	4, 5, 11, 14	1, 2	2, 6, 7

C. Reflection/Evaluation

	1	2	3	4	5
▶ Research an article that shows the ways in which people have been helped through recycling projects. Write a narrative on feelings about the project.		2, 3, 5, 6, 7, 8	10		
▶ Write a futuristic story about what the earth will be like if the waste keeps increasing. ▶ Illustrate or dramatize the story.		3, 8	1, 8, 10		

D. Extension

	1	2	3	4	5
▶ Research and plan experiments to determine ways of limiting the deterioration of food products that results in waste. ▶ Write up lab procedures and results.		2, 3, 5, 6, 7, 8	1, 3, 6, 7, 8, 9, 14	2	6, 7
▶ Debate the ethics and impact of genetic engineering.			10	10	
▶ Use previously owned garments to make a quilt to be donated to a charity or a health-care facility.	8	7, 8	1, 13, 15	1, 2, 5, 9	7
▶ Create a sculpture using recycled materials. ▶ Form a company whose purpose is to sell its artistic works for profit. ▶ Develop an organizational design diagram. ▶ Define roles for various positions. ▶ Apply for positions and perform duties in the following areas: develop an operational budget, develop and implement a plan for a show, develop a plan and solicit contributions, plan and implement marketing strategies, develop and hold tours,	1, 2, 5, 7, 9, 10, 11, 12	2, 3, 4, 8	2, 15	1, 2, 3, 9, 11	7

Continued on next page

Sample Activities

List of CCWR Standards

	1	2	3	4	5
conduct an analysis of products sold, develop a profit report, and plan for distribution of funds. *Teacher Tip: Tour exhibits that use farm tools as components of the artistic creations, e.g., dinosaurs.*					
▶ Recycle an adult coat to fit a child.		7, 8	1, 13, 15	1, 2, 5, 9	7
▶ Research and chart the sources of toxic waste. ▶ Propose methods to limit toxic waste in the community.		5, 6	3		6, 7, 8

Statement B:

K-4

A schoolwide unity day to celebrate diversity is being planned by the school. As part of the celebration, a mini-Olympics will be held. A plan needs to be developed and implemented to include opening exercises, main events, and closing ceremonies. A small budget has been allocated but will need to be supplemented.

Focus: Develop an understanding of the components of an Olympic celebration. Plan, implement, and evaluate a schoolwide mini-Olympics.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.6; Comprehensive Health and Physical Education 2.5, 2.6; Language Arts Literacy 3.2, 3.3, 3.5; Mathematics 4.1.3, 4.1.8; Science 5.3; Social Studies 6.8; World Languages 7.2

Sample Activities   List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▸ Discuss the cultural diversity of participants in various Olympic events. ▸ Create a visual representation highlighting the different cultural groups.		5, 6, 7, 8	4, 5, 9, 12	6	
▸ Compare and contrast differences in participants' backgrounds, skills, limitations, ethnicity, gender, languages, etc.		4, 6, 7	4, 5, 9, 12	6	
▸ View excerpts from Olympic events. ▸ Create a concept chart of the components of an Olympic celebration, e.g., opening and closing ceremonies, various sporting competitions.		7	7, 8, 9		
▸ Plan events to be held in the school's Olympics. ***Teacher Tip: Committees may be divided by grade/ developmental level, classes, or committees within a single class.***	2, 3	4, 6, 7, 8	1, 4, 5, 8, 13, 15	1, 2, 3, 9, 11	1, 2, 5, 6, 7, 8, 9

Sample Activities

List of CCWR Standards

Activity	1	2	3	4	5
▶ Brainstorm the type of emergencies that might occur during ▶ Develop a plan that addresses how emergencies will be handled.		2	1, 3, 15	9	1, 2, 6, 8, 9
▶ Discuss job opportunities that will be available for the Olympic events. ▶ Establish the framework for applying for positions and carrying out functions.	2, 3, 5, 9, 10, 11	2, 6, 7	4, 5, 13	1, 2, 6	
▶ Develop a procedure for compensation, rewards, incentives, etc., for completing assignments/job tasks.	1, 5, 12	2, 7, 9	1, 4, 5, 11, 13	1, 2	
▶ Devise a marketing plan and publicize the school Olympics to the school community.	3	6, 8, 9	4	2, 9	
▶ Listen to several musical themes. ▶ Discuss theme, tempo, beat, and the feelings they evoke. ▶ Select a musical theme to use for the opening and closing ceremonies. ▶ Write and perform a song in another language.		8	1, 10, 15	1	
▶ Develop noncompetitive activities to participate in as an individual or team. ▶ Include games that are specific to different cultures.		6	5	2, 6, 7	1, 6, 7
▶ Produce a banner celebrating diversity for each class or team to carry into the arena for the opening ceremony. ▶ Develop the banners in a second language being studied. *Teacher Tip: Demonstrate safety procedures and the safe use of tools and equipment during banner production.*		8, 9	1, 15	6, 9	1, 4, 7, 8
▶ Discuss sportsmanship and ways to practice it in the activities. ▶ Identify and discuss rules of sportsmanship.	1			2, 6, 7	
▶ Analyze a case study on a conflict situation in a mini-Olympics. ▶ Discuss issues. ▶ Use puppets or similar materials to present solutions.	5		1, 2, 11, 13, 14	6	

Sample Activities

List of CCWR Standards

	1	2	3	4	5
▶ Chart the fastest, average, and slowest times for selected events.		2, 7			
Teacher Tip: Wherever appropriate, substitute distance, height, and/or weight for the time.					

C. Reflection/Evaluation

	1	2	3	4	5
▶ Discuss whether participants had fun through the planning of and participation in the event.				3, 4, 5	
▶ Explain how the diversity of the participants contributed to the success of the event.				6	
▶ Talk about why everyone can have fun, winning or losing.				3	
▶ Evaluate the success of the event.				11	
▶ Monitor feelings about participating in the program.			10	3, 11	

D. Extension

	1	2	3	4	5
▶ Watch a Special Olympics event and compare it with the school's event.			9, 12		
▶ Visit, if possible, an Olympic training site or a site for field activities.					7

5-8

Statement B:

A schoolwide unity day to celebrate diversity is being planned by the school. As part of the celebration, a mini-Olympics will be held. A plan needs to be developed and implemented to include opening exercises, main events, and closing ceremonies. A small budget has been allocated but will need to be supplemented.

Focus: Develop an understanding of community and individual differences celebrated in a Special Olympics.
Links to Other Standards: Arts (Visual and Performing) 1.1, 1.3, 1.4; Comprehensive Health and Physical Education 2.5,2.6; Language Arts Literacy 3.2, 3.5; Mathematics 4.5, 4.6, 4.9; Science; Social Studies 6.9; World Languages 7.2

Sample Activities

List of CCWR Standards

	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Research the summer or winter Olympics. ▶ Include a segment on times when local community Olympics were not held due to political or other conflicts. ***Teacher Tip: Visit www.specialolympics.org.***		5, 6, 7	1, 4, 5, 8		
▶ Explore the use of conflict resolutions skills in situations where groups or individuals disagree.	1		1	4, 5, 6, 7	
▶ Identify the ethnic diversity in the town and research the cultural background of each. ▶ Research changes in the demographic make up of our country. ▶ Analyze the data in a spreadsheet program using algebraic formulas. ▶ Present the results in a graph.		4, 6, 7	4, 5, 12	6	
▶ Research the languages of the various ethnic groups of the community and act as interpreters at planned events.		4, 6, 7	4, 5, 12	6	

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▸ Investigate Special Olympics and invite participants in this initiative to speak. ▸ Role-play participation in a Special Olympics event. *Teacher Tip: Emphasize self-worth, self-image, and evaluation related to winning and losing and accomplishments.*		4, 6, 7	4, 5	6, 7	3, 7
▸ List jobs that will be available in producing a Special Olympics, e.g., coaches, athletic trainer, scheduler, judges, sales.	9	2, 7	4	2	
▸ Select a job and research the skills required to perform that job. ▸ Write a letter of application; participate in a job interview. ▸ Perform the tasks associated with the job.	2, 3, 5, 7, 8, 10, 11	4, 6, 7	4, 5		3, 4, 5, 7
▸ Develop opening and closing activities that include a dance, song, and welcome speech, etc., incorporating languages represented in the community.		6	5, 15	2, 6, 7	3, 6, 7
▸ Develop competitive and noncompetitive events. ▸ Compare the skills necessary for events with employability skills.	1, 5	6	9	2, 6, 7	1, 3, 8
▸ Recommend a comprehensive plan for the safe participation of all guests/participants.		6	4, 11, 13		2, 8, 9
▸ Develop a training program concerned with the specific demands of each event, e.g., physiological, nutritional.		4, 6, 7	15	1,9	2, 5
▸ Develop an advertising campaign in multiple languages/or in a language other than English.		4, 6, 8	4, 15	1, 6	
▸ Establish and develop competitive teams to plan and execute a plan for innovative ways to raise funds. ▸ Identify the team that raises the most money. ▸ Determine a reward for the winner. ▸ Compare and contrast anticipated revenue with actual revenue. ▸ Plan for team distribution of profits and awards. ▸ Analyze the techniques used by the winning team and *Continued on next page*	1, 2, 5 12	4, 5, 6, 7	4, 5, 15	1, 2, 9	7, 8

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
determine strategies for future improvement. *Teacher Tip: Follow district policies and procedures with regard to fund-raising.*					
C. Reflection/Evaluation					
▶ Evaluate the job selected and write a short essay on what was liked, what disliked or what could be improved for next time.	2, 3, 5		2, 8, 10, 11	1, 3, 11	
▶ Compare the feelings created by competitive and noncompetitive events.			11	3, 11	
▶ Determine the success of efforts to involve participants and spectators. ▶ Analyze data and present information on the number of spectators and the number of participants in events. ▶ Analyze the data in a spreadsheet program using algebraic formulas.		4, 7	7, 8, 12	2, 3	
▶ Role-play participation in Special Olympics event. ▶ Record feelings and abilities in a journal.			10	2, 3, 6	3
▶ Develop an injury prevention program for athletes, spectators, event organizers, coaches, or judges, etc. which would also include first aid procedures.		6			1, 2, 6, 9
D. Extension					
▶ Volunteer to serve on committees for the state's Special Olympics.	1, 3, 8, 9			2, 6, 7	7

Statement B:

9-12

A schoolwide unity day to celebrate diversity is being planned by the school. As part of the celebration, a mini-Olympics will be held. A plan needs to be developed and implemented to include opening exercises, main events, and closing ceremonies. A small budget has been allocated but will need to be supplemented.

Focus: Develop an understanding of the components of an Olympic celebration. Plan, implement, and evaluate a schoolwide mini-Olympics.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2; Comprehensive Health and Physical Education 2.2, 2.3, 2.5; Language Arts Literacy 3.2, 3.5; Mathematics 4.2; Science 5.1, 5.3; Social Studies 6.5; World Languages 7.2

Sample Activities

List of CCWR Standards

Activity	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Determine and convene essential committees to host Olympics such as financial; advertising; main events; opening and closing events; crowd care; awards; transportation; security; food; medical care; lodging; facilities construction; cleanup, etc. ***Teacher Tip: Include cultural diversity and customs.***	5	4, 6, 7, 8	1, 4, 8	1, 2, 6	8
▶ Develop job descriptions and highlight transferable skills. ▶ Develop application scoring sheet. ▶ Apply for positions on the committee.	2, 3, 5, 9, 10, 11				
▶ Develop a committee implementation plan based on consensus and the integration of ideas.	1	7, 8	1, 4, 8, 15	1, 2, 4, 5, 7, 9	2
▶ Investigate the sites of past Olympic events. ▶ Compare and contrast cultures and their impact on experiences.		4, 5, 6, 7	1, 4, 8, 9, 12	6	

Sample Activities

List of CCWR Standards

Activity	1	2	3	4	5
▶ Analyze the incidence of injuries and accidents and determine safety hazards at Olympic training or events. ▶ Analyze the data in a spreadsheet program using algebraic formulas. ▶ Develop an injury prevention plan.		4, 6, 7, 8, 9	12		1, 2, 5, 8, 9
▶ Construct a personal schedule for an Olympic athlete.		8	13		
▶ Develop a complete itinerary for an athlete, a spectator, media personnel, support teams, and local citizens.		8	5, 8, 15		
▶ Develop a multimedia presentation on careers in sports, tourism, hospitality, media, and communications in the state of New Jersey.	3, 9	2, 8, 9	15	9	
▶ Conduct the schoolwide mini-Olympics to implement all planned phases.	1, 3, 5	9	15	5	1–9
▶ Propose solutions to drug use in competitive athletic events.		6	3, 4, 5	8	1
▶ Develop scoring and record-keeping systems for time, distance awards, technical difficulty, etc.		1, 4, 7, 8			
▶ Establish a banking system for currency exchange, etc.	12	4, 7			
▶ Calculate the costs and expenses to hold an Olympic festival.	12	2, 7			

C. Reflection/Evaluation

Activity	1	2	3	4	5
▶ Assess group work as it relates to achieving a goal. ▶ Explain difficulties and conflicts. ▶ Propose resolutions. ▶ Write a story with two endings: one that illustrates successful conflict resolution and one that depicts the results of an unsuccessful resolution.			3, 13	4, 5, 11	

Sample Activities

List of CCWR Standards

D. Extension

Sample Activities	1	2	3	4	5
▶ Analyze tapes of previously held Olympics for media coverage effectiveness. ▶ Predict the Neilson ratings. ▶ Draw a comparison between the techniques used and the number of viewers.		4, 5, 6, 7	8, 12		
▶ Study the different societal influences on rules and how the Olympic rules were implemented. ▶ Determine if they reflect the changing times. ▶ Project and debate specific changes.		5, 6	3, 4, 5, 8, 9, 11, 14	3, 4, 5 7, 9	
▶ Develop menus and foods reflective of various cultures to be sold at Olympic events.				6, 9	
▶ Design blueprints, site plans, etc., for new buildings to be constructed at the site and create models. ▶ Develop and produce brochures for various events, schedules in different languages, menus, etc.		4, 6, 7, 8, 9	4, 8, 15	1, 2	6, 7
▶ Divide into committees and participate in an entrepreneurial project for the production, marketing, and sales of Olympic souvenirs. ▶ Develop a business plan for the overall project that is focused on a target audience. ▶ Keep detailed budget and accounting records.	3, 8, 12	8	15	1, 2, 3, 9	4, 7, 8

Statement C:

K-4

Statistics indicate that drugs have an impact on worker productivity and safety. Develop a program or campaign focusing on the reduction of substance abuse in the community and in the workforce.

Focus: Develop general awareness about substance abuse and its effect on personal behaviors and life.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.3, 1.4, 1.5; Comprehensive Health and Physical Education 2.1, 2.2, 2.3, 2.6; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics; Science 5.1, 5.2, 5.3, 5.6; Social Studies 6.1; World Languages

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▸ Use a book, a cartoon, or a program to identify the role models, character traits, and problem behaviors (include substance abuse) of people in various employment and life situations.	1, 2, 5		4, 5	6	5
▸ Implement an incentive program to acknowledge students who display good character traits.	2, 5	2	15	1, 2, 11	
▸ List and discuss the reasons for taking drugs.			1, 3, 9	3	
▸ Distinguish between a good drug and a bad drug.			1, 3, 9	8	1, 6, 8
▸ Differentiate between the use and abuse of substances.			3, 5	8	1, 6
▸ Draw a cartoon promoting a healthy lifestyle.			1, 10		
▸ Analyze the effect of individual choices, including drug use, on family, community, education, and employment (performance and safety).		5	9, 12		1, 6

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Role-play making choices in given situations and hypothesize the impact of the decisions made.			1, 3, 13	2, 8	
▶ Practice saying no to drugs/substances.				8	
▶ Discuss how substance abuse by community helpers and workers might affect people. ▶ Identify the range of injuries and accidents that might occur as a result of a worker's use of drugs.	1	6	8		6, 8
▶ Develop a poster campaign depicting the importance of a drug-free workplace and community. Display the posters throughout the school or parade them around the block. *Teacher Tip: Ask the police department to help with traffic control.*	1	8		1, 2	1, 2, 8
▶ Invite the school student assistance counselor or other available professional to address the class on substance abuse. *Teacher Tip: The school counselor is a good resource for building students' self-esteem and for substance abuse prevention.*			4, 5	8	
▶ Develop questions and interview a parent/guardian or relative about substance abuse and consequences in the workplace.	1, 2		3, 8	6	

C. Reflection/Evaluation

	1	2	3	4	5
▶ Create a journal of personal character traits that make you special (use print or pictorial representations).			4	3, 8, 10	

D. Extension

	1	2	3	4	5
▶ Using a word-processing program, create a story that illustrates the impact of the character traits and skills discussed in the world of work.	1, 2, 5	2, 8	1		
▶ Hold a ceremony to declare "I am drug-free."	1	2		3, 8	9
▶ Collect nonperishable items and money. ▶ Take a trip to a local food bank/soup kitchen to donate items.	8, 12	2		1, 2	3, 6, 7, 8

5-8

Statement C:

Statistics indicate that drugs have an impact on worker productivity and safety. Develop a program or campaign focusing on the reduction of substance abuse in the community and in the workforce.

Focus: Develop an antidrug media campaign.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.4; Comprehensive Health and Physical Education 2.1, 2.2, 2.3, 2.6; Language Arts Literacy 3.1, 3.2, 3.4, 3.5; Mathematics 4.1, 4.2, 4.5, 4.7, 4.12; Science 5.1, 5.6; Social Studies 6.1; World Languages 7.1, 7.2

Sample Activities

List of CCWR Standards

	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Using a spreadsheet program, analyze the extent of drug use in our country over the last ten years. ▶ Present the results in a graph. Research the effects of substance abuse on human physiology and human behavior. ▶ Research on the Internet the impact of substance abuse on the workplace.		4, 5, 7	1, 8	10	
▶ Choose and invite students and speakers from the community to discuss the impact of substance abuse on life and employment (examples: sports, clubs, military, officeholders).	2		4		6
▶ Identify jobs where safety might be compromised if a worker is using drugs. ▶ Create a database related to loss of time, injuries, costs to employers, etc. ▶ Analyze the data in a spreadsheet program using algebraic formulas.		4	5		1, 6
▶ Organize and evaluate different advertisement campaigns. ▶ Brainstorm advertising methods on the board and break into		2, 8	3, 15	1, 2, 7, 9	

Continued on next page

Sample Activities   List of CCWR Standards

Sample Activities	1	2	3	4	5
subcommittees to establish short- and long-term goals, set up a timeline, identify resources and materials for project completion, and establish roles for the group.					
▶ Form small groups and research methods of advertising. ▶ Search various resources for existing ad campaigns targeting substance abuse. ▶ Evaluate the effectiveness of the advertising.		3, 5, 6, 7	2,5	2, 10	
▶ Analyze antidrug ad campaigns from different countries. ▶ Identify methods of propaganda included in the various campaigns.		5	9, 12		
▶ Investigate various careers in advertising through research and speakers. (Speakers share their knowledge and samples of their ad campaigns.)	3, 5, 6	6	4		
▶ Organize, synthesize, and evaluate the different ad campaigns for their target technique. Keep a log.		3, 5, 6, 7	7, 8, 9		
▶ Plan and implement an "Ask the Experts Day" to consult experts in the fields of advertising, television, media, and print. ▶ Include such topics as the use of technology, problems, career opportunities, and academic preparation to facilitate the development of the advertising campaign.	1, 2, 3, 5, 7	10	3, 4	7, 11	9
▶ Create a media ad campaign that uses persuasive techniques and focuses on reducing substance abuse in the workplace. ▶ Use strategies such as PowerPoint presentations, radio commercials, television ads, plays, short films, posters, bumper stickers, T-shirts, painters hats, songs and raps. ▶ Include inter- and intrapersonal skills and safety in the workplace.		2, 4, 5, 6, 7, 8, 9	15	1, 2, 9, 10	3, 4, 7, 9
▶ Design a rubric to evaluate the ad campaigns.		2	8		
▶ Present ad campaigns to an audience, referencing the various advertising related careers that would be involved in preparing and presenting ad campaigns in the workplace.	3, 5, 6, 7	2, 8, 9	15	9	

Sample Activities

List of CCWR Standards

	1	2	3	4	5
C. Reflection/Evaluation					
▶ Add journal entries that describe an understanding of how advertisements have changed and how advertisements have had an effect on their life.		10	9, 10, 12		
▶ Conduct a survey to determine the best campaigns.		2, 4, 10	3, 12		
▶ Develop and host a contest for teams to present ad campaigns to judges.	1	2, 9	4	1, 2	
D. Extension					
▶ Participate in job shadowing at an advertising firm to determine personal skills and competencies for employment.	3, 4, 7		4, 7	9, 11	9
▶ Identify contacts to offer the "best campaigns" to local radio and television stations to use as public service announcements. ▶ Make these "best campaigns" available for community businesses to use in their employee training programs. ▶ Track the winning campaigns that were used by the stations and the companies. Analyze the campaigns for similarities and differences that led to their selection.		2	3, 4, 9, 14	4, 11	7, 9
▶ Hypothesize ways in which advertising will be used in the future.			3		

Statement C:

9-12

Statistics indicate that drugs have an impact on worker productivity and safety. As a CEO, develop a program focusing on the reduction of substance abuse in the workplace.

Focus: Develop a substance-abuse prevention program for the workplace.

Links to Other Standards: Arts (Visual and Performing) 1.3; Comprehensive Health and Physical Education 2.1, 2.3; Language Arts Literacy 3.1–3.5; Mathematics 4.1–4.5, 4.11; Science 5.1, 5.2, 5.5, 5.6; Social Studies 6.1, 6.6; World Languages 7.1

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Interview local business leaders, union leaders, and local medical personnel to ascertain the perceived extent and impact of substance abuse in the workforce in the local area.			3, 4, 12		9
▶ Survey local companies to determine the number of companies that have operational substance abuse programs and related safety and health guidelines in their workplace.		2, 4, 7, 9	3, 4		8
▶ Research the statistical data on the financial consequences of substance abuse in the workforce. *Teacher Tip: Students may calculate the financial impact of drug abuse on their community. Research hospital and police records, approximate costs in lost staff time, medical care, damaged property, etc.*	12	2, 3, 4, 5, 6, 7	3, 12	10	
▶ Develop a web page that lists the types of employment positions available in a company. ▶ Develop a list of jobs done by each type of employee and post on the web site. ▶ Include a section on the web page on policies, procedures, and help on substance abuse issues. ▶ Develop community survey and post on the web site.	3, 5	1, 7, 10	1, 4, 8, 15	9	7

Sample Activities

List of CCWR Standards

Activity	1	2	3	4	5
▶ Post information with "hit" counters to determine number of people accessing the information and responses to survey items. ▶ Determine ways to tabulate results. ▶ Develop a marketing strategy and implement it to encourage people to visit the web site.					
▶ Investigate the relationship between substance use and abuse with accidents and violence.		5, 6	5, 9, 12		1, 8
▶ Research the consequences of a criminal record on acceptance into a college or employment.	2	5, 6	4, 9, 12	10	
▶ Investigate the prevalence of drug testing in the workplace.		5, 6, 7	4, 5, 8		
▶ Establish a strategy for reducing substance abuse in the company.			15	8	
▶ Develop role-playing skits that demonstrate effective and ineffective methods of intervention when dealing with coworkers and/or employees who have a substance dependency or usage problem.			1, 13	2	8
▶ Collect, analyze and produce timely, culturally sensitive company policy information concerning substance use and abuse.		8	4, 8	6	6, 8, 9
▶ Develop a model substance-abuse prevention program for business and industry. *Teacher Tip: This program may be written in different languages.*			15		8

C. Reflection/Evaluation

Activity	1	2	3	4	5
▶ Write an essay on how the learner defines acceptable substance use as related to personal performance in the workplace.	1		10		

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Role-play both the manager's and the employee's role when an employee has displayed behavior that indicates possible substance abuse.	1		1	2, 6	8
▶ Investigate careers that relate to substance-abuse testing, counseling, and treatment and visit the work sites of individuals in these careers.	3, 5, 6	5, 6	4, 5		9
▶ Compare and contrast the effects of different substances on various tasks in the workplace.		5, 6	4, 5, 9, 12		
▶ List individual short- and long-term goals and analyze the impact of substance abuse on the possible attainment of those goals.			10	1	
▶ Determine how to improve an existing long-range strategic plan based on local needs for preventing substance abuse in the community. ▶ Develop such a plan if none exists.			3, 4, 8, 13, 15	1,9	8

D. Extension

	1	2	3	4	5
▶ Develop a Peer Leaders Program for addressing student concerns.			1, 2, 3, 4, 15	2, 5, 7	
▶ Debate incarcerating or rehabilitating a drug abuser.			1, 3, 8, 14	9	8

Statement D:

K-4

Climatic conditions have changed in the twenty-first century. Research scientists are looking to the oceans to create habitable communities. Create an underwater community.

Focus: Students will explore the ocean as a habitat for human life.

Links to Other Standards: Arts (Visual and Performing) 1.6; Comprehensive Health and Physical Education 2.1, 2.4; Language Arts Literacy 3.2, 3.3; Mathematics; Science 5.3, 5.5, 5.6, 5.7, 5.8, 5.10, 5.12; Social Studies 6.4, 6.5; World Languages 7.1

Sample Activities

List of CCWR Standards

A. Preparation: *(See page 6-2)*

B. Action: *The student will*

Sample Activities	1	2	3	4	5
▶ Define the term "ocean." ▶ Compare and contrast with other bodies of water. ▶ Identify devices and products necessary to live on the ocean floor. ▶ Calculate the amounts of goods needed to sustain a community for a year.		6	1, 3, 5		
▶ Study fresh- and saltwater bodies, including water currents and waves, vegetation, marine life, and land formation on the ocean floor. ▶ Categorize terminology using two languages. ▶ Create models of the water cycle.		6, 7, 8	2, 12		
▶ Plan and conduct experiments focused on buoyancy, water movement and tides, and the ability of water to support life. ▶ Compare similarities. ▶ Contrast differences. ▶ Construct a Venn diagram.			2, 6, 7, 8	10	7
▶ Investigate the types of fresh- and saltwater plant and animal life that might be harvested as future sources of food.		5, 6	5, 9		

Sample Activities   List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Plan and construct a water-tight ocean floor habitat. ▶ Identify the skills required to construct it.	5	1	15	2, 7	6, 7
▶ Develop an illustrated book depicting plant and animal life in the oceans. ▶ Label them in two languages.		8	8		
▶ Explore career opportunities associated with ocean habitats.	3, 6, 7	6	5	10	
▶ Compare the consumption of marine-based foods by humans in various cultures. ▶ Create a graph that illustrates the types and amounts of marine- based foods consumed by humans in various cultures around the world.		6	5, 9		

C. Reflection/Evaluation

	1	2	3	4	5
▶ Write a story about the life of a person living in a sphere on the ocean floor.			10		8
▶ Present the stories and critique based on the ability to sustain life.			10	4, 5	
▶ Evaluate projects with class/student-created rubrics.			10, 14	11	

D. Extension

	1	2	3	4	5
▶ Invite professionals in the marine/ocean food and science industry to speak. ▶ Read books related to life in and on the seas. ▶ Schedule trips to aquariums, science museums, and exploratoriums.	3, 5, 7		3	9	6, 8, 9
▶ Plan and take a field trip to an aquarium.	3			1, 2	7
▶ Create a cartoon about the life of a person in an underwater environment.					8
▶ Complete a job-shadowing experience with aquarium workers.	2, 3, 4, 7			9	8

Statement D:

5-8

Climatic conditions have changed in the twenty-first century. Research scientists are looking to the oceans to create habitable communities. Create an underwater community.

Focus: Work in project teams to develop an aquatic biosphere.

Links to Other Standards: Arts (Visual and Performing) 1.6; Comprehensive Health and Physical Education 2.1, 2.2, 2.4; Language Arts Literacy 3.1, 3.2, 3.4; Mathematics 4.7; Science 5.6, 5.9, 5.10; Social Studies 6.3, 6.7, 6.8, 6.9; World Languages

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Define a "community."			4		
▶ Develop a chart on the components of a community, e.g., the makeup of a community, the method of government, the responsibilities of the members, site plan and architecture, unique features, the goods and services needed in a community.	3	2, 5, 6 ,8	1, 2, 3, 9		
▶ Write an essay explaining what the learner likes about living in a community on land and compare to hypothetical living in an underwater environment.		8	3, 9, 10		
▶ Divide into project teams to 1. research an ocean location; 2. determine the kind of government and the roles that are needed in the underwater community. Include description of role; 3. determine the kinds of jobs, worker qualities, and profession that would be needed to design and construct the underwater community; 4. determine the kinds of businesses, jobs, worker qualities, services and professions that would be needed in the community, including job descriptions;	1, 3, 5, 7	1, 2, 5, 6	1, 3, 4, 12, 13	1, 2, 9, 10	8

Sample Activities   ## List of CCWR Standards

5. design an educational system that would be needed to serve a community of this size. Including job descriptions.
Teacher Tip: Provide examples of job descriptions for students to review.

Activity	1	2	3	4	5
▶ Each subcommittee will select, develop, and present to the class a design model based on the above research.	1	1, 2, 8, 9	15	1, 2, 7, 9, 10	8
▶ Research light sources that can be used for food production under water.		6		10	
▶ Calculate water pressure for different levels of underwater living.		7			
▶ Create an aquatic biosphere. *Teacher Tip: Emphasize safety during the construction.*		2, 9	15	1	4, 7
▶ Develop a portfolio detailing observations of life in the Biosphere.			2, 7		
▶ Critique a movie related to underwater living. ▶ Identify ideas and issues that may affect the underwater community. ▶ Identify the jobs, roles, and careers needed to sustain such a community. Investigate career options associated the film industry.	3, 5, 6, 9	5, 6	1, 2	5	5, 6
▶ Divide into teams to create a video on the ways raw materials from the ocean are used. ▶ Research companies that have an association with the raw materials. ▶ Contact a potential corporate sponsor for support of the video development. ▶ Hold a competition to determine the winning video in various categories. ▶ Plan and hold a movie award night.		1, 9, 10	15	1, 2, 9, 11	7
▶ Create a pie chart that illustrates the allocation of resources needed for life in the biosphere. ▶ Justify resource allocation.		2	10		

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
C. Reflection/Evaluation					
▶ Critique design models for feasibility, presentation style, and completeness. ▶ Compare and contrast similarities and differences. ▶ Include the estimated cost of each.	12	1	2, 8, 9, 12, 14	4, 5	
▶ Complete a team and self-assessment on the biosphere project. ▶ Include assessment of personal achievements and problems associated with the model. ▶ Identify elements that might be changed in the future.	2		8, 10	3, 4, 5, 6	
D. Extension					
▶ Display models in the media center or office and elicit feedback from others.			10	3, 4, 5, 6	4
▶ Invite guest speakers from city-planning, architecture, oceanography, etc., to share their roles, responsibilities, and expertise in building communities. ▶ Discuss the role of consultants when planning and developing a project.	3, 5, 6, 7		3	11	

Statement D:

9-12

Climatic conditions have changed in the twenty-first century. Research scientists are looking to the oceans to create habitable communities. Create an underwater community.

Focus: Design and create an underwater community, taking into consideration global socio-political perspectives.

Links to Other Standards: Visual Arts 1.6; Health and Physical Education 2.1, 2.2; Language Arts 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.2. 4.3, 4.5, 4.7, 4.9, 4.10; Science 5.1, 5.2, 5.4, 5.5, 5.6, 5.9, 5.12; Social Studies 6.7, 6.8, 6.9; World Language 7.2

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Evaluate the importance of aesthetics, design, and construction concepts in community planning. ▶ Discuss the role of architects in community planning. ▶ Identify the different occupations that might be needed in order to construct an underwater community.	3, 7		2, 3, 4, 9	5	8
▶ Investigate technological equipment related to weather and environmental conditions.		2, 6	5		1
▶ Identify the number and types of illnesses and injuries that occur to workers who work in commercial diving operations. ▶ Calculate the number of illnesses and injuries that might occur in the construction of an underwater community.		1, 10	1, 3, 5, 9, 12		1, 5, 8, 9
▶ Recommend design features that support health-enhancing behavior and community interaction, which includes physical living environment, social and human services, judicial and government services, security, transportation, information and communications technologies, etc. ▶ Calculate how long it would take to build the community.	3, 5	2, 3, 5, 6, 7, 9	1, 4, 5, 8, 10, 11		5, 6, 8,

Sample Activities

List of CCWR Standards

Activity	1	2	3	4	5
▶ Explain the interrelationship and impact of geography, human political systems, and environment in the creation of an underwater community. ▶ Identify likely sites.			5, 8, 9, 14		
▶ Compare life-support systems needed in an underwater community with space stations. ▶ Draw parallels and analogies.		1	5, 9, 11, 12		5, 6, 8
▶ Create a systemic solution to social and cultural problems of human interaction.	1, 2	10	15		
▶ List positions within career pathways that are essential to the newly established community. ▶ Create job descriptions and methods of attracting qualified applicants; obtain labor market information; and project growth rates for related careers.	1, 2, 3, 5, 9	1, 2, 8, 10	9		6
▶ Develop resumes and interview for identified positions.	10, 11	8			

C. Reflection/Evaluation

Activity	1	2	3	4	5
▶ Design the underwater community. ▶ Construct a critical-process recording sheet that addresses necessary components in the design process, e.g., air, food, shelter, education, finance, transportation. ▶ Invite members of an architectural firm to judge the most aesthetic design.		8	14, 15	5	7

D. Extension

Activity	1	2	3	4	5
▶ Take a virtual field trip to a different living environment.		1	2		
▶ Generate an architectural/blueprint format; build three-dimensional models of the communities.	1, 3, 5, 7	1, 2, 9	15	9	4, 7

Statement E:

K-4

A public relations firm has been hired to develop and produce a documentary alerting young adults to the need for fiscal responsiblity when using credit cards. As an employee you have been asked to develop a five-minute demo for the client.

Focus: Explore basic monetary principles and apply them in a classroom store.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.3, 4.4, 4.5, 4.6, 4.8; Science 5.2, 5.8, 5.9; Social Studies 6.6; World Languages 7.1, 7.2

Sample Activities

List of CCWR Standards

	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Create a visual design by rubbing crayons, chalk, or other media on paper over coins.		2	15		
▶ Create a collage or a bulletin board of objects that cost more than, less than, or the same as a given amount of money.	12		15		7
▶ Interview family member or a neighborhood friend about bank services and documents used in banking institutions. ▶ Share the information with classmates in an oral presentation.	12		3, 4		
▶ Compare information on various coins and currency from the U.S. and other countries. ▶ Design a coin or a paper bill for your school. ▶ Compare words for money and numbers in associated languages. ▶ Test coin composition and identify the metals used.	12	6	6, 7, 8, 12, 15	10	7
▶ Develop a game tossing coins to demonstrate force and motion as scientific principles.		2	15	11	6, 7

Continued on next page

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Combine coins and currencies to construct a three-dimensional structure.			15		
▶ Discuss, plan, and implement a fund-raising event to help a community organization or family.	1, 3, 12	2	1, 13, 14	1, 2, 3, 6	7
▶ Plan a field trip to a bank. ▶ Invite merchants and bankers to visit the classroom to discuss financial issues.	1, 2, 3, 12	2	1, 13, 14	1, 2	7
▶ Establish a class store and bank. ▶ Weekly "paychecks" are deposited into students' "bank accounts". ▶ Open an account (in a classroom bank) for depositing funds for later classroom activities. ▶ Design a system for rewarding/depositing weekly checks to buy items in the class store. ▶ Role-play consumers, merchants, and bankers. ▶ Create credit card/bank statements to monitor spending. ▶ Use credit cards or faux-money to buy items in the class store over a period of weeks. ***Teacher Tip: Grades K-2 can use pictorial representations; grades 3-4 students can develop actual accounting statements. Students in lower grades may operate a store, making simple change for purchases.***	1, 2, 3, 5, 12	2, 7, 8	15	1, 2, 7, 9	
▶ Read *Aesop's Fables*, e.g., *Ant and Grasshopper* (saving vs. squandering).	12				
▶ Create a class spending chart, graphing total spending and student debt. ▶ Discuss reasons why some students are in debt and why others have incurred no debt.	12	8	3, 9, 10		
▶ Deduce reasons for the overuse of credit cards. ▶ Create a poster/visual fostering fiscal responsibility. ▶ Videotape poster presentations to the class.	12	2, 8, 9	9, 15	2	7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
C. Reflection/Evaluation					
▶ Write in a journal reactions to tasks for earning money, the amount of money earned, and feelings about system of earning money and ways of spending money.	12		10		
▶ View and critique the video of one's own presentation.		9	10	3	
▶ Debate whether credit cards will ever completely replace money.	12		1, 3, 8, 9, 11, 14	9	
D. Extension					
▶ Compose a public relations jingle encouraging fiscal responsibility.	12		15		
▶ Mint faux-money and design credit cards.		2	15		7
▶ Investigate alternatives to monetary systems used in the past or internationally.	12	5, 6	5, 14	10	

Statement E:

5-8

A public relations firm has been hired to develop and produce a documentary alerting young adults to the need for fiscal responsiblity when using credit cards. As an employee you have been asked to develop a five-minute demo for the client.

Focus: Investigate and analyze the purpose, use, and impact of credit cards.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.4, 1.6; Comprehensive Health and Physical Education 2.2, 2.3; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.3, 4.5, 4.6, 4.8; Science 5.9; Social Studies 6.5, 6.6, 6.7; World Languages 7.1, 7.2

Sample Activities	List of CCWR Standards				
	1	**2**	**3**	**4**	**5**
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Develop a vocabulary bank — e.g., fiscal, credit, interest rates.	12	6			
▶ Brainstorm problems related to the use of credit and credit cards. *Teacher Tip: Initial questions about the problem might include: 1) What is the value of having credit? 2) What would it be like not to have a credit card today? 3) How were credit cards first introduced?* ▶ Propose solutions to these problems.	12	10	1, 3, 11		
▶ Investigate what happens to a person financially who is injured on the job and is unable to work. ▶ Hypothesize whether a person in this situation is more likely to have credit problems. ▶ Identify what laws are in place to pay for medical treatment and compensate a person if he or she is injured and is unable to work. ▶ Evaluate the effectiveness of Worker Compensation Laws in financially supporting workers who are partially or totally disabled.	12	5, 6	3, 5, 9, 14		8

Sample Activities List of CCWR Standards

Activity	1	2	3	4	5
▶ Seek and bring in songs from various countries and eras with references to money. ▶ Analyze for meaning and historical context.	12	5, 6	5, 12		
▶ Use the Internet to download pictures of various coins and money from other countries. ▶ Bring in samples of coins from other countries. ▶ Practice buying objects using money from other countries.	12	3, 5			
▶ Design and construct a device that measures the speed and motion of a coin on a slope.		7	15		7
▶ Participate in *the Real Game* activities emphasizing budgeting. *Teacher Tip: Visit www.realgame.com.*	3, 12		2, 11, 13	10	
▶ Select a business and simulate the ups and downs of operation.	3, 5, 12	1	5, 9, 12		
▶ Invent a contract dividing profits fairly among business partners.	12	2	15		
▶ Select a high-end purchase (of interest to teens) and compare the total cost based on cash price vs. a credit purchase for a specified time.	12	2	11, 12		
▶ Interview individuals on their personal strategies for effective credit card usage. ▶ Create a visual representation that summarizes responses. ▶ Present to the class.	12	9	3, 4, 15	9	7
▶ Hypothesize the strategies that would be most effective for responsible use of credit cards. ▶ Check hypothesis by reviewing print and Internet resources.	12	5, 6, 10	3, 10		
▶ Develop a preliminary outline for the presentation on responsible credit card use.	12	9	5, 15		
▶ Videotape the presentations.		2		2	4
▶ Job shadow a person from banking, credit, or other financial department.	2, 3, 7				7

Continued on next page

Sample Activities

List of CCWR Standards

	1	2	3	4	5
C. Reflection/Evaluation					
▶ Develop a rubric and assess the videotape presentation. ▶ Present ideas for improvement.		2	9, 14	4, 5	
▶ Keep a log of personal earnings/income/allowance and expenses during a defined time frame. ▶ Categorize expenditures and project a budget to allow for a pecial or unforeseen future purchase.	12	2	8, 9, 12, 13		
D. Extension					
▶ Develop a budget for a single person, a family of two, and a family of four on a given salary. ***Teacher Tip: Include information on savings and credit purchases.***	12	2	4, 5, 12, 13, 14, 15	1	
▶ Develop a simulation for a bank/credit union where credit cards are issued to patrons/participants. ▶ Select bank loan officers and consumers. ▶ Issue credit cards, maintain credit card records, develop credit card billing system, outline opportunities for using the a credit card and make simulated purchases. ▶ Prepare monthly statements and collect faux payments. ▶ Develop methods for dealing with individuals who miss payments or default over time. ***Teacher Tip: This activity may be linked to occupations and salaries in the Real Game.***	1, 2, 3, 5, 12	7	1, 3, 8, 9, 11	6, 8	7

Statement E:

9-12

A public relations firm has been hired to develop and produce a documentary alerting young adults to the need for fiscal responsiblity when using credit cards. As an employee you have been asked to develop a five-minute demo for the client.

Focus: Produce a five-minute documentary alerting peers to the value of exercising fiscal responsibility.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.3, 1.4, 1.6; Comprehensive Health and Physical Education 2.1, 2.2; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.4, 4.5, 4.6, 4.8, 4.14; Science; Social Studies 6.1, 6.3, 6.5, 6.6; World Languages 7.1, 7.2

Sample Activities / List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Contact a college representative to speak with classes about spending and credit card uses and abuses in college.	12	10	3, 4, 5	1	
▶ Invite banking representatives or people involved in the credit card industry to address the class about fiscal responsibility and the various strategies for managing money. ▶ Visit banking and credit departments of business organizations and shadow individual employees in those companies.	2, 3, 7, 12		3, 4, 5	2	7
▶ Obtain application forms for various credit cards and analyze the types of information requested. ▶ Examine the applications for similarities and differences. ▶ Present the findings to the class using a multimedia format. ▶ Complete a personal application.	12	4, 5, 6, 8	5, 7, 9, 11		
▶ Visit a local cable TV company to observe and discuss equipment operation and fiscal considerations as well as policies related to community service spots and programming.	3	1	3		7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Obtain information on the variety of career employment opportunities in the production industry.	12	2	4, 5	1	
▶ Prepare an imaginary budget on a daily, weekly, and annual basis to reflect the personal expenses of a young adult.					
▶ Contact one young adult in the United States and one in another country. ▶ Compare and reflect on the differences between their perceived and actual expenses.	12	5	9, 10	1, 2	7
▶ Investigate the projected costs of further education, including room, board, tuition, spending money, books, health and physical well-being, etc. ▶ Analyze the data in a spreadsheet program using algebraic formulas. ▶ Develop a proposed budget or spending plan on an annual basis.	12	4, 5, 6, 7	4, 5	1	
▶ Explore various traditional and state-of-the-art payment and purchase methods. ▶ Compare the advantages and disadvantages of each. ▶ Identify the pitfalls inherent in each method. ▶ Calculate the impact of different interest rates on the balances remaining on credit cards or other time-purchase agreements.	12	5, 6, 7	8 ,9, 11, 12, 13		
▶ Analyze a sample pay stub and draw conclusions about gross versus net pay. ▶ Investigate various withholdings and rates of deduction. ▶ Complete a sample W-4 form. ▶ Trace the history of business and personal taxation in the state and the nation.	12	5, 6	12		
▶ Investigate methods to protect personal income. ▶ Explain why saving is important.	12	5 ,6, 7, 10	4, 5		
▶ Research and write a paper on a great entrepreneur in the state, country, or world.		3	5, 8	10	

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Investigate credit card theft and privacy issues.	12	6,10	5		
▶ Work in teams to develop possible scenarios for a five-minute documentary for peers on fiscal responsibility. ▶ Include stories of young adults using and abusing credit cards. ▶ Research statistics and information on teen spending and credit use as background information.	12	4, 6, 9, 10	4, 5, 8, 15	1, 2, 6, 8, 9	
▶ Work with cable company staff to identify the professional competencies necessary to produce an effective video.	1, 2, 3, 5, 7		3, 4, 5	2, 9	7
▶ Form teams with students assuming the professional roles (technicians, writers, performers, etc.) and produce the video.	3, 5, 8	8	15	1, 2, 9	4, 8
▶ Read and discuss *The Merchant of Venice.*	12		9	7	
▶ Role-play the following scenerio: A bank loan officer needs to develop an evaluation tool for new customers requesting credit cards. The bank has experienced a 20% default rate on credit card payments. Currently there are 1,000 credit card holders. ▶ Develop a plan for reviewing and approving or disapproving new credit card applications.	3		3, 11, 15		
C. Reflection/Evaluation					
▶ Write an essay describing a personal financial profile. ▶ Explain any spending patterns that may be a problem.	12	8	9	1	
▶ Use various scenarios to demonstrate strategies young adults can employ to practice fiscal responsibility.	12		15	1, 8	
▶ Write a letter dealing with a credit bill problem.	12	8			
▶ Show the videos to focus groups to obtain feedback. ▶ Based on the feedback, analyze the videos for effectiveness.		2	10	4, 5	
▶ Complete an internship with an employer who is in the field of banking and/or credit.	1, 2, 3, 4, 5, 6, 7, 8	7		3, 5, 7, 9	7

Sample Activities

List of CCWR Standards

D. Extension

Sample Activities	1	2	3	4	5
▶ Compare cost, skills needed, and suitability of end product when buying a food item at a restaurant vs. the preparing the same food at home.	12	2	9, 15		
▶ Plan a healthy menu for a family of four for a week. ▶ Develop a shopping list and do comparative shopping at several food stores.	12	4	4, 5, 9		
▶ Investigate credit card use by employees in business. ▶ Compare similarities and differences in personal and business accounts.	12	6	9		
▶ Scrutinize laws related to consumer protection and relate them to a potential financial transaction for a teen.	12	6	15		8
▶ Write a column for the student newspaper on financial concerns and tips for teens.	3, 8, 12	8	4, 5, 15	9	8
▶ Research bankruptcy and its consequences in the personal and business world.	12	5, 6, 7	4, 5, 14	10	
▶ Create and complete a comparative study on an occupation and the related educational training to determine the dollar value of current schooling.	7, 12	5, 6, 9	9, 12		

Statement F:

K-4

Mr./Ms. Z's company has decided to relocate the employee and the family overseas. The employment opportunities exist in Australia, Brazil, China, Kenya, and Switzerland. Your family must maike the decision as to the country of preference with a backup alternative. Provide a justification to the human resource department. Be prepared to negotiate a contract that meets career, financial, and personal needs.

Focus: Compare and contrast several countries to select the country best suited for the family's relocation.
Links to Other Standards: Arts (Visual and Performing) 1.3; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1, 3.2, 3.5; Mathematics 4.1; Science 5.7; Social Studies 6.4, 6.9; World Languages 7.2

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Research the United States and the five country choices including: climate in relation to health and comfort; customs and culture; weather, transportation; job opportunities; resources; housing; currency; language; etc. ▶ Design a table presenting the results of the research. ***Teacher Tip: Depending upon grade level, the teacher can determine the level of complexity.***	6, 7, 8	1, 5, 8	10		
▶ Draw a map showing the topography and location of the countries.		8	5		
▶ Create a master list comparing and contrasting each country and the United States. ***Teacher Tip: Students in grades K-1 can use a pictograph, students in grades 3-4 can create actual lists.***		2	9		
▶ Determine what constitutes a contract, methods of negotiating a contract, personal and financial needs related to a career, etc.	12	5, 6	5		

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Break up into small "family" groups. Use the master list to determine the first- and second-choice country.			8, 12, 14	2	
▶ Make an oral/multimedia presentation (by "family" group) explaining why the first-and second-choice destinations were selected.		8	15	2	
▶ Use a simple teacher-created contract to clarify job tasks. *Teacher Tip: Depending upon grade level, the detail of the contract will vary. For grades K-1 the criteria can be represented in picture form.*	3				
▶ Read and discuss a story about a family's move. ▶ Brainstorm a list of factors to be considered and decisions to be made in a move. Compare and contrast those factors and decisions in relation to a move out of the country.		9, 12	9		
▶ Read a story about a family in another country. ▶ Compare and contrast the lifestyle of the family with one in the United States. ▶ Visit the country (a virtual field trip) via the Internet. *Teacher Tip: Comparison of holidays may interest students.*		5	5, 9, 12		

C. Reflection/Evaluation

	1	2	3	4	5
▶ Conduct a peer evaluation of each group's presentation.				4, 5	
▶ Conduct a self-evaluation: What would you do differently next time?			10	3	
▶ Write a persuasive paragraph or essay justifying the family's decision to go to a certain country.			10		

D. Extension

	1	2	3	4	5
▶ Create resumes for each family member who is relocating with the employee, based on a list of available careers in each country of choice.	9, 10	5, 6, 7	5, 8	1	

Statement F:

5-8

Mr./Ms. Z's company has decided to relocate the employee and the family overseas. The employment opportunities exist in Australia, Brazil, China, Kenya, and Switzerland. Your family must maike the decision as to the country of preference with a backup alternative. Provide a justification to the human resource department. Be prepared to negotiate a contract that meets career, financial, and personal needs.

Focus: Use the decision-making process to relocate a family to an overseas location.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.6; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1, 3.3, 3.4; Mathematics 4.1, 4.3, 4.5, 4.7; Science 5.12; Social Studies 6.5, 6.9; World Languages 7.1, 7.2

Sample Activities / List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Research decision-making models and practice in given case situations. ▶ Divide into small family groups to determine the strategy to be used in making decisions about the impending move.		5, 6, 7	1, 3, 5, 8, 12, 15	2, 10	
▶ Correspond with a student from one of the countries about family life, activities, school, and the cost of various items. ▶ Compare activities and costs with those in the United States.	12	5, 6	3, 9		7
▶ Use the Online Public Access Catalog and the Internet to research the countries and relevant demographic and statistical data such as housing, education, medical care, etc. ▶ Analyze the data in a spreadsheet program using algebraic formulas. ▶ Take a virtual field trip to a country to explore its resources.		3, 4, 6	5, 8, 9, 12		7
▶ Organize the data gathered using necessary software applications, such as Excel, Power Point, etc.		2	8		

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Recommend the information that should be included in the contract with the company with regard to wages, travel expenses, benefits, etc.	12	6	5, 10		
▶ Discuss the subject of change. Include personal adjustments each family member would have to make. ▶ Develop strategies to help cope with change.			3, 14		
▶ Create a multimedia Power Point presentation that includes audio/video, graphs, charts, etc., and explains to the employer the reasons for choosing a particular country over the other options.		9	13		
▶ List short- and long-term career and family goals. ▶ Analyze those goals against the projected career move.			14	1	
▶ Change key concepts on the employee resume to the language of the selected country.	10				
▶ Contact two moving companies about the costs of moves across state lines, across the country, and to international locations. ▶ Analyze data and select the more cost-effective company. ▶ Explore how preparations for moves in the United States compare with those for moves to international locations. ▶ Diagram how movers pack various size boxes and protect breakable objects. ▶ Research a list of items not recommended for packing, storage, and transfer due to combustibility or other safety reasons.	12	2, 7	12	10	8
▶ Categorize personal and work items to take along in the move as "essential," "nice to take," and "not essential." ▶ Determine and/or project the volume and weight of the items selected.			8, 9		

Sample Activities

List of CCWR Standards

Activity	1	2	3	4	5
C. Reflection/Evaluation					
▶ Collaboratively design an assessment rubric to include self- and peer- assessment of the research process, the presentations, and the product as a whole.			9, 10, 11 14	2, 9	
D. Extension					
▶ Create visual comparisons of the countries selected.		2	2		
▶ Write a business letter to the human resources department. ▶ Apply for one site and justify why you are the best person for the site.	5, 10	2			
▶ Form a human resources department in a company seeking five employees to relocate oversees. ▶ Develop a plan to recruit highly qualified but reluctant employees to relocate.	1, 2, 3, 5	8	15		

9-12

Statement F:

Mr./Ms. Z's company has decided to relocate the employee and the family overseas. The employment opportunities exist in Australia, Brazil, China, Kenya, and Switzerland. Your family must maike the decision as to the country of preference with a backup alternative. Provide a justification to the human resource department. Be prepared to negotiate a contract that meets career, financial, and personal needs.

Focus: Mr./Ms. Z is interested in employment in a company with employment opportunities overseas. Mr./Ms. Z must apply to human resources for one specific site.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.6; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.5, 4.7; Science 5.10, 5.12; Social Studies 6.1, 6.3, 6.4, 6.5, 6.6, 6.7; World Languages 7.1, 7.2

Sample Activities	List of CCWR Standards				
	1	**2**	**3**	**4**	**5**
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Research international companies. ▶ Include policies and procedures related to employment and transfer to other companies as well as the job titles available and job descriptions. ▶ Create a database illustrating the information. ▶ Analyze the data and compare it with personal skills and abilities. ▶ Compare and contrast the occupational safety and health worker-protection laws in the different countries. ▶ Take a virtual field trip to explore the companies' production facilities and procedures.	1, 2, 5, 7, 9	3, 4, 6, 7,	5, 8, 9, 12		8
▶ Investigate the language, climate, religion, education/schools, housing, cost of living, government, history, culture, transportation, currency (rate of exchange), customs, crime rate, and health and safety issues. *Continued on next page*	12	5, 6, 7, 9	5, 11, 12	6	

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▸ Draw conclusions about living and working in that country. ▸ Evaluate the quality of air and water in the different countries and assess if they represent a health risk to the citizens. ▸ Quantify comparisons of some findings. ▸ Design a brochure that the company could use in recruiting employees to various international sites. *Teacher Tip: Visit a travel agency and pick up brochures on countries. This is an opportunity for students to fully explore the art and culture of the country.*					
▸ Decide which company and location meet their career and life goals.			13, 14	1	
▸ Prepare a resume, complete an application and role play an interview for that position. ▸ Negotiate a contract for a specific site/position.	10, 11	8	13	9	
▸ Develop a dictionary of phrases in the language used in the country selected; select phrases that may be used in employment and living situations.	11	5, 6, 8	5		
▸ Analyze labor market information available through the Internet.	9	5, 6	8, 12		7
▸ Project an annual budget based on salary and expenses for work and personal living. ▸ Analyze the data in a spreadsheet program using algebraic formulas.	12	4, 5, 6	10	1	
▸ Research travel plans. Include citizenship laws, passports and visas, immigration laws and procedures, and immunization requirements. ▸ Diagram a variety of possible routes and determine the shortest.		5, 6	5	10	
▸ Write a persuasive letter to family and/or friends explaining the merits of the company and location.		2			

Sample Activities

List of CCWR Standards

	1	2	3	4	5

C. Reflection/Evaluation

	1	2	3	4	5
▶ Develop a rubric for assessing resumes, applications and interviews. ▶ Implement use of rubrics through peer assessment.		2	8	4, 5	

D. Extension

	1	2	3	4	5
▶ Create a menu in English and one other language for the employee cafeteria.		5, 6, 8	5, 15		
▶ Divide into teams and travel to another country for three weeks to negotiate a contract. ▶ Identify major cultural differences that will influence the ability to complete the negotiations, for example, the roles of women, minorities, and other groups. Explore the impact of doing business in a country with a different culture. ▶ Prepare a business dinner and simulate cultural customs as part of the investigation. ▶ Analyze cultural influences on conducting business in other countries.	2, 5	2	1, 3, 5, 8, 9	2, 6, 7, 8	6, 7, 8, 9

Statement G:

K-4

The town has decided to build a new school. Research, design and estimate costs for a model school. Prepare a presentation to convince the local board of education.

Focus: Investigate the components of a school facility and create a model of the ideal school.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.3, 1.4, 1.6; Comprehensive Health and Physical Education 2.1, 2.3, 2.6; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.3, 4.5, 4.6, 4.7, 4.8, 4.9; Science 5.2, 5.6, 5.7; Social Studies 6.7,6.9; World Languages 7.2

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Read a story about a child going to school in another country. ▶ Compare the experiences of that child with their own. ▶ Visually represent the similarities and differences. **Teacher Tip: Provide a bibliography of stories for students to select.**			2, 4, 9, 12		
▶ Participate in an in-school field trip to map the school and its grounds. ▶ Label the different uses for each area.			7, 9	2	
▶ List the different needs and wants as related to a school. **Teacher Tip: Differences between needs and wants will vary; e.g., a media center is a need for some and a want for others.**			3	1	
▶ List the uses of various rooms and spaces within the school facility. ▶ Analyze the effectiveness of the utilization. ▶ Propose changes.			3, 12		
▶ Critique the landscaping of the school. ▶ Research plants and conditions for maximum growth in the location. *Continued on next page*	3, 5, 7, 8	2, 6, 8	4, 8, 13, 15	1, 2, 9	4, 7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Propose recommendations for beautifying the grounds. ▶ Present them to the principal. ▶ Develop a plan for securing materials, tools and plants. ▶ Plant and maintain the plants identified in the beautification plan. ▶ Donate plants to a community site that needs beautification.					
▶ Plan and take a field trip to a nursery. ▶ Invite a horticulturist to speak to children about plants and landscapes.	3	2	4	1, 2	7
▶ Survey the school on the types of employment opportunities, tasks performed by workers, and space or facility requirements to complete tasks. ▶ Analyze the survey results to determine the minimum required facilities in a school. ***Teacher Tip: Include maintenance, office, nurse, gym, cafeteria, architecture, landscaper, etc.***	3	3, 6, 7, 9	3, 4, 8, 12, 14	2	7
▶ Plan a fitness program for elementary students. ▶ Identify the necessary equipment and design a storage area for the items.	3	2, 6	3, 4, 5, 15	10	1, 2, 5, 6, 8, 9
▶ Use technology and community resources to research various structural and safety issues: heating, lighting, placement of electric outlets, fire exits, etc. ▶ Discuss safety and health features needed in a school. ▶ Develop an inventory list of safety features for the school. ▶ Determine the necessary items for a well-stocked first aid kit.	3	1, 2, 3, 6	4, 5	6, 7, 8	
▶ Brainstorm symbols that might be used to represent doors, windows, lights and other architectural features. ▶ Draw some sample illustrations. ▶ Compare the illustrations with those actually used by architects.	3	2	9, 12	9	
▶ Use a sample floor plan and measure the size of spaces. ▶ Discuss the need for scale measurements. ▶ Practice various math scenarios for measuring inches, feet, and yards.	7	2	3, 9, 12		

Sample Activities   ## List of CCWR Standards

Activities	1	2	3	4	5
▶ Use multimedia resources to draw a floor plan or build a 3-D model of the ideal school. ▶ Information from their research needs to be incorporated. ***Teacher Tip: Recommend using cooperative groups. The teacher may use one classroom instead of the entire school for the early grades.***	3, 8	2, 3, 8	15	2, 10	7
▶ Make an oral presentation describing the model and giving rationale for the choices.	1	9	10, 14	4, 5	
▶ Display models and written presentations in a school showcase for board of education and community viewing. ▶ Present designs to school principal and/or PTA members.	1, 8	9		2, 9	7

C. Reflection/Evaluation

Activities	1	2	3	4	5
▶ Maintain a journal recording feelings and the reasons for maintaining and improving playground and recreational facilities at a school site.			3, 10	3	
▶ Use a rubric to evaluate group models and oral presentations.			14	3, 4, 5	

D. Extension

Activities	1	2	3	4	5
▶ Present group models to the school facility planner for feedback and discussion.	1, 8	9	10	3, 4, 9	
▶ Create a portfolio of materials developed to be shared with the administration and architects.	1	2, 9	2	11	

Statement G:

5-8

The town has decided to build a new school. Research, design and estimate costs for a model school. Prepare a presentation to convince the local board of education.

Focus: Using architectural requirements and legal building codes, design blueprints or CAD representations for a model school.

Links to Other Standards: Arts (Visual and Performing) 1.2–1.6; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.3, 4.5 4.6, 4.7, 4.9; Science 5.10; Social Studies 6.4, 6.6, 6.7; World Languages 7.1

Sample Activities

List of CCWR Standards

A. **Preparation:** *(See page 6-2)*

B. **Action:** *The student will*

Activity	1	2	3	4	5
▶ Learn how to read an architectural blueprint. ▶ Analyze and discuss the blueprint for current use of space. ▶ Survey school staff and the community to include their needs, wants, concerns, etc. ▶ Set a long-term goal to design a new facility. ▶ Set short-term goals to modify the current facility.	3	2, 6	1, 3, 4, 8, 12	1	
▶ Research federal, state, and local requirements and building codes related to safety, health, space usage, etc. ▶ Investigate how much outside air is needed for each room in the school to ensure good ventilation and proper air quality.		3, 6	4, 5		6, 8
▶ Research and make local contacts to identify the stages of building design and construction. ▶ Interview individuals regarding career preparation in these fields.	3, 5, 7	6	3, 4, 5	2, 6, 11	7
▶ Measure four different types of rooms in a school building and draw the rooms to scale. ▶ Use furniture templates and arrange furniture in the rooms. ▶ Draw an elevation that includes a color rendition.	3	2, 9	15		

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Estimate the furniture and technology needs the rooms within the proposed facility. ▶ Based on quantity and specification estimates, construct a proposed budget using at least two different vendors. ▶ Include transportation and shipping or other associated costs. ▶ Recommend and defend issuing a contract to one of the vendors.	3, 12	1, 2, 5	4, 5, 9, 10, 12, 15		7
▶ Develop a bulletin board using architectural-symbols.		2, 8	15		7
▶ Work in groups to design a model school. ▶ Chose the traditional drafted blueprint, a 3-D model, and/or CAD program for the presentation. ▶ Incorporate the building safety and code requirements researched earlier. ***Teacher Tip: Design a model using metric measure.***	3	2, 9	15	2	7
▶ Research and recommend materials and assembly methods for constructing the school. ▶ Create guidelines for purchasing materials to construct the new school that will minimize chemical emissions into the air inside the school and help prevent indoor air-quality problems. ▶ Explore the effect of local weather systems on these materials. ▶ Defend the recommendation.	3	5, 6, 7	5, 8, 10, 11, 13		6
▶ Identify local contractors. ▶ Contact the Better Business Bureau to check the companies' service records and customer complaints.	2, 12	6, 7	3, 4, 5, 8	11	
▶ Present a multimedia proposal to peers. ▶ Complete evaluations based on the merits of each proposal and design. ▶ Convene a group of adults to serve as a jury.	1	9	4	3, 4 ,5, 11	
▶ Job shadow people in positions related to architecture, design, landscaping, construction, contracting, etc.	1, 2, 3, 5, 7	1	10	2, 9	7

Sample Activities

List of CCWR Standards

Activity	1	2	3	4	5
Teacher Tip: Be sure students observe work only. Child Labor Law prohibits student participation in hazardous occupations.					

C. Reflection/Evaluation

Activity	1	2	3	4	5
▶ Conduct a peer evaluation of each proposal using rubrics to evaluate the actual design and the presentation itself.			7, 10	3, 4, 5	
▶ Self-assess group and individual participation in the project.			10	3	
▶ Use a journal to record reactions to the job-shadowing experience. ▶ Include likes and dislikes in the narrative description.	2, 3, 5, 7		10	3	

D. Extension

Activity	1	2	3	4	5
▶ Display the models for school and community viewing.		2			
▶ Write a press release announcing the completion of the models for the new school. ▶ Send the press release to the editors of the local paper. ▶ Track the columns and inches that are actually published. ▶ Analyze the factors that led to acceptance by the editor. ▶ Compare the costs of public service announcements and purchased space.	12	2, 8	4, 8		7
▶ Write a description of the new school and send it to a pen pal/foreign exchange student. *Teacher Tip: Use the native language of the recipient.*		2, 7			7
▶ Research various furniture styles and historical perspectives. ▶ Discuss international influences on interior design.		5, 6	9		
▶ Create a portfolio of designs to be presented to the architect addressing the best features for the new school.	1	2, 9	2	11	
▶ Plan and take a field trip to stores or museums that supply furniture.		2		1, 2	7

Statement G:

9-12

The town has decided to build a new school. Research, design and estimate costs for a model school. Prepare a presentation to convince the local board of education.

Focus: Simulate the occupational roles of individuals involved in the design and construction process of a new school building.

Links to Other Standards: Arts (Visual and Performing) 1.1–1.6; Comprehensive Health and Physical Education 2.1, 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.3, 4.4, 4.5, 4.7, 4.8, 4.10; Science 5.2, 5.9; Social Studies 6.1, 6.5, 6.6; World Languages 7.1

Sample Activities   List of CCWR Standards

	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Brainstorm the types of occupations directly related to the task with which the town has challenged the class.	3			9	
▶ Survey students to identify related career interests, abilities, and skills and to help them divide into cooperative groups according to clustered disciplines/career pathways.	2, 3, 6		3, 8, 9	2, 9	
▶ Prepare resumes and apply and interview for positions on the student teams. ***Teacher Tip: Working teams can then be assembled based on individual talents and potential contributions.***	10, 11	2, 8	8, 10	1, 3, 9, 11	
▶ Research licensing, bonding, and labor organizations in the construction industry. ▶ Investigate provisions that can be added to the contract to help ensure the workers are protected from occupational safety and health illnesses and injuries. ▶ Compare the number of injuries and illnesses that occur in the construction industry with the number that occur in other types of industries. ▶ Explain why some industries have more injuries and illnesses than others.		5, 6	3, 4, 5, 9	10	2, 9

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Contact local professionals in the fields of public relations, architecture, construction, interior design, etc., to arrange for meetings and mentoring of student teams. ▶ Include discussion of employability skills, appropriate career majors, academic and occupational skills, and local volunteer opportunities.	2, 3, 4, 5, 6, 7, 9	2	3, 4, 8, 10	9	7
▶ Research state and local requirements for facility planning of schools. ▶ Include information on design requirements and bidding processes.	12	5, 6	4, 5		8
▶ Contact several construction companies and ask their personnel to mentor students in estimating the costs of the building based on materials, labor, etc. Compare company estimates for the various designs. Analyze why some designs are more or less expensive.	12	6	3, 9, 12	9	7
▶ Explore financing options. nclude information on tax and interest rates, bonds, etc. ▶ Debate selected options and come to consensus on a recommendation.	12	2, 5, 6	8, 10	9	
▶ Identify and access other community resources and sources of information that might be used to formulate design ideas.		5, 6	4, 5		
▶ Research lighting, floor coverings, plumbing fixtures, etc. ▶ Select appropriate materials for the group design.		1, 6	4, 5, 15		
▶ Plan and conduct experiments on types of lighting, wattage, and types of bulbs and the ease of completing tasks in school. ▶ Design an ideal source of light.		8	6, 7, 15		4, 6, 7
▶ Develop preliminary designs for the multimedia presentations and 3D model of the building and site.	3	2, 8	15		
▶ Present designs to the board or other community group for assessment and discussion of the feasibility of construction in the community.	2	9		9	7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Relate site development to overall community development and environmental preservation.			14		
▶ Design a unique student desk or chair for a school. ▶ Hold a competition to determine the most unique and/or ergonomic design. ▶ Include an engineer or architect on the evaluation team. ▶ Determine the cost to manufacture the desk or chair and the selling price. ▶ Investigate obsolescence factors in the design.	2, 3, 12	1, 2, 9	15	11	1, 6, 7
▶ Research unique and/or controversial architecture throughout the world. ▶ Write an explanation in the language of the country.		5, 6	4, 5		
▶ Participate in a cooperative education or an apprenticeship structured learning experience at a construction site. ▶ Practice injury prevention. ▶ Manage crisis and stressful situations to maintain physical and mental health.	1, 2, 3, 6, 8		10	2, 3, 11	1, 3, 4, 7, 9
▶ Prepare a resume for construction employment in another country.	10	8		11	

C. Reflection/Evaluation

	1	2	3	4	5
▶ Conduct a peer evaluation of each proposal using rubrics to evaluate the design, the presentation, and the models. ▶ Conduct self-assessments of participation in the project.			10	3, 4, 5	

D. Extension

	1	2	3	4	5
▶ Display models for school and community viewing.		2			7
▶ Write a press release describing the project designs.		2			

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Project operating costs for the gymnasium and/or the auditorium. ▶ Analyze the data in a spreadsheet program using algebraic formulas. ▶ Determine a facility use price to ensure proper maintenance and overhead.	12	4, 5, 6	3, 4, 5		
▶ Create a color and elevation portfolio for the school.		8	15		
▶ Plan and take a field trip to a business that uses CAD programs in design.	3	2		1, 2	7
▶ Create a portfolio of designs addressing the best features of the new school.	1	2, 9	2	11	

Statement H:

K-4

Earth is becoming uninhabitable.

Focus: Develop and create alternative habitats in order to survive in outer space. Space stations and other planetary habitats need to be explored.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.4, 1.6; Comprehensive Health and Physical Education 2.1, 2.4, 2.5; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.4, 4.7, 4.11; Science 5.1, 5.2, 5.3, 5.5, 5.6, 5.8, 5.9, 5.11, 5.12; Social Studies 6.1, 6.5; World Languages 7.1

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ View and discuss a movie or read a book about the solar system such as *The Magic School Bus in the Solar System.*			5		
▶ List items essential for sustaining life, e.g., air, water, food, and shelter.			2, 3		
▶ Research facts about each planet using library media resources. ▶ Compare and contrast the environments of each planet. ▶ Draw conclusions about which planets can support life.		5, 6	5, 9,12, 13	10	
▶ Discuss the pros and cons of establishing a colony on selected planets. ▶ Chart such items as temperature, distance from the earth, space, etc.		2	8, 9		
▶ Research NASA's program of space exploration and the role of the government in the program. ▶ Send a letter to NASA by e-mail or surface mail.	3	5, 6	5		8
▶ Develop a map that depicts all countries that have space exploration programs. ▶ Compare reasons that countries began and continue to maintain space exploration programs.		2, 8	5, 9, 12		

Sample Activities

List of CCWR Standards

Activity	1	2	3	4	5
▶ Using pictures, drawings, or other visuals, create a story line describing events related to space travel.		2, 8	5, 9, 12		
▶ Investigate careers in astronomy, the aerospace industry and related fields.	3, 5	6	5		
▶ Develop a list of jobs needed to build a space station and to sustain a planet colony.	3, 5	6, 7	5		6
▶ Design a space station or planet colony. ▶ Build a model of the habitat.	3	2, 8	15		7
▶ Select a role from the list of jobs. Create and present a multimedia presentation about the colony/space station. ▶ Role play positions such as astronaut, colony scientist, space station designer, etc.	2, 3, 5, 19	9	15	11	
▶ Create a cartoon showing your life on the job or as a family member for a day.				7	
▶ Plan and/or conduct experiments on space-related concepts such as gravity, weightlessness, nutrition and digestion, fitness, etc.			6, 7		4, 7
▶ Plan and take a virtual field trip to NASA in Florida.	3	5, 6, 7			

C. Reflection/Evaluation

Activity	1	2	3	4	5
▶ Complete a rubric evaluation of the colony.			10	3	
▶ Write a story about life on another planet based on what was learned.		8	10		

D. Extension

Activity	1	2	3	4	5
▶ Use the Internet to communicate with a person in a career related to space exploration.	3	5, 6			7

Statement H:

Earth is becoming uninhabitable.

5-8

Focus: Earth's resources are rapidly being depleted. An expedition to Mars revealed potential raw materials. Devise a plan for securing and transporting the raw materials from Mars to Earth. The plan must be submitted for government approval.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.5, 1.6; Comprehensive Health and Physical Education 2.1, 2.2, 2.6; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.3, 4.5, 4.7, 4.14; Science 5.1, 5.2, 5.3, 5.4, 5.5, 5.9, 5.10, 5.11; Social Studies 6.1, 6.2, 6.4, 6.9; World Languages 7.1

Sample Activities

List of CCWR Standards

	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▸ Define and explain what a corporation is and why it is established.		6			
▸ Locate and interview people with expertise in establishing a corporation, such as local chamber of commerce members, financial officers for banks, lawyers, etc.	3, 5, 7	2	3, 4, 8		7
▸ Divide into groups and select a role in the corporation. ▸ Write a job description for each role in the company. ▸ Justify how that role contributes to the entire project.	2, 3	2	1, 8, 10	2	
▸ Access information on the Internet and in print that explains how raw materials are obtained and refined. ▸ Define for each group the raw material to be obtained from Mars and the material's characteristics. ▸ Calibrate a scale that accurately measures the amount of raw material taking into account the difference in gravity on Mars. ▸ Draw conclusions about the best existing methods for extracting the material and suggest new ones based on background information about Mars. ▸ Design and manufacture a device for extracting the raw material.	3	1, 5, 6, 10	15	10	7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Design a container for shipping of the raw material in the space ship. ***Teacher Tip: The NASA web site (www.nasa.gov) contains information that might be useful.***					
▶ Research living conditions on Mars and determine how the corporation will provide a safe habitat in this environment. ▶ Design the habitat for the workers and develop a database of materials needed for survival, e.g., food, water, oxygen source. ▶ Plan for fitness, emotional well-being, and recreational activities such as music and dance. ▶ Design a travel recruitment piece to entice workers to go to Mars. ***Teacher Tip: Make recruitment posters in different languages.***	3	1, 2, 5, 8	15	10	6, 8
▶ Propose and demonstrate a method for simulating movement and various activities on Mars. ▶ Hypothesize the effects of gravity on various body systems. ▶ Design a fitness plan to ensure muscle tone and fitness.		8	3		1,3, 8
▶ Investigate the influence of imaginary space travel on art, movies, and other media productions. ▶ Complete a comparative analysis of imaginary space travel to reality.		5, 6	5, 9, 12		
▶ Propose a system for extracting and transporting the raw material to earth.		1, 2	15		
▶ Prepare a written proposal detailing the plan for government approval. ▶ Develop a multimedia presentation to persuade an audience.		2, 9	15		

C. Reflection/Evaluation

	1	2	3	4	5
▶ Present the formal proposals by each company to the "government."		9			
▶ Ask an engineer to provide feedback on the designs for equipment and living facilities.			4	4	7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Hypothesize the differences in everyday living activities when a long period is spent on another planet.			3		
D. Extension					
▶ Construct a model of the proposed living accommodations for the Mars colony.	3	8	15		4, 7
▶ Relate the theme to current problems on Earth and propose solutions. ▶ Devise a new garment or product that solved one of the current problems on Earth. ▶ Test the item for feasibility in use and production. ▶ Determine a test market site. ▶ onduct a public survey of consumers at the market site to determine if consumers would buy the item and the amount hey would be willing to pay. ▶ Compare with production costs to determine feasibility of production.	3, 12	8, 10	9, 13, 15	1	7
▶ Research the impact of a new corporation of this kind on a community in the United States.		5, 6	4, 5		
▶ Investigate the Challenger explosion and why it happened. ▶ Hypothesize what implications this accident has for building a habitat on Mars and for transporting people and materials between Mars and Earth.		5, 6, 10	3, 5, 8		1, 6, 8
▶ Expand the search for resources to other planets and/or natural satellites in our solar system. ▶ Research the geophysical aspects of the specific body in space and project how the "corporation" could work there.		5, 6	3, 5		
▶ Research the clothing and protective equipment needs of space travelers. ▶ Develop improvements on existing space suits and equipment.		5, 6	15		5
▶ Research and participate in the Mars Millennium project. ***Teacher Tip: Visit www.mars2030.net.***		5, 6	5	2	7

Statement H:

Earth is becoming uninhabitable.

Focus: A previous expedition to Mars has identified and created a highly successful mining operation that has resulted in an unprecedented economic windfall on Earth. Develop a plan for donating money to a nonprofit organization.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.6; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.5, 4.6, 4.9, 4.10, 4.12; Science; 5.1, 5.2, 5.5, 5.7; Social Studies 6.3, 6.4, 6.5, 6.6, 6.8, 6.9; World Languages 7.1

Sample Activities / List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Research the names and functions of nonprofit organizations. ▶ Summarize information using a database format. ▶ Include information on the fiscal assets of the group.	12	3, 5	3, 5, 8		7
▶ Investigate the procedures for establishing a nonprofit organization. ▶ ompare the procedures with those for establishing a for-profit organization.		6	5, 8, 9, 12		
▶ Divide into teams. ▶ One team represents the company who has the accumulated wealth to be distributed to a nonprofit organization. ▶ Other teams are formed to represent nonprofit organizations. ▶ The company team develops a request for proposals from nonprofit organizations that outlines the requirements to receive funding. ▶ The nonprofit organizations are required to identify their name and purpose and to develop the application to receive funds. ▶ The company team reviews applications and holds interviews as necessary. ***Teacher Tip: The amount of money to be used should be defined (e.g., $1,000,000).***	1, 2, 3, 5, 12	2, 8	1, 3, 5, 8, 13, 14	1, 2, 6, 8, 9	

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Hypothesize the results of increased wealth on the services delivered to the clients of nonprofit organizations. ▶ Display the results through charts and graphs. ▶ Predict trends of distribution of services based on geographic location. ▶ Analyze the data in a spreadsheet program using algebraic formulas.		2, 4	3		
▶ Research the role of the United Nations in global economics, including the provision of goods and services to countries throughout the world. ▶ Compare and contrast the functions of the United Nations and nonprofit groups in the United States.		5, 6, 7	3, 5, 9, 12		
▶ Create an original artistic (visual and/or performing) representation of the mission of a nonprofit group.		2, 9	15		
▶ Discuss the opportunities and difficulties of communicating in a highly technological society for a group that is nonprofit. ▶ Discuss the images portrayed or projected.		10	3, 9		
▶ Identify the roles and responsibilities of United Nations representatives in this process. ▶ Brainstorm ways that multilingual communication skills influence job success. ▶ Assess one's own qualifications and interests. ▶ Job shadow or volunteer in a related position with a nonprofit group. ***Teacher Tip: Use the Internet to correspond with a United Nations representative(www.undcp.or.at/unlinks.html).***	1, 2, 3, 5, 6, 7, 8	2	5, 10	3, 9	7
▶ Plan and take a trip to the United Nations in New York City. ▶ Prepare potential questions to ask guides for tours in at least one other language. ▶ Identify possible careers and transferable skills.	3, 5, 6		3		

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
C. Reflection/Evaluation					
▶ Debate the pros and cons of forming an organization for profit vs. nonprofit.	12		1, 8		
▶ Interview a person in a nonprofit group such as the Peace Corps. ▶ Write a reaction paper and incorporate personal feelings about future participation in such activities.			3, 10	1, 2, 6, 9	7
D. Extension					
▶ Research organizations that provide assistance to people in other countries. ▶ Chart the percentage of contributions reaching people in need. ▶ Compare resource distribution that actually reaches the people with the portion retained by governments.		2, 5, 6	5, 9,12	10	
▶ Model distribution of food throughout the world. ▶ Discuss feelings about a country or section of the world with few resources for food distribution but large population demand.		2	2, 10		
▶ Participate in a UNICEF community-service event.	1, 5, 8	2		2, 9, 11	3, 7
▶ Plan and implement a charitable campaign for a needy family or group in the community. ▶ Develop accompanying campaign visuals.	1, 5, 8	2, 8	15	2, 9, 11	3, 7

Statement I:

K-4

An individual wants to select a career pathway (Arts and Humanities; Health and Human Services; Mathematics, and Technology; and Business and Information) in an area of interest for future employment and postsecondary and lifelong learning.

Focus: Investigate a variety of career pathways based on individual interests.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.5, 4.6, 4.14; Science 5.2; Social Studies 6.4, 6.5; World Languages 7.1

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Complete interest inventories and make a collage showing areas of interest. ▶ Label the collage using vocabulary in several languages.	3	2, 6, 8	1, 4, 5		6
▶ Interview people in any of the career pathways on the duties and tasks associated with the job. ▶ Investigate educational preparation and health and safety concerns for the pathway. ▶ Compare student interest areas to the career pathway.	2, 3, 7	2, 5, 6	3, 4, 9	9, 10	7, 8
▶ Divide into groups and work with the library media specialist to find books and stories about people on the job. ▶ Read the books and do an oral report of the careers described. ▶ Classify each job described into one of the four career pathways. ▶ Draw a person in sample careers. ▶ Assess other presentations. ***Teacher Tip: Presentations to the class might include an overview of occupations, employment opportunities, education necessary, safety, etc., for each pathway.***	3	6	4, 5,	4, 5	

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Create clocks to tell the time that people start to work.	1	2			
▶ Read and discuss *Oh, the Places You'll Go by Dr. Seuss*.	5				
▶ Invite speakers/parents to make presentations on each pathway. ▶ Investigate pathways of potential speakers before they present.	2, 3, 5, 7	6	3, 4, 5	9	
▶ Sort clothing, tools, products, etc., into career pathway categories. ▶ Hypothesize which clothing protects workers.			3, 9		1, 2, 5, 6, 8
▶ Participate in a career dress-up day. ▶ Make and wear a hat depicting a career. ▶ Hold a hat day. ▶ Label clothing in different languages. *Teacher Tip: Have some clothing/costumes available that can be used by the students.*		2	15	6	
▶ Ask questions of parents, neighbors, and other acquaintances concerning their work, duties, responsibilities, likes/dislikes, educational training, hours, and any accidents or health problems related to their work. ▶ Summarize findings. ▶ Prepare a chart showing the number of hours worked daily, weekly and yearly. ▶ Develop another chart depicting the number of vacation days and holidays. ▶ Compare charts with those of classmates. ▶ Use another language to depict the same information.	2, 3, 7	8	3, 4, 8, 9, 10 12	9	6, 7, 8
▶ Participate in field trips to neighborhood business/industry sites. *Teacher Tip: Develop questions and ideas for observation and safety as a class.*	3, 5, 7		3, 7	2, 6, 9	6, 7, 8

C. Reflection/Evaluation

	1	2	3	4	5
▶ Establish a school post office with students at various grades holding jobs for the post office.	1, 2, 3, 7, 10, 11	2	4, 15	1, 2, 9, 11	7, 8
▶ Develop a newsletter about career options and events in the school.	3, 5	3, 8	4, 15	1, 2, 9, 10	

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Give an oral report to the class on experiences and feelings while role-playing the job. ▶ Evaluate with student/teacher-created rubrics.			10	4, 5, 6	
D. Extension					
▶ Make presentations to a PTA meeting.	2	9		9	
▶ Make presentations to another class.	2	9		9	
▶ Prepare a school bulletin board.	2,8	15		7	

5-8

Statement I:

An individual wants to select a career pathway (Arts and Humanities; Health and Human Services; Mathematics, and Technology; and Business and Information) in an area of interest for future employment and postsecondary and lifelong learning.

Focus: Participate in a variety of activities to explore possible career pathways.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.1, 2.2, 2.3, 2.6; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.11, 4.12; Science 5.2; Social Studies 6.1, 6.6; World Languages 7.1

Sample Activities

List of CCWR Standards

	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Complete an interest inventory or revisit previous interest inventories from the student portfolio. ▶ Write an autobiography that describes personal qualities and interpersonal skills, keeping in mind personal health, fitness, afety, and ability to complete tasks.	2, 3, 5	2	8, 10		
▶ Job shadow a person in a career pathway of interest. ▶ Investigate child labor laws. ▶ Discuss why these laws are needed. ▶ Participate in a "take your child to work day." ▶ Complete a questionnaire. ▶ Make a presentation to the class about the highlights of the day.	2, 3, 4, 5, 6		8, 10	6, 9, 11	6, 7
▶ Complete a hands-on project that involves skill development related to a career pathway choic: prepare food as a chef; plan and conduct an experiment as a scientist, design/build an object as an architect or engineer; analyze data in a spreadsheet program using algebraic formulas as an accountant, etc. Peers evaluate the project.	1, 2, 3, 5, 6	2, 4, 8	15	1, 4, 5	7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Volunteer or participate in a community-service activity associated with a career pathway. ▶ Participate as an interpreter in a community organization where these services might be needed. ▶ Evaluate your experience.	1, 2, 3, 4 5, 6, 7, 8	2	10	3, 9	7
▶ Invite speakers to make presentations on select occupations in the career pathways. ▶ Conduct individual/group research before the presentations. ▶ Include academic, employability, and occupational skills, as well as health and safety issues. ▶ Complete the statement: "I am (not) interested in _____ because..." ▶ Develop a visual display of protective clothing and gear for different jobs.	2, 3, 6, 7	2, 6	4, 5, 9, 10	2, 3, 11	6, 8
▶ Research the kinds of jobs available today and projected for the future. Include market demand, geographical locations, working conditions, and compensation. ▶ Conduct electronic/media searches on a broad occupational area. ▶ Prepare a multimedia presentation for the class. ▶ Compare individual interests and abilities and career choices based on the information presented.	2, 3, 5, 7	5, 6, 9	5, 8, 10	11	
▶ Develop a career plan and portfolio based on individual interests and abilities. ▶ Develop and maintain a resume that includes school and community activities and hours. ▶ Categorize and select courses offered in the middle and high school programs that promote preparation in the career pathway.	3, 4, 6, 10	2, 7	15	1, 3, 9, 11	
▶ Participate in an exploratory series of activities to broaden occupational skills in areas such as technology education, consumer education, child care, fashion design, food services, agriculture, medical arts, conflict mediation, etc.	3, 5, 7, 8	2, 7	15	2, 3, 11	3, 4, 5, 7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Hold a "real life" fair where students role play various life situations and their impact on careers and future life. ▶ Examples are substance abuse, criminal record, college loan debt, low grades, poor attendance, etc. ▶ Prepare a budget for living within a defined wage/salary for an occupation. ▶ Complete a financial wage analysis that includes deductions for taxes and benefits, insurance, loans, pension contributions, etc.	1, 2, 3, 10, 11, 12	2, 5, 6, 8	1, 13 14	11	
▶ Participate in the *Real Game* activities. *Teacher Tip: This is a multidisciplinary program that provides activities based on role playing experiences typical of an assigned career (www.realgame.com). Opportunities for career exploration include studying all aspects of career development and decision making/problem solving as well as academic skills. Other programs related to career guidance are Choices(www.choicesedgroup.org), Junior Achievement (www.ja.org), Micro-Society (www.microsociety.org), Mini-Society (www.minisociety.com), and/or McTown USA (see resource list).*	2, 3, 4, 5, 7, 12		1, 3, 8, 10, 11, 12, 13, 14	1, 2, 7	
▶ Participate in a Micro-Society or entrepreneurial experience. ▶ Apply for positions as safety patrol members, financial officers, attendance clerks, CEO, business manager, public relations coordinator, etc. ▶ Develop a system for rewarding points/faux money for atten dance, participation in events, etc. ▶ Plan and implement a culminating activity such as an entrepreneurial fair where students may use the money earned to purchase items made by various classes.	1–12	1, 2, 3, 5, 6, 7, 8	15	1, 2, 3, 4, 5, 6, 7, 8, 9, 11	7
▶ Search the Internet and print ads for potential employment opportunities. ▶ Categorize these by career majors. ▶ Select one of interest and write a letter of application. ▶ Prepare a resume for the position. ▶ Role play interviewing for the position. *Teacher Tip: Encourage students to explore WNJPIN (www.njpin.state.nj.us) for information on careers and jobs.*	3, 9, 10, 11	5, 6, 8	4, 5, 8	3, 9	

Sample Activities　　　　　　　　　　**List of CCWR Standards**

Sample Activities	1	2	3	4	5
C. Reflection/Evaluation					
▶ Use a journal to record reactions to various presentations/ interviews/job shadowing experiences, etc.	3, 4, 6	2	8, 10		
▶ Compare employability skills as they apply to the job of being	1, 2, 5, 7		8, 9	3	
▶ Use a rubric to evaluate the interviews conducted in role play situations. ▶ Provide constructive criticism.		2	7, 8	4, 5, 6	
D. Extension					
▶ Apply for and work in actual employment, adhering to child labor laws.	1–12	2	15	1–11	1–9
▶ Investigate fighting and anger management in the workplace.	5	5	5	4, 5, 6, 8	8

9-12

Statement I:

An individual wants to select a career pathway (Arts and Humanities; Health and Human Services; Mathematics, and Technology; and Business and Information) in an area of interest for future employment and postsecondary and lifelong learning.

Focus: Conduct research and perform preparatory activities to select a specific career pathway for future employment, postsecondary education and lifelong learning.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.6; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.11, 4.12; Science 5.2; Social Studies 6.1, 6.3, 6.4, 6.5, 6.6; World Languages 7.1

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Complete an interest inventory or revisit previous interest inventories from the student portfolio. ▶ Write a persuasive essay or letter of application for a job or admission to a postsecondary institution that emphasizes personal skills, competencies, abilities and interests, past and current employment, and school and community activities.	2, 3, 5, 6, 10	2	8, 10	1, 3, 11	
▶ Job shadow a person in a selected career pathway ***Teacher Tip: Job shadowing is recommended for the early years of high school only, not for career preparation.***	2, 3, 6, 7		7, 10	2, 9	7
▶ Participate in comprehensive courses that involve skill development related to a career pathway choice: for example, keyboarding, computer applications and Accounting I and II, as a sequence in the business and information career pathway. ▶ Complete individual and group projects that demonstrate skill development and add them to a portfolio.	2, 3, 4, 5, 6, 7	2	15	1, 3, 10, 11	

Sample Activities

List of CCWR Standards

Activities	1	2	3	4	5
▶ Volunteer or participate in a community-service activity related to in the career pathway. ▶ Evaluate the experience.	1, 2, 3, 4 5, 6, 7, 8	2	10	2, 3, 4	7
▶ Plan a career day. Invite speakers to make presentations on select occupations in the career pathways. ▶ Conduct individual/group research before the presentations. ▶ Ask speakers to include information on academic, workplace, and occupational skills as well as information on health and safety issues. *Teacher Tip: A series of panels may be substituted for a career day.*	2, 3, 6, 7	2, 4, 6	3, 4, 5	1, 2, 9, 11	6, 8
▶ Conduct electronic/media searches on a specific career. ▶ Interview a person in the field, using predetermined questions. ▶ Prepare a multimedia presentation for the class. ▶ Compare individual interests and abilities with career choices based on the information presented.	2, 3, 5, 7	5, 6, 9	5, 8, 10	2, 3, 6, 7, 9, 10, 11	
▶ Review and modify the career plan and portfolio based on individual interests and abilities. ▶ Discuss how avocations can lead to careers.	3, 4, 6	2	10	1, 3	
▶ Prepare or update a resume. Complete job applications. ▶ Role play interviewing for various positions. *Teacher Tip: Encourage students to explore WNJPIN (www.njpin.state.nj.us) for information on careers and jobs.* ▶ Obtain a paid job and work for a period of time. ▶ Analyze this employment experience against future goals and objectives. ▶ Identify skills that are transferable to future jobs. ▶ Review on-the-job performance with the mentor or employer.	1–12	2	10, 15	1, 2, 4, 9	4, 5, 7
▶ Develop and work in a school-based enterprise such as a student store, a floral shop, a bagel express, etc. ▶ Analyze this employment experience against future goals and objectives.	1–12	2	10, 15	1, 2, 3, 9, 11	2, 3, 4, 5, 7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Identify skills that are transferable to future jobs. ▶ Evaluate the success of the enterprise in achieving its financial goals.					
▶ Develop and complete a senior experience. ▶ Select a problem, identify a mentor, conduct research, write a report, and make a presentation to an audience. ▶ Analyze the experience in terms of future career goals and objectives.	2, 3, 4, 5, 7	2, 5, 8, 9	1, 5, 8, 10, 15	1, 2, 3, 9, 10	7
▶ Investigate salaries for different jobs at the entry, mid-management, and executive levels. ▶ Propose a budget, including savings, for a single person and/or a family. Incorporate the data in a spreadsheet program using algebraic formulas. ▶ Research the origins and history of federal, state, social security, and unemployment taxes. ▶ Develop an alternative system to fund services and retirement.	12	4, 5, 6	15		
▶ Hypothesize the reasons for the rise of the labor movement in the United States. ▶ Validate the hypothesis.		5, 6	3, 5, 8, 9, 10, 12	10	
▶ Develop a timeline showing the events that led up to the passage of child labor laws.		2, 5, 6	5, 8		8
▶ Trace gender and equity employment issues throughout various eras.		2, 5, 6	1, 5, 8, 9, 12	10	
▶ Select a career pathway focused on one broad industry. ▶ Collect, organize, and analyze data on all jobs available as part of all aspects of the industry. ▶ Identify the levels of education necessary for each employment opportunity. ▶ Create a diagram showing possible jobs for advancement in the industry. ▶ Develop a visual presentation comparing salary ranges for various positions in the industry. *Continued on next page*	2, 3, 4, 5, 6, 7, 9	2, 5, 6, 8	3, 5, 8, 9	10	6, 8

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Compare accident rates for various positions within the industry. ▶ Hypothesize causes for the accidents.					
▶ Research employment opportunities overseas within a career pathway of interest. ▶ Complete a job application package in another language.	9, 10	2, 5, 6, 8	5, 8		
C. Reflection/Evaluation					
▶ Compare the student evaluation process with the employer's assessment process for employees.	2	2	9		
▶ Determine future educational goals and develop a financial plan for funding further study.	4, 6, 12	2	15	1	
▶ Keep a journal of reactions, feelings, etc., that can be reviewed for future self-assessment.	2	10	3		
▶ Write a narrative that describes a typical day for a person in a career pathway.	3	2			
D. Extension					
▶ Select and use a budgeting/financial-planning software package.	12	2, 3	15		
▶ Use the data from the previously proposed budget to develop an investment portfolio. Compare saving opportunities based on salary ranges. ▶ Select hypothetical investments and track the yield by percentage and actual amount over a defined period of time.	12	2, 3, 8,	1, 7, 8, 9, 11, 12, 13, 14	1, 9	

Statement J:

K-4

Although New Jersey is well known as the Garden State, it certainly could be recognized as the Invention State. We now live in an increasingly complex "global society" with demands for increased invention, design, and manufacturing to make people's lives and work more productive while meeting personal and family needs.

Focus: Same as above.

Links to Other Standards: Arts (Visual and Performing) 1.4, 1.5, 1.6; Comprehensive Health and Physical Education 2.1, 2.4, 2.6; Language Arts Literacy 3.2, 3.3, 3.4; Mathematics 4.1, 4.2, 4.3, 4.7,4 .10; Science 5.1, 5.2, 5.3, 5.10; Social Studies 6.5; World Languages 7.1, 7.2

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
▶ Research a constructivist learning approach to inventing, designing, and making products.					
▶ Obtain information on existing local, statewide or national invention competitions such as the New Jersey Mathematics Coalition Calendar Contest, Inventing America, the Toshiba/ NSTA Explora Vision.					
B. Action: *The student will*					
▶ Discuss the "big ideas" related to inventing, designing, and making a product. ▶ Develop a visual organizer or a concept map illustrating what is already known about the topic. ▶ Make additions to the organizer or concept map on a ongoing basis.	8	3, 15			
▶ Read stories about inventors, designers, and engineers from around the world.	3	1	5		
▶ Contrast different products designed to solve the same problem: a fork, a spoon, a knife, chopsticks, a bowl, etc. ▶ Create a new way to complete a routine, for example, combing		2, 6	7, 9		6

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
hair, brushing teeth. ▶ Compare different versions of similar products: for example, health products like toothpaste. *Teacher Tip: Vocabulary may be presented in more than one world language.*					
▶ Determine the function and/or origin of materials used to make a product, for example, the wood or graphite used in a pencil. Learn the word for the product in the country of origin. *Teacher Tip: Explore the geography, history, and culture of the country of origin of the materials.*		1, 3, 6	5, 9		
▶ Document the evolution of a product related to the problem using a timeline that shows how and why a product's design has changed. ▶ Project how the product might change in the future. *Teacher Tip: See the Toshiba NSTA Contest as an example.*		1, 3, 5, 7, 10	1, 2, 5, 7, 8, 9, 11, 14	1	
Complete a design brief (DB) for one of the projects described below: *Teacher Tip: Be sure students discuss safety issues and develop a safety plan for the design brief selected.*					
▶ DB#1: Design and construct a model of a device that enables a Teddy Bear or other favorite stuffed animal or doll to sleep comfortably throughout the year. *Teacher Tip: See K-6 modules developed through Project UPDATE, an NSF funded, integrated curriculum-development initiative, at http://www/tcnj.edu/~ties or other similar sites.*	1, 3	1, 2, 7	15	1, 9	3, 5, 7
▶ DB#2: Design a calendar for an upcoming year that highlights the achievements of a select group or combination of people such as scientists, inventors, business leaders, or heroes. *Teacher Tip: See a sample design brief used during NJ's Mathematics, Science, and Technology Month. Note: This design brief can be extended to a schoolwide activity.*	1, 3	1, 2, 7	15	1, 9	3, 5, 7
▶ DB#3: Participate in the Toshiba/NSTA Explora Vision competition and design a portfolio which illustrates the future	1, 3	1, 2, 7	15	1, 9	3, 5, 7

Sample Activities   List of CCWR Standards

Sample Activities	1	2	3	4	5
direction of a selected technology. ***Teacher Tip: Entry deadline for all categories is February of each year. For more information see http://www.toshiba.com/tai/exporavision.***					
▶ DB#4: Participate in the NSTA Young Inventors program and "design and build a tool that performs a practical function, including but not limited to tools that mend, make life easier or safer in some way, entertain, or solve an everyday problem." ***Teacher Tip: Documentation to include a three- to seven-page inventor's Log and a photograph of the inventor demonstrating the tool. This program is open to students in grades 2-5. Entry deadline is in March of each year. For more information see http://www.nsta.org/programs/craftsman.htm. Hold an inventor's fair.***	1, 3	1, 2, 7	15	1, 9	3, 5, 7
▶ DB#5: Create a design brief for a class- or self-initiated entrepreneurial project.	1, 3	1, 2, 7	15	1, 9	3, 5, 7
▶ Invite guest speakers from the entrepreneurial or manufacturing community to explain their business, inventions, and/or products.	2, 3, 5, 7		3, 4	2	7
C. Reflection/Evaluation					
▶ Maintain a daily, one-page class log describing (1) the focus of each day's work, (2) something learned or information acquired that would answer a "need-to-know" question on the concept map, and (3) mnemonic reminders for the next class session.		2	8, 10	3, 9	
▶ Design groups present the results of their work to the class or other audience. ▶ Provide peer feedback. ***Teacher Tip: Use a rubric to provide feedback to the students.***		9	2, 8, 10	2, 3, 4, 5, 7, 9	3, 4, 7
D. Extension					
▶ Display design solutions at a school open house or other event.		9	4	2	4, 5
▶ Manufacture and sell the product or invention through a local vehicle.	1, 3, 5	2	15	1, 2, 3	1–9
▶ Obtain newspaper coverage showcasing the student's involvement.		2	4		7

Statement J: *5-8*

Although New Jersey is well known as the Garden State, it certainly could be recognized as the Invention State. We now live in an increasingly complex "global society" with demands for increased invention, design, and manufacturing to make people's lives and work more productive while meeting personal and family needs.

Focus: Same as above.

Links to Other Standards: Arts (Visual and Performing) 1.4, 1.5, 1.6; Comprehensive Health and Physical Education 2.1, 2.5; Language Arts Literacy 3.2, 3.3, 3.4; Mathematics 4.1, 4.2, 4.3, 4.7, 4.10; Science 5.1, 5.2, 5.3, 5.10; Social Studies 6.5; World Languages 7.1, 7.2

Sample Activities   **List of CCWR Standards**

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
▶ Research a constructivist learning approach to inventing, designing, and making products.					
▶ Obtain information on existing local, statewide or national invention competitions such as the New Jersey Mathematics Coalition Calendar Contest, Inventing America, the Toshiba/ NSTA Explora Vision.					
B. Action: *The student will*					
▶ Discuss the concepts of inventing, designing and making a product. ▶ Develop a visual organizer or a concept map illustrating what is already known about the topic. ▶ Make additions to the organizer or concept map on an ongoing basis.		8	3, 15	2	
▶ Research and present the lives, history, and times of inventors, designers, and engineers. ▶ Classify the areas the inventors, designers, and engineers work in according to career pathways. ▶ Identify the common workplace readiness and occupational skills required.	2, 3, 5, 6, 7	5, 6, 9	4, 5, 9, 15	1, 9, 10, 11	

Continued on next page

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Discuss the academic preparation necessary for employment in these fields. *Teacher Tip: Ensure that the individuals selected for study represent gender and cultural diversity. Encourage students to broaden their experience by pursuing new individuals and problems.*					
▶ Invite a businessperson from the community to speak with the class about a focused topic, such as invention, patents, product design/development, or innovation (e.g., developing an invention into a marketable product). *Teacher Tip: Sources for speakers include corporate speakers bureaus, the Department of Labor, the local/state chamber of commerce, or parents of students.*	2, 3, 5, 6, 7	10	3, 4		7
▶ Conduct a human factors study. Analyze and plot data that would be useful to a company designing and manufacturing a product related to that factor. ▶ Determine mean, mode, median, and standard deviation and plot them on a graph. ▶ Discuss how a company would use this information in the designing and manufacturing process. ▶ An example includes measuring and plotting a gender-neutral trait such as shoe length or width. Complete a design brief (DB) for one of the projects described below: *Teacher Tip: Be sure students discuss safety issues and develop a safety plan for the design brief selected.*		1, 2, 4, 5, 6, 7, 8	1, 3, 5, 12		
▶ DB #1: Design and model a developmentally appropriate traveling board game to keep two or more third- or fourth-graders occupied while traveling in a car or other transportation mode.	1, 3	1, 2, 7	15	1, 9	3, 5, 7
▶ DB#2: Design a calendar for an upcoming year that highlights the achievements of a select group or a combination of people such as scientists, inventors, business leaders, or heroes. *Teacher Tip: See a sample design brief used during NJ's Mathematics, Science, and Technology Month. Note: This design brief can be extended to a schoolwide activity.*	1, 3	1, 2, 7	15	1, 9	3, 5, 7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ DB#3: Design, produce, and package a snack-food product for teenagers that contains cereal as a primary ingredient. The snack should be wholesome, and have a long shelf life, and a unit retail price between fifty cents and one dollar per individual serving. *Teacher Tip: Parts of the production and packaging may be divided among various classes to involve art and design/ computer technology in the labeling, packaging design, and production of the snack.*	1, 3, 8, 12	1, 2, 7, 8	15	1, 9	3, 4, 5, 7
▶ DB#4: Participate in the NSTA Young Inventors program and "design and build a tool that performs a practical function, including but not limited to tools that mend, make life easier or safer in some way, entertain, or solve an everyday problem." *Teacher Tip: Documentation to include a three to seven page Inventor's Log and a photograph of the inventor demonstrating the tool. This program is open to students in grades 2-5. Entry deadline is in March of each year. For more information see: http://www.nsta.org/programs/craaftsman.htm.*	1, 3	1, 2, 7	15	1, 9	3, 5, 7
▶ DB#5: Select a service learning project. Analyze it and adapt/modify/design an innovation to the system that will better serve the needs of the group or individuals involved.	1, 3	1, 2, 7	15	1, 9	3, 5, 7
▶ Research the process of applying for a patent. ▶ Establish a mini-patent office in the classroom so each group can apply for a patent upon completion of the product or concept.	5, 6	2, 5, 6	5		

C. Reflection/Evaluation

	1	2	3	4	5
▶ Maintain a daily, one page class log describing (1) the focus of each day's work, (2) something learned or information acquired that would answer a "need-to-know" question on the concept map, and (3) mnemonic reminders for the next class session. ▶ Record progress through an electronic portfolio format as an option.		2	8, 10	3, 9	

Sample Activities   List of CCWR Standards

	1	2	3	4	5
▶ Design groups present the results of their work to the class or other audience. ▶ Develop a rubric and provide peer feedback.		9	2, 8, 10	2, 3, 4, 5, 7, 9	3, 4, 7

D. Extension

	1	2	3	4	5
▶ Test the products with students in another class or school. ▶ Design and analyze the results of a survey evaluating the product. ▶ Develop a new recipe or improve an existing one. ▶ elect a site for a sample taste test. ▶ Compile consumer taste results. ▶ Determine the winner. *Teacher Tip: Be sure foods are labeled with ingredients to avoid allergic reactions in taste testers.*	3	2, 4	3, 6, 8, 9, 12	2, 9	3, 4, 7
▶ Manufacture and sell the product/invention. ▶ Do a cost analysis to determine selling price, profit margin, and overhead costs. ▶ Determine the distribution of the proceeds, such as reinvesting in the project or donating to a charitable organization.	1, 3, 5, 7, 8, 12	2	4, 12, 15	1, 2, 3, 9, 11	1–9
▶ Investigate potential health problems and safety hazards associated with producing products for consumption. ▶ Discuss ergonomics. ▶ Examine various products and clarify functions and utility. ▶ Develop a safety plan to address potential problems.		2, 10	5	9	1, 2, 5, 6, 8, 9
▶ Investigate the circumstances associated with the deaths of Marie Curie in 1934 and Karen Wetterhahn at Dartmouth College in 1997. ▶ Discuss how occupational risks may have been prevented. ▶ Identify the different laws that are designed to protect consumers, workers, and the environment before a new product is introduced into the marketplace.		2, 6	1, 3		6, 8
▶ Prepare press releases, fliers and advertisements featuring the products or inventions.	1, 3, 5	8	15		

Sample Activities

List of CCWR Standards

	1	2	3	4	5
▶ Participate in a packaging design activity for middle school students, such as the one produced by FACETS (published by Kendall Hunt) in association with the American Chemical Society.	1, 3, 8, 12	1, 2, 8	15	1, 9	3, 4, 5, 7
▶ Plan and take field trips to museums, societies and businesses that invent things. ▶ Document how inventions are encouraged as part of the business cycle.	3	2	3	1, 2	7

Statement J:

9-12

Although New Jersey is well known as the Garden State, it certainly could be recognized as the Invention State. We now live in an increasingly complex "global society" with demands for increased invention, design, and manufacturing to make people's lives and work more productive while meeting personal and family needs.

Focus: Same as above.

Links to Other Standards: Arts (Visual and Performing) 1.4, 1.5, 1.6; Comprehensive Health and Physical Education 2.4, 2.6; Language Arts Literacy 3.2, 3.3, 3.4; Mathematics 4.1, 4.2, 4.3, 4.7, 4.10; Science 5.1, 5.2, 5.3, 5.10; Social Studies 6.5; World Language: 7.1, 7.2

Sample Activities / List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
▶ Research a constructivist learning approach to inventing, designing, and making products.					
▶ Obtain information on existing local, statewide or national invention competitions such as the New Jersey Mathematics Coalition Calendar Contest, FIRST Robotics Competition, the Toshiba/ NSTA Explora Vision Awards.					
B. Action: *The student will*					
▶ Construct a journal that describes the personal use of inventions over the course of one day and reactions to efficiency, suitability, and effectiveness. ▶ Analyze the effects of technology (e.g., microwaves, VCRs, answering machines, wireless phones) on family life. ▶ Include examples from your home life.		2, 10	10	10	
▶ Create a database of inventors based on a career pathway of choice. ▶ Using a world language of choice, present information on one inventor from the career pathway. ▶ Explain some of the workplace readiness and occupational skills of the chosen inventor.	2, 3, 5, 6, 7	4, 6, 9	5, 8	11	

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Discuss the academic preparation necessary for employment in the field. *Teacher Tip: Ensure that the individuals selected for study represent gender and cultural diversity. Encourage students to broaden their experience by pursuing new individuals and problems.*					
▶ Locate job openings that require the skills and abilities demonstrated by the inventors, designers, and engineers or by group members performing the tasks. *Teacher Tip: Use WNJPIN (www.wnjpin.state.nj.us) as a resource in addition to other print materials in libraries and newspapers.*	9	6, 7	4, 5	9, 11	
▶ Participate in a mentoring or structured learning experience with inventors, designers, or engineers.	1, 2, 3, 5, 6, 7, 8	2	15	2, 3, 6, 9	7
▶ Interview or talk in a chat room with a person employed in invention/patents/ product design or development regarding academic preparation, employability skills, job satisfaction, working conditions, salary ranges, and potential for advancement. ▶ Prepare and deliver a multimedia presentation.	2, 3, 5, 7, 9	3, 5, 6	3, 4, 5, 8		7
▶ Compare and contrast the *inquiry method* used by scientists to discover new knowledge with the *design process* used by technologists to invent products. ▶ Consider important issues related *to technological progress.* ▶ Include the trade-offs and risks associated with using a new technology and the unforseen impacts in developing products that satisfy wants and needs while focusing on sustainability. ▶ Analyze how inventions for fitness (e.g., Nordic Track or the heart monitor) have influenced daily life and life expectancies. Complete a design brief (DB) and complete an application for a position on the design team for one of the projects described below: *Teacher Tip: Be sure students discuss safety issues and develop a safety plan for the design brief selected.*		10	9, 12		

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ DB#1: Form a small peer group (three to four persons) and design, develop, and model a product that protects a child from a hazardous situation. Preliminary work must illustrate the research the design team has done to identify the existence of a hazardous situation.	1, 3	1, 2, 7	15	1, 2, 9	1–9
▶ DB#2: Design a display to celebrate a special event or holiday. Examples include mobiles; windsocks; action figures; and door/window covers that incorporate a controlled source of movement, light, and/or sound.	1, 3	1, 2, 8	15	9	3, 5, 7
▶ DB#3: Participate with a mentor in a design competition. *Teacher Tip: An example of this is the FIRST competition (www.usfirst.org).*	1, 2, 3, 5, 6, 7, 8	1, 2, 9	15	2, 9	3, 4, 7
▶ DB #4: Participate in the DURACELL/NSTA Invention Challenge and design a device that solves a problem and incorporates a battery as source of energy. Include a computerized Inventor's Log and a videotape of the inventor demonstrating the tool as part of the documentation. *Teacher Tip: This program is open to students in grades 6-12. Entry deadline is in January of each year. For more information see http://www.nsta.org/programs/duracell.htm.*	1, 3	1, 2, 7	15	1, 9	3, 4, 7
▶ Prepare a resume that includes project and structured learning experiences.	10	8	10		

C. Reflection/Evaluation

	1	2	3	4	5
▶ Maintain a daily, one-page class log describing (1) the focus of each day's work, (2) something learned or information acquired that would answer a "need-to-know" question on the concept map, and (3) Mnemonic reminders for the next class session. ▶ Record progress through an electronic portfolio format as an option.		2	8, 10	3, 9	

Sample Activities

List of CCWR Standards

Activity	1	2	3	4	5
▶ Conduct internal testing of products. ▶ Redesign product based on the test results. ▶ Test the product again to ensure item meets specifications.		1, 2	6, 7, 12, 14	5, 9	1, 3, 4, 5, 6, 7
▶ Present design groups projects to a review panel. *Teacher Tip: The review panel might consist of business and industry representatives.*		9	2, 8, 10	2, 3, 4, 5, 7	3, 4, 7
▶ Use a journal to record feelings and reactions to mentoring, structured- learning experiences, and career preparation activities and compare these with personal career choices.	3, 4, 6	2	10	3, 11	

D. Extension

Activity	1	2	3	4	5
▶ Invite designers/engineers to school and have students present their design solutions to a panel.		9	2, 10	2, 4	7
▶ Display design solutions at a school open house.		9	4	2	4, 5
▶ Prepare press releases, fliers and advertisements featuring the products/inventions.	1, 3, 5	8	15		
▶ Create a consumer report on a product developed. ▶ Include the research methods and procedures used in evaluating the product.	12	8	8	5	
▶ Investigate the Responsible Care initiative developed by the Chemical Manufacturers Association and discuss the implications this effort has on new product development.		5, 6	3, 8		8

Statement K:

K-4

The behavior of sports stars and movie personalities has been called into question. Develop a system for identifying and promoting positive role models in the community.

Focus: Indentify the positive character traits associated with role models and relate them to employer requirements.

Links to Other Standards: Arts (Visual and Performing) 1.3; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.3; Science 5.2, 5.3; Social Studies 6.5; World Language 7.2

Sample Activities	List of CCWR Standards				
	1	**2**	**3**	**4**	**5**
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Develop a list of character traits and define them (e.g., honesty, responsibility, respect for others, fairness, tolerance). ▶ Present the list in more than one language. ▶ Develop an illustration depicting a situation in which a positive character trait was demonstrated.		2	9, 10	6	
▶ Discuss heroes. ▶ Brainstorm a list of people considered to be heroes. ▶ Categorize the heroes identified (e.g., media heroes, sports heroes, cultural heroes, family members, other role models). ▶ Discuss the traits a hero should possess.	2		8, 9, 10	9	
▶ Assess the positive qualities in identified heroes. *Teacher Tip: Divide the class into cooperative groups.* *Visit the web site, www.clcrc.com/pages/asssess.html.* ▶ Explain which hero the learner would choose as a friend.	2		10	2	
▶ Create a super hero using the list of character traits the learner deems most important. Write a paragraph or create a collage as part of the presentation. *Teacher Tip: Instead of a super hero, create another super person such as coach, a teacher, a community helper, etc.*	2, 5	2, 9	10	11	

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Create a list of good worker traits. Compare and contrast with the list of character traits.	1, 2, 5	2	9, 12	11	
▶ Write a resume from a template for a job of a role model using related character traits.	10	8	8		
▶ Role-play an employment agent and applicant. ▶ Dress up as a role model chosen from the list. ▶ Apply for the job and convince the "employment agent" that the person is the perfect candidate for the job.	9, 10, 11		10	6, 11	

C. Reflection/Evaluation

	1	2	3	4	5
▶ Create an inventory to provide feedback as students role-play and project the employee to be hired.			3, 8	5	

D. Extension

	1	2	3	4	5
▶ Create a role-model journal to be kept throughout the year. *Teacher Tip: Journal content will vary but should include a list of the qualities discussed. Illustrations, drawings, and collages may be used.*		2	10	7, 9, 11	
▶ Investigate a hero. Write a research paper including a bibliography.		3, 5, 6, 8	5	10	
▶ Develop a display illustrating heroes and their traits.		2	15		7

Statement K:

5-8

The behavior of sports stars and movie personalities has been called into question. Develop a system for identifying and promoting positive role models in the community.

Focus: Analyze and evaluate the character traits of public figures from around the world.

Links to Other Standards: Arts (Visual and Performing): 1.3; Comprehensive Health and Physical Education: 2.2; Language Arts Literacy: 3.1–3.5; Mathematics: 4.3, 4.5, 4.8, 4.9, 4.12; Science: 5.2, 5.3, 5.4; Social Studies: 6.2, 6.3, 6.8, 6.9; World Language: 7.1, 7.2

Sample Activities

List of CCWR Standards

	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Brainstorm what makes someone a role model and the qualities a role model might have. ▶ In a written paragraph list and defend personal role models.		2	10	9	
▶ Use magazines and newspapers from around the world to find pictures of role models. Make a collage from the pictures.		2	2, 15		4
▶ Develop a database that includes the characteristics and profiles of the role models. ▶ Create an "ideal" profile in more than one language. ▶ Develop a resume from a template for this "ideal" person for a specific career pathway.	10	4, 8	8, 10	11	
▶ Research and compare public figures from around the world with the ideal profile.		5, 6	5, 8, 9		
▶ Identify some local personalities from career areas such as business, education, politics, sports, the arts, etc., who approximate the ideal profile. Interview a local personality on his/her career. ▶ Discuss the attitudes workers and citizens should have toward complying with occupational safety and health laws and procedures.	3	2	3, 8, 9	2, 11	1, 7, 8

Sample Activities

List of CCWR Standards

Activity	1	2	3	4	5
▶ Participate in a mentoring program or job shadow a person in a career pathway. Evaluate the experience. ▶ Compare similarities and differences for role models and mentors.	1, 2, 3, 5, 7	2	3, 7, 9, 10	1, 2, 3, 9, 11	7
C. Reflection/Evaluation ▶ Draw a conclusion as to whether or not the opinions held of the public figure changed as a result of doing the comparison.			3, 10		
▶ Create a game board, that includes ideal profiles, public offices, campaigns with famous heroes, and role models.		2, 5, 8	5, 15		4
▶ Debate whether a nationally known person is a hero. ▶ Use a rubric with "ideal" qualities.			3, 8, 11	9	
▶ Complete an interest inventory. ▶ Place the results in a career portfolio.	3, 4	2			
D. Extension ▶ Divide into teams to develop strategic and tactical plans for the following scenario. The sports star that a company has used for years as a commercial spokesperson and to whom the corporation has become closely linked has just been found to be using steroids. A reporter asks the company public relations representative a sensational question relating to this issue during an otherwise routine press conference. The corporation needs to decide what to do about the issue. It does not have expertise in-house to deal with such a massive public relations debacle, so the company will be awarding a contract with a public relations/media relations firm to handle the situation. After developing their plans, teams present them to the company in hopes of being awarded the multi-million dollar contract (an outside businessperson can be brought in to make the judgment).		2, 8	15	1, 2, 9, 11	7
▶ Create a Wall of Fame for the school auditorium. ▶ Develop criteria for choosing the people for the Wall of Fame. ▶ Develop a program or ceremony for inducting these local heroes for the Wall of Fame. Complete a cost analysis of the project.	12	6, 9	15	1, 2, 9, 11	4, 7

9-12

Statement K:

The behavior of sports stars and movie personalities has been called into question. Develop a system for identifying and promoting positive role models in the community.

Focus: Interaction with role models in the workplace.

Links to Other Standards: Arts (Visual and Performing) 1.3; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.3; Science: 5.2, 5.3; Social Studies 6.2, 6.5; World Language 7.1, 7.2

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Search the *New York Times* database to find award-winning essays on role models written by high school learners in New York City pubic schools and other districts. ▶ Read those essays. ▶ Analyze the essays for the portrayal of the positive qualities of the role models. ***Teacher Tip: Research databases in New Jersey and throughout the world.***		4, 5	5, 9, 12		
▶ Categorize the careers of the role models into career pathways. ▶ Hypothesize the positive qualities that lead to advancement in the chosen careers.	2, 3, 4, 5, 7	3	3, 8, 9		
▶ Choose a role model in a career field of interest. ▶ Write (in more than one language) and publish a curriculum vitae for that individual; specify professional preparation and achievements, occupational skills, educational background, and personal interests. ▶ Use print and electronic job-posting services to locate potential employment opportunities worldwide. ▶ Research web sites and computer-based career programs to obtain information on careers.	2, 3, 4, 5, 7, 9, 10	2, 8	5, 8, 9		

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Interview a successful local business or industry employee who fits the criteria of a positive role model. Summarize information and categorize according to the identified positive qualities.	2, 3, 5, 7	2	3, 8, 9	11	7
▶ Participate in a structured-learning experience under a local workplace mentor. ▶ Evaluate the experience based on the development of employability skills that will lead to becoming a mentor in the future.	1, 2, 6, 7, 8	2	8, 10	2, 3, 9	3, 4, 7
▶ Role-play your response to a person who is working in a way that endangers both their own and your health and safety.			1	8	1, 7, 8
▶ Develop a system that fosters service, (e.g., a mentor/peer mentor/tutor) and serve in that capacity. *Teacher Tip: Students are encouraged to apply and interview for mentor positions.*	1, 5, 6	2	15	2, 9	3, 4, 5, 7
C. Reflection/Evaluation					
▶ Write original essays on the contributions of individuals who emphasize community/workplace success above personal gain. *Teacher Tip: Essays may be written in a language other than English.*	5	2		11	
▶ Students choose a piece of world literature that addresses the theme of role models. ▶ Analyze the characteristics.		6	8		
▶ Write an original poem that illustrates the qualities exhibited by the role model in the literary selection read. *Teacher Tip: Resources and presentation may be in a language other than English.*		2	9		
▶ Create grading rubrics for an original essay and multimedia presentation.		2		9	

Sample Activities

List of CCWR Standards

D. Extension

Sample Activities	1	2	3	4	5
▶ Choose a piece of literature that depicts positive role models. ▶ Compare the literary role model with a contemporary role model.		6	5, 9		
▶ Create an original poem, song, multimedia slide show, game, etc. that illustrates the qualities exhibited by any identified role model.		2, 8	9		
▶ Divide the class into teams to address the following scenario: A famous rock star/movie star has accepted your class's invitation to attend prom night festivities. Public appearances by this star often result in dangerous, rowdy conditions. The school realizes that it might be held liable for any destruction, damage, or personal injury that would occur to people or property during this event. It must take all precautions that would fully protect the community, the students, and the faculty, etc. from any and all negative occurrences. The school does not have expertise on its staff to deal with such issues, so it will be contracting the effort to security firms. ▶ The class divides into several teams that role-play the employees of a security firm bidding on the contract. One team in the class assumes the identities of school officials who, over the course of time, meet often with the security firms to lay out the issues and eventually award the contract to one of the firms.		2, 8	15	1, 2	1, 2, 6, 8, 9
▶ Invite personal role models to school for an evening celebration. ▶ Create a multimedia presentation to highlight the personal and professional traits exhibited by the guests. ▶ Design and produce a commemorative plaque or award for each guest.	2, 5	9	15		7

Statement L:

K-4

Current transporation systems consume natural resources and add to pollution and congestion.

Focus: Current transportation systems consume natural resources and add to pollution and congestion.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.1, 2.2, 2.3, 2.5; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.5, 4.8, 4.9, 4.10; Science 5.1, 5.2, 5.3, 5.4, 5.5, 5.8, 5.9, 5.12; Social Studies 6.1, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9; World Languages 7.1, 7.2

Sample Activities

List of CCWR Standards

	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ List various modes of transportation used daily.			1		
▶ Survey the class to determine the frequency of use of the various modes of transportation and graph the results.		8	3, 8, 9, 12	2	
▶ Research safety rules related to driving, walking, biking, rollerblading, etc., and those that apply to airplanes, boats, trains, etc. ▶ Create a visual presentation that summarizes safety rules.		6, 8	4, 5, 8, 12		1, 2, 5, 6, 7, 8, 9
▶ Discuss and compare the environmental and economic impact of different modes of transportation.	12	10	1, 9, 12		
▶ Compare the advantages and disadvantages of different transportation modes in reaching a destination. ▶ Write a persuasive paragraph.		6	4, 5, 12, 13		
▶ Divide into groups. ▶ Select a job from stories. ▶ Determine comparable locations within the neighborhood for the job in the story. ▶ Analyze maps to determine distances to be traveled. ▶ Estimate the time necessary to travel from the school to the work location.	1	2, 6, 7	3, 8, 12, 13	9, 11	8

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Review the previously discussed environmental issues and come to a decision about the best means of transportation in a given situation. ▶ Discuss the importance of getting to school and work on time.					
▶ Trace the development of a mode of transportation throughout various eras of history. Create a timeline.		5, 8	5, 8		
▶ Identify songs that include modes of transportation. ▶ Select a song and perform it for the class. ▶ Construct or obtain a costume or hat that depicts a worker for that mode of transportation. *Teacher Tip: Encourage students to research songs from other countries and cultures.*	3	2	5		
▶ Using map skills to measure distances for travel, select a destination and map a route for reaching it. ▶ Design a "trip-tik" itinerary for the trip.		8	2, 15		8
▶ Invite a speaker whose work involves a career related to transportation to speak to the class. ▶ Develop a list of questions related to job tasks, the preparation/training required, licensing, safety rules and crisis situations related to this career.	1, 2, 3, 5, 7	2	3	9	6, 7, 8, 9
▶ List the pros and cons of using different transportation modes consider health and safety issues, cost, environmental concerns, time, and travel and related concerns as listed above. ▶ Each group presents its findings.	12	9	8	2	6, 7, 8, 9
▶ Select a mode of transportation and compare it to another country. ▶ Create and conduct a multimedia presentation on the topic.		5, 9	5, 15	10	
▶ Plan a trip to the local police department. ▶ Develop a list of questions to interview a police officer about the consequences of behaviors and violations of driving laws. ▶ Project the impact on careers and employment.	1, 2, 3	2	1, 3	1, 2	7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Research the methods of counting vehicles passing a specific point. ▶ Develop a plan for documenting travel and frequency at a particular point.		2	15		1

C. Reflection/Evaluation

	1	2	3	4	5
▶ Write a story about a personal experience related to travel.		8	10	3	
▶ Select a favorite means of transportation and defend this choice.			10	3	

D. Extension

	1	2	3	4	5
▶ Compare and contrast the speeds at which animals move with human modes of transportation.			5, 12		
▶ Communicate with a driver who tracks the progress of delivering people or products as part of a job assignment. ▶ Map starting locations, planned stops and the final destination. ▶ Brainstorm events that may interfere with meeting time schedules. ▶ Identify safety measures for this mode of transportation.	3	2, 5	15	9	5, 6, 7, 8
▶ Develop a plan to implement a bicycle-safety awareness ampaign in the school. ***Teacher Tip: Work with the local police department/safety division.***			1, 15		1, 2, 4, 5, 6, 7, 8, 9
▶ Measure strides and use a pedometer to determine how long it will take to walk various distances.		2	6	9	

5-8

Statement L:

Current transporation systems consume natural resources and add to pollution and congestion.

Focus: Propose ideas that will reduce the number of cars on the roads. Research, develop, and advertise economical transportation systems that conserve natural resources.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.4, 1.5, 1.6; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.4, 4.5, 4.7, 4.8, 4.10; Science 5.1, 5.2, 5.3, 5.9, 5.12; Social Studies 6.1, 6.2, 6.3, 6.4, 6.5, 6.7; World Languages 7.1, 7.2

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Brainstorm a list of initial questions, issues, and possible solutions related to the problem. *Teacher Tip: Encourage the students to develop wide-ranging solutions, e.g., vehicle design, public transportation systems, and community redevelopment. Consider hybrid cars, fuel cells, mandatory public transportation, and/or pedestrian malls.*			1		
▶ Research and debate whether vehicle manufacturers are designing or producing fuel-efficient vehicles. ▶ Compare American-made vehicles with those manufactured in other countries for fuel efficiency and environmental safety. *Teacher Tip: If a manufacturing facility is available, take a trip to the site. Investigate career opportunities related to design, manufacturing, etc.*		6, 10	3, 5, 8, 9		7
▶ Design a fuel-efficient vehicle. ▶ Produce a model or prototype. ▶ Compare and contrast the fuel costs of operating a current gas-fueled vehicle with the costs of operating the newly designed fuel efficient model. ▶ Compare the safety features of the current model with those of the fuel efficient design.	12	7, 8, 10	8, 10, 15	1	4, 6, 7

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Categorize fuel sources throughout the ages. ▶ Explore their impact on the environment. ▶ Write a research report with footnotes and a bibliography.		5, 6	5, 8, 9	10	
▶ Divide into teams to research and propose ideas to reduce the number of cars on the roads. ▶ Each team will champion a different solution. ▶ Develop an information packet to inform people of the idea. ▶ Conduct consumer focus groups to determine if drivers respond positively. ▶ If not, analyze why the ideas were not received positively and redesign the proposal.		2, 8	15	2, 3, 4, 9, 11	7
▶ Compare public transportation systems in different countries. ▶ Apply the best solution to the local problem. ▶ Develop a thesaurus for different forms of transportation. ▶ Include terms in other languages.		1, 5, 6, 8	5, 8, 11, 12, 13		6
▶ Develop a cost analysis for the proposed transportation system within the community. ▶ Explore government subsidy options and private ownership opportunities. ▶ Develop a model and project a one-way and a round-trip fare for a specific destination. ▶ Analyze the data in a spreadsheet program using algebraic formulas.	12	4, 5, 8	3, 4, 5, 12		
▶ Invite a local or regional planner to present information on projected community-development plans. ▶ Analyze the information presented to determine future transportation needs. ▶ Draw conclusions regarding the best transportation system to meet community-development plans. ▶ Present the recommended system in a proposal format.		2	8, 11, 12, 13		
▶ Design a community that offers the most efficient transportation options.	3	1, 9	15	1	8

Sample Activities

List of CCWR Standards

	1	2	3	4	5
▶ Develop a public relations campaign to foster the use of the selected solution. ▶ Include one media form that focuses on an ethnic group speaking a language other than English. *Teacher Tip: Presentations can be made in different languages.*		8, 9	1, 15	6	
▶ Categorize jobs related to this problem into career pathways. ▶ Identify the transferable skills that will be needed. ▶ Identify job openings in the local community. ▶ Develop job descriptions for the employment opportunities. *Teacher Tip: Plan and implement a field trip associated with transportation.*	2, 3, 5, 6, 7, 9	2	9		7
C. Reflection/Evaluation ▶ Display the final products in showcases and evaluate models through a student/ teacher-designed rubric. ▶ Invite parents, community representatives (mayor, town council members, chamber of commerce), board of education representatives, PTA groups, and the media to view the display and provide feedback.		2		2, 3	7
▶ Critique a municipal plan from another community. ▶ Write a business letter to the community offering suggestions.		2	14	5, 6	
▶ Hypothesize how various modes of transportation have changed society.			3		
▶ Job shadow a person in a career related to one of the areas of investigation.	3, 7	2			
D. Extension ▶ Write an original story about obtaining transportation to a site after missing the last scheduled departure.		8	10		
▶ Investigate artists that feature a form of transportation and analyze the works in relation to the lifestyle of the time.		6	5, 12		
▶ Write an article and take photographs of the projects completed for publication in school newsletters and local newspapers.	3	8		2, 9	

Statement L:

9-12

Current transporation systems consume natural resources and add to pollution and congestion.

Focus: As the chief engineer working for a firm, research and design an alternative form of transportation that uses renewable natural resources.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.4, 1.6; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11; Science 5.1, 5.2, 5.3, 5.4, 5.8, 5.9, 5.10, 5.11, 5.12; Social Studies 6.1, 6.4, 6.6, 6.7, 6.8, 6.9; World Languages 7.1

Sample Activities

List of CCWR Standards

Activities	1	2	3	4	5
A. Preparation: *(See page 6-2)*					
B. Action: *The student will*					
▶ Identify types of transportation systems currently available throughout the world. ▶ Communicate with a person in another part of the world using his or her other native language.		1, 5			7
▶ Categorize renewable and nonrenewable energy sources that can be used in transportation. ▶ Prepare a graphic representation.		2	9		
▶ Research patents for transportation and fuel/energy devices and formulas. ▶ Determine which applications involve renewable resources.		1, 5	5		
▶ Determine and present the economic, social, technological, natural resource, industrial, and political impacts of transportation on society. ▶ Investigate company policies and procedures related to employee commutation problems and issues.	12	6	5, 14	10	

Sample Activities

List of CCWR Standards

Sample Activities	1	2	3	4	5
▶ Investigate the safety concerns associated with using hydrogen as an alternative fuel. ▶ Describe how these concerns are being addressed and reach a class consensus as to whether the benefits outweigh the risks.		5, 6, 10	3, 5	7	6
▶ Apply the design-loop process to the design of an alternative transportation system that uses renewable natural resources. *Teacher Tip: Group members apply for positions within the design team.*	9, 10	1, 9	15	2, 7	
▶ Test the solutions and report the results. ▶ Prepare a design brief and role-play making a presentation to management. ▶ Evaluate each option and recommend one to be presented to the client. ▶ Create a rubric and evaluate the solution.	7	8	8, 10, 13 14		
▶ Research the potential that lubricant additives have in extending engine life and increasing fuel economies. ▶ Investigate the difference between using regular engine oil, engine oil with additives, and synthetic oils. ▶ Include an in-depth analysis of short- and long-term cost factors to the consumer. ▶ Develop a brochure "pitching" the best choice in engine lubrication. ▶ Develop a consumer survey and ask a number of individuals which product they use and why. ▶ Review the brochure with the consumer and record whether or not the marketing efforts have any impact on consumer behavior.		2, 5, 9	1, 3, 5, 11, 13	2	7

Sample Activities

List of CCWR Standards

	1	2	3	4	5
C. Reflection/Evaluation					
▸ Compare the design team's experience with operations in an engineering firm. *Teacher Tip: Job-shadowing, field-trip, or employment experiences might be used as a basis for completing the comparison.*	2, 3, 5, 6	2	9	11	7
D. Extension					
▸ Investigate and design improvements to the current infrastructure.	3, 5, 7	6, 9	15		
▸ Develop cost estimates for construction of the recommended design option. ▸ Analyze the data in a spreadsheet program using algebraic formulas. ▸ Develop a business plan for implementing the project.	5, 12	2, 4, 6, 8	15		

Chapter 7

Instructional Adaptations for Students with Diverse Needs

In the interest of compliance with the Individuals with Disabilities Education Act (IDEA) of 1997 and Section 504 of the Rehabilitation Act of 1973, and in accordance with N.J.A.C. 6A:8-3.1(a)3, adaptations for students with disabilities are suggested in this section.

Adaptations for exceptionally able students are included in accordance with N.J.A.C. 6A:8-3.1(a)5.

In the interest of serving the needs of students with Limited English Proficiency (LEP), adaptations for LEP students are also suggested in this section.

Instructional Adaptations for Students with Disabilities

Introduction

The New Jersey Core Curriculum Content Standards and related curriculum frameworks are the focus of curriculum and instruction for all pupils. That population includes students with disabilities. To provide pupils with disabilities meaningful access to curriculum and instruction based on the content standards, adaptations may be required. The adaptations are not intended to compromise the content standards. Instead, adaptations provide students with disabilities the opportunity to maximize their strengths and compensate for their learning differences.

Figure 7.1

RELATIONSHIP
BETWEEN THE
STANDARDS AND
FRAMEWORKS, THE
GENERAL EDUCATION
CURRICULUM, AND
IEPS

Because students with disabilities are expected to participate in the general education curriculum, their individual education programs reflect the Core Curriculum Content Standards and the local school district's general education curriculum (see Figure 7.1).

Individualized Education Programs (IEPs)

General Education

Core Curriculum Content Standards and Curriculum Frameworks

The Federal Requirements

The Individuals with Disabilities Education Act (IDEA) amendments of 1997 and Section 504 of the Rehabilitation Act of 1973 guarantee students with disabilities the right to general education *program adaptations as specified in their Individual Education Programs (IEPs) or 504 plans.* The intent of the acts is to give these students access to the general education program and curriculum.

The term *adaptation,* in the context of the frameworks, is defined as any adjustment or modification to the general education program that enables students with disabilities to participate in, and benefit from, activities and experiences based on the Core Curriculum Content Standards and demonstrate understanding and application of the content standards. Such modifications may be those identified as *best practice*.

Cross–Content Workplace Readiness: Participation and Benefits

Students with disabilities demonstrate a broad range of learning, cognitive, communication, physical, sensory, and social/emotional differences that may necessitate adaptations to the general education program. Each pupil manifests his or her learning abilities, learning style,

and learning preferences in a unique way. Consequently, the types of adaptations needed and the programs in which the adaptations will be implemented are determined for each student within the Individualized Education Program (IEP) or 504 planning processes.

Cross-content workplace readiness requires different forms of participation. Instructional and physical adaptations are required for learning experiences in the classroom and in the community. Some adaptations may structure a student's learning in an explicit and systematic way, including the way in which instruction is presented and organized. For example, greater emphasis might be placed on foundation skills. Physical adaptations might be required to assist the student with tasks requiring dexterity and flexibility or the use of a variety of tools and materials. Physical adaptations might also be necessary to address safety considerations. Therefore, the teacher must understand the nature of the student's disability and access the individual education program.

Success for all is the goal. The following sections describe the types of adaptations that may be required. Also presented are best-practice strategies that are generally applicable to the enhancement of the special education student's access to the classroom and to learning and success.

Classroom Organization

Students with disabilities may require specific adaptations that facilitate their participation in classroom activities. The classroom's organization and environment will maximize the students' participation and attention if the following needs are addressed:

- comfort
- interaction
- peer and adult communication
- independence
- mobility

Table 7.1

EXAMPLES OF ADAPTATIONS

Instructional Groups	Individual Support	Environmental Conditions	Adaptive Equipment
• Cooperative groups • Peer partners • Buddy system • Teams • Common interest	• Assist physically • Clarify • Prompt/cue • Gesture/signal • Interpret • Reinforce • Highlight • Organize • Focus	• Ventilation • Temperature • Sound • Lighting • Conference area • Storage accessibility • Labeled bins and cabinets *Safety:* • Clear pathways • Posted rules • Labeling • Distribution (materials) • Directions • Demonstrations • Role assignments • Timekeeping • Health/chemical • Equipment storage and use • Preparation and cleanup	• Pump bottles • Revolving utensil holder • Books on tape • Directions on tape • Tape recorder • Tools with foam handles • Voice-activated recorder • Personal computer • PC software: e.g., *Ultimate Reader* (reads texts aloud on Internet) • Typography books (bas-relief) • Speech synthesizer • Communication board • Lap/drawing board • Closed-captioned videos and monitors • Braille materials • Large print materials • Low-vision equipment • Talking watch or clock • Calculator • FM system
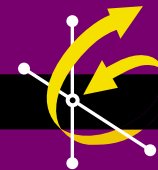
Instructional Presentation

Instructional presentation adaptations can enhance a student's attention and ability to focus on instruction. The adaptations provide special education students with teacher-initiated and teacher-directed interventions that prepare students for learning and engage students in the learning process (*instructional preparation)*; structure and organize information *(instructional prompts)*; and foster understanding of new concepts and processes during classroom activities *(instructional applications)*.

Note that many of these "adaptations" are simply good instructional practices, from which all students would benefit.

Table 7.2

PREPARATION, PROMPTS, AND APPLICATIONS

Preparation	Prompts	Applications
Examples	**Examples**	**Examples**
• Relate to personal experience	• Graphic organizers	• Hands-on activities
• Preview materials	• Semantic organizers	• Constructions
• Use organizing tools	• Outlines	• Dramatization
• Brainstorm/web	• Mnemonics	• Props/manipulatives
• Use questioning techniques	• Analogies	• Illustrations
• Predict	• Imagery	• Flowcharts
• Preteach vocabulary	• Color coding	• Field trips
• Review strategy	• Highlight/underline	• Guest speakers
• Demonstrate	• Segment techniques and task analysis	• Interviews/surveys
• Illustrate	• Key words/labels	• Life applications
• Use models	• Repeat/clarify directions	• Process modeling
• Provide a mini-lesson	• Use cue cards, chalkboard, pictures, overhead	• Think aloud
	• Movement cues	• Games/puzzles
Purpose		• Simulations
• Increase interest	**Purpose**	
• Understand objectives/goals	• Organize information	**Purpose**
• Grasp key concepts	• Understand whole/part relations	• Simplify abstractions
• Recall	• Associate and connect cues	• Give concrete examples
• Use prior knowledge	• Grasp essential concepts	• Elaborate
• Focus	• Classify	• Connections
	• Compare	• Association
	• Recall	• Relate to experience
	• Summarize	• Form generalizations
		• Use multiple modalities

Instructional Monitoring

Frequent monitoring of the performance and progress of students with disabilities is essential to ensure that students are, in fact, understanding and benefiting from learning activities. Monitoring provides teachers with a means of obtaining information about students and their ability to participate effectively in activities. Monitoring helps teachers determine when and how to adjust instruction and provides supports to promote student development. Equally important is student self-monitoring, self-evaluation, and self-management, which promote student self-reflection and self-direction regarding task demands, goal attainment, and performance accuracy.

Table 7.3

INSTRUCTIONAL MONITORING

Examples		Purpose
• Goal setting	• Conference	• Periodic check for understanding
• Anecdotal recording	• Peer critiques	• Progress checks
• Progress graphs	• Student contracts	• Redirect attention
• Checklists/rubrics	• Systematic	• Direct on-task behavior
• Timelines	assessment	• Promote participation
• Journal entries		• Student goal setting
• Portfolios		• Reinforcement
• Videos		• Manage student behavior
• Audiotapes		• Self-critique

Student Response

Student performance responses provide students with disabilities a means of demonstrating progress toward the lesson objectives related to the *Cross-Content Workplace Readiness Curriculum Framework* activities.

Table 7.4

RESPONSE PROCEDURES AND FORMATS

Response Procedures	Response Formats	
• Extend time	• Offer oral/written options	• Make
• Provide practice exercises	• Maintain eye contact	observations
• Interpret/interpreter	• Demonstrate	• Provide choices
• Use preferred response mode	• Peer-teach	to students
(written, dictated, or oral)	• Discuss	

Instructional Adaptations for Exceptionally Able Students
Gifted and Talented

Introduction

This section offers information on developing instructional adaptations for exceptionally able students. Required adaptations for exceptionally able students are supported by the section of the New Jersey Core Curriculum Content Standards titled, Implementation Issues: We must provide all students with appropriate challenges so that the raised expectations for all students do not result in lowered expectations for the exceptionally able."

Additionally, New Jersey Administrative Code — N.J.A.C. 6A:8-3.1(a)5 — requires that "district boards of education shall be responsible for indentifying gifted and talented students and shall provide them with appropriate instructional adaptations and services."

Suggestions for serving the needs of these students are offered in the following categories: the identification process, adaptation strategies, and educational planning.

Adaptations for Exceptionally Able Students

Curricular adaptations, also referred to as differentiating the curriculum, refers to appropriate adjustments to curriculum content, teaching strategies, expectations of student mastery, and scope and sequence.

Adaptation strategies include the following:

▶ interdisciplinary and problem-based assignments with planned scope and sequence
▶ advanced, accelerated, or compacted content
▶ abstract and advanced higher-level thinking
▶ allowance for individual student interests
▶ assignments geared to development in the areas of affect, creativity, cognition, and research skills
▶ complex, in-depth assignments
▶ diverse enrichment that broadens learning
▶ variety in types of resources used
▶ community involvement
▶ cultural diversity
▶ internships, mentorships, and other forms of apprenticeship

Adaptation categories include the following: acceleration, enrichment, and grouping. The next several pages identify a variety of adaptive efforts within these categories.

Process for the Identification of Exceptionally Able Students

Exceptionally able (gifted) students are those who:

- demonstrate a high degree of intellectual, creative, and/or artistic ability(ies),
- possess exceptional leadership skills,
- excel in specific field (e.g., as athlete, entrepreneur),
- function above grade level,
- need accommodation or special instruction and/or services to achieve at levels commensurate with a challenge to their abilities.

The characteristics of exceptionally able students include, but are not limited to, the following:

- ability to grasp concepts rapidly and/or intuitively
- intense curiosity about principles and how things work
- ability to generate theories and hypotheses and to pursue methods of inquiry
- produce products that express insight, creativity, and/or excellence
- pose questions beyond those presented in the Core Curriculum Content Standards
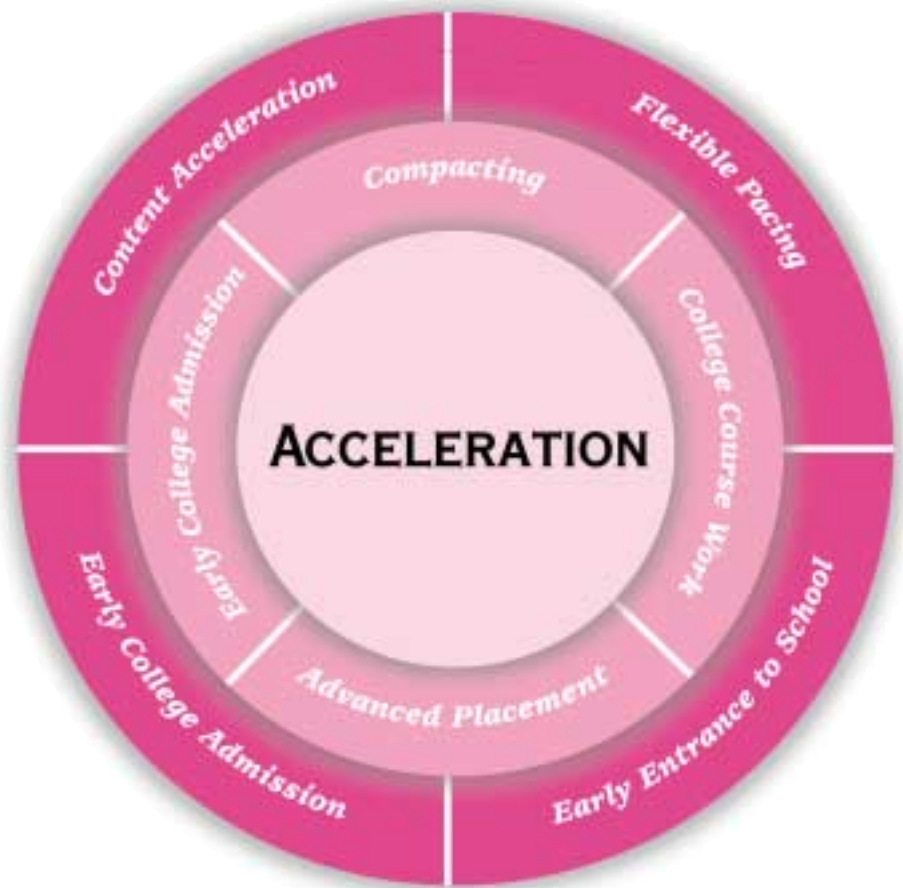
The process of identification is ongoing. Students are continuously entering and exiting school districts. Fluidity should be maintained as students' needs change each year. Identification and appropriate educational challenges should be initiated in kindergarten and reviewed annually through grade 12 (N.J.A.C. 6A:8-3.1(a)5i). Identification practices should be in place at the time of school enrollment. When a separate or pullout program is maintained, the selection of nominees should be determined by a committee of at least three to five individuals to maintain a fair and democratic process.

The identification process should reasonably identify three percent to five percent of the school population through multiple criteria:

- aptitude discovered through testing, special projects, teacher observation, student interest and motivation, and state or national standardized assessments
- teacher recommendation
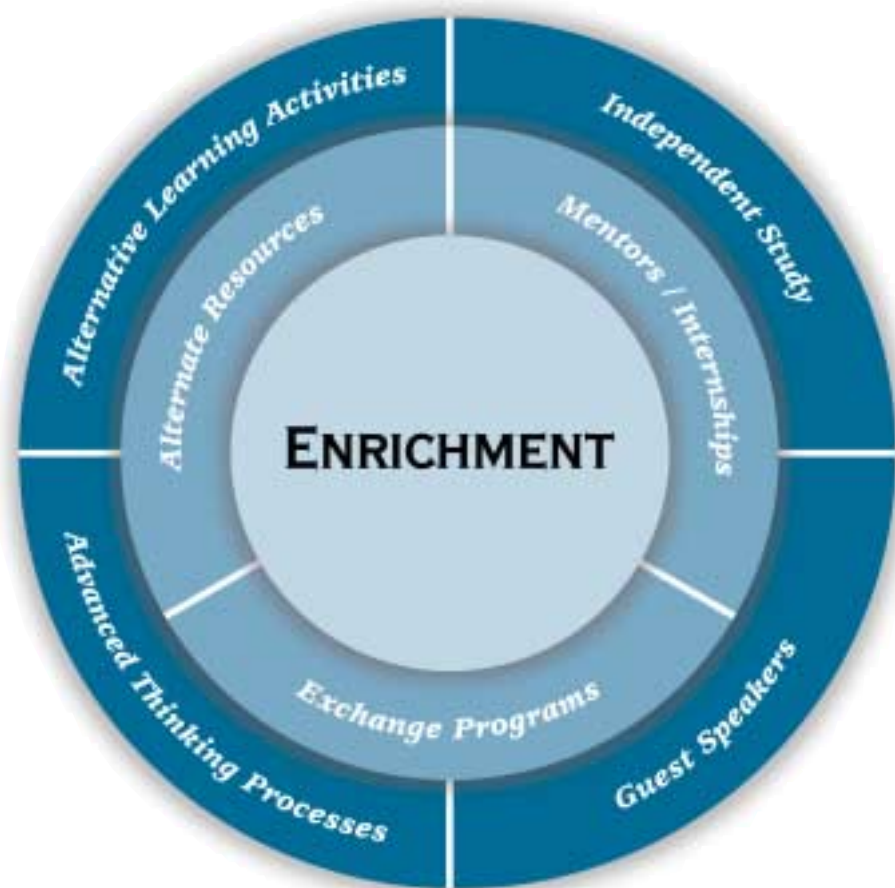- self-, peer, and/or parent nomination

- **Flexible pacing:** Assignment to classes should be based on the ability to be challenged and handle the work, not based on age.

- **Content acceleration:** Superior performance in some areas may be addressed with placement in a higher grade level for the areas warranting it.

- **Early entrance to school:** Eligibility should be evaluated in terms of the following: (1) degree of advancement in relation to peers; (2) number of areas of advanced achievement; (3) the student's self-concept. (The percentage of students attending one to three years of preschool has increased dramatically and should be considered.)

- **Multiage classes:** Classes in which two or more grade levels are combined. Students can accelerate through self-pacing.

- **Compacting (also known as telescoping):** Refers to a form of acceleration in which part of the curriculum is covered in a shorter period of time than is usual. Previously mastered content is determined through pre-evaluation and eliminated.

- **College course work:** Qualified students take college courses for college credit while completing high school requirements (concurrent enrollment). College courses may be taken in the summer.

- **Early college admission:** Once the standards for high school are met, early admission to college is an option. Students may leave high school early and enter college.

- **Advanced placement:** The advanced placement program (APP), administered by the College Entrance Examination Board, enables high school students to obtain both high school and college credit for demanding course work offered as part of the school curriculum.

Acceleration

Acceleration involves grade-skipping or changing the rate of presentation of the general curriculum to enable the student to complete the program in less time than usually required. Prescribed seat-time is not necessary for achievement of the standards. Acceleration can occur in any subject area. Middle school students should be able to take high school courses or high school students take college courses with appropriate credit accrued. Some provision must be made for continued acceleration or high-level enrichment. Unless the student has a pre-identified problem, social or emotional development should not inhibit acceleration.

• **Alternative learning activities/ units:** Opportunities to pursue alternative activities permit students to engage in new learning and avoid the boredom of repetitive instruction or unnecessary practice in skills already mastered.

• **Independent study:** Students conduct carefully planned, self-directed research projects which are carefully monitored by the teacher. Prerequisites include instruction in field-based and library research skills, the scientific method, and other authentic types of inquiry.

• **Advanced thinking processes:** Assignments in all curriculum areas should emphasize higher-level thinking skills such as synthesis, analysis, and evaluation.

• **Guest speakers:** University faculty, parents, business and industry leaders, or other teachers can provide information on topics beyond the teacher's expertise.

• **Mentors/internships:** Both mentors and internships allow students to interact with adult experts in their fields of interest and to increase their awareness of potential careers. Mentors act as role models.

• **Alternate resources:** Alternate resources may include materials from a higher grade level or business, university, and community resources such as laboratories, libraries, and computer facilities.

• **Exchange programs:** Students attend schools in a different community or country to enrich their educational experiences.

Enrichment

Enrichment is another way to meet the differentiated needs of exceptionally able students. Well-articulated assignments that require higher cognitive processing, in-depth content, and alternative modes of communication can be effective and stimulating

- **Self-contained classes:** Self-contained classes enable exceptional students to be challenged in every area throughout the day and week, to be stimulated by their intellectual peers, and to have guidance from teachers with experience in a sequential, integrated curriculum for the exceptionally able.

- **Pullout programs:** Pullout programs combine regular class integration and homogeneous grouping on a part-time, regular basis. Pullout programs require careful coordination and communication between the teachers of both classes.

- **Cluster grouping in the regular classroom:** This type of grouping permits homogeneous and heterogeneous grouping according to interests and achievement.

- **Cluster scheduling:** Schedules are arranged so that exceptionally able students can take their required core courses together to enhance rapid pacing, require less drill, and allow greater depth and breadth.

- **Honors and enrichment classes:** These classes provide opportunities for practicing higher-level thinking skills, creativity, and exploration of in-depth course content.

- **Seminars:** Aimed at research, interdisciplinary studies, visual and performing arts, academic subjects, or other areas of interest, seminars provide interaction with specialists who can give guidance in specific areas.

- **Resource centers:** A district can establish a resource center available to all students but reserve it at times for exceptionally able students from a broader geographical area (e.g., interdistrict or county-wide).

Grouping

Grouping involves placing students of like ability together in homogeneous arrangements such as special classes or clustering in the same classroom. Grouping allows for more appropriate, rapid, and advanced instruction and challenges students without isolating them.

EDUCATIONAL PLAN FOR AN EXCEPTIONALLY ABLE STUDENT

STUDENT_____H.R._____Date _____

Birthdate_____Age_____Grade _____

Address_____ Zip _____

INITIAL ASSESSMENT INFORMATION [National norms/percentiles]

Group Achievement Tests: Date_____ Individual Achievement Test: Date _____

Name:_____ Name _____

Subtest	Percentile	Subtest	Percentile
_____	_____		
_____	_____		
_____	_____		
_____	_____		
_____	_____		

INDICATORS OF MASTERY OF CCCS IN_____:

<center>(Subject)</center>

MONITORED BY:

Parent:_____ Teacher: _____

Counselor:_____ Administrator: _____

CONSIDERATIONS/INTERESTS: _____

_____

SPECIAL NEEDS/ADAPTATIONS: _____

_____

EXPECTATIONS/OBJECTIVES: _____

_____

RECOMMENDED FUTURE PLAN: _____

_____

PERMISSION TO PARTICIPATE:_____

<center>(Parent)</center>

Date_____

Instructional Adaptations for Students with Limited English Proficiency

Introduction

Students with Limited English Proficiency (LEP) come to school with diverse linguistic and cultural backgrounds. They bring differences in physical, social, and intellectual abilities. Some are refugees who have experienced traumatic hardships. Learning a language means learning to speak, listen, read, and write with clarity and understanding — all of which rely upon thinking in a new language. The students' level of literacy in their first language and their prior mastery of the subject must be considered. The task is daunting for the students. The number of LEP students is increasing, and familiarity with the strategies on the following pages will help to smooth the way for teacher and learner. When adaptations are not provided, instruction will not be effective and the student will not benefit.

The purpose of adaptations is to reduce the complexity of the language, not the depth of the subject content. By lowering the language barrier and making the lessons as comprehensible as possible, the student's ability to understand is increased. Two factors will influence the student's ability: (1) the level of familiarity the student has with the content; and (2) the degree to which the content is given meaning through visual materials, e.g., pictures, charts, and diagrams. Nonlinguistic cues enable the student to comprehend the material and the teacher's messages.

The goal is to lower the language barrier by making the classroom communication simple, clear, and meaningful to the student. Students may sound fluent in a social setting but have difficulty with "academic" language. Students will go through a stage of silence, then mimicking, before using the language spontaneously.

The following pages include specific recommendations to ease the task of teaching content and skills to LEP students and to facilitate student learning.

Table 7.5

ADAPTATIONS FOR LEP STUDENTS

Prepare for Student	Prepare Instruction

1. Learn about the student's background.
2. Work with the LEP/bilingual teacher to identify key objectives, skills, and concepts before introducing a unit.
3. Plan a lesson that is culturally and linguistically appropriate.
4. Create flexible small groups based on interests, need, or ability.
5. Give clear simple directions.
6. Students retell in their own words before attempting the task.
7. The teacher leads the lesson; the bilingual teacher then provides background, examples, or other support to the lesson.
8. The bilingual teacher reiterates key concepts in simple English or in the student's first language.
9. Reorganize/reinforce information.
10. Provide bilingual resources.
	1. Eliminate peripheral information.
	2. Be clear and concise.
	3. Translate the abstract to the concrete.
	4. Consult the LEP/bilingual teacher for guidance.
	5. Build background information with
	  • brainstorming
	  • semantic webbing
	  • maps, graphics, photographs, illustrations
	  • videos, film
	6. Use KWL chart: Students consider what they
	  • **K**now
	  • **W**ant to learn
	  • **L**earned
	7. Slowly expand the amount of material to be learned.

Teaching Strategies

1. Simplify vocabulary/sentence structure.
2. Provide concrete examples with hands-on activities.
3. Elaborate understanding using "thinking aloud" and demonstrations.
4. Emphasize key words and phrases; use intonation and repetition.
5. Build associations and connections between the new and the known.
6. Use variety when presenting materials: oral, visual, graphic, etc.
7. Elaborate on figurative language and idiomatic expressions.
8. Summarize on the chalkboard or with transparencies as you speak and model.

Table 7.5 *(continued)*

ADAPTATIONS FOR LEP STUDENTS

Enhance Vocabulary	Presentation
1. Start a picture dictionary or file. 2. Teach vocabulary appropriate to a given subject before content. 3. Report, reinforce, and review vocabulary during content activities. 4. Label objects in the room. 5. Tape vocabulary words in context for sound recognition. 6. Use real objects with words where possible. 7. Encourage dictionary use for word meaning.	1. Maintain consistent classroom procedures/ routines for prediction and comfort level. 2. Use verbal and nonverbal communication to communicate expectations. 3. Routine expectations such as checking homework or going to the office for a late slip should be shared upon arrival. 4. Assign buddies/peer tutors to assist with acclimation to the school and to school routines.

Hands-On Activities

▶ graphic organizers ▶ posters ▶ games ▶ puzzles ▶ labeling simulations ▶ student-made flash cards	▶ vocabulary ▶ word banks ▶ charts ▶ graphs ▶ surveys ▶ interviews ▶ drawing/illustrating ▶ student-made books ▶ language experience books	▶ response journals ▶ tape recordings ▶ role playing and drama

Table 7.5 (continued)

ADAPTATIONS FOR LEP STUDENTS

Check for Student Understanding	Questioning Strategies
1. Check student understanding periodically. 2. Promote participation. 3. Check understanding of assignments, directions, instruction. 4. Use visual reviews with lists and charts. 5. Break tasks into sequential parts. 6. Help students learn to "think aloud." 7. Allow for translation time; questions need "wait time." 8. Rephrase for understanding.	1. Questions structured to student language level; begin with yes/no questions and progress to advanced open-ended questions. 2. Ask a new student to point to a picture or a word to demonstrate knowledge. 3. Using visual cues, ask simple yes/no questions; e.g., "Is this a pencil?" 4. Ask either/or questions in which the answer is embedded: e.g., "Is this a pencil or a crayon?" 5. Break complex questions into several steps: e.g., "Look at the picture. Point to the boy. Is he jumping?" 6. Avoid the negative when questioning. 7. Ask simple "how" and "why" questions that can be answered with a short phrase or sentence. 8. Do not require that students speak in full sentences until that level of proficiency is reached. 9. Tell the student in advance which question she or he will be responding to, thus allowing for response practice.

Appendix A

Research and Theory

The following research may help the educator design activities with students. Further research is available from web sites that are cited in this document.

Multiple Intelligences

In *Frames of Mind: A Theory of Multiple Intelligences*, Howard Gardner (1983) wrote that a study of children's growth and development suggests a number of distinct intelligences (related to patterns of thinking or thinking styles).

> ▶ **Linguistic:** Sensitivity to the order and meanings of words; sounds, rhythms, inflections, and meters of words; and the function of words: to excite, convince, stimulate, convey information, or simply to please.

> ▶ **Logical–mathematical:** The ability to appreciate the actions performed upon objects (confronting, ordering/reordering) and assessment of quality relations among those actions; statements/propositions about actual or potential actions and the relationships among those statements.

> ▶ **Spatial:** The capacity to perceive the visual world accurately; to perform transformations and modifications upon one's initial perceptions; and to be able to recreate aspects of one's visual experience, even in the absence of relevant physical stimuli. Sensitivity to patterns, forms, and the whole.

> ▶ **Bodily–kinesthetic:** Use of the body as an object to express self and feelings; aspirations/use of body parts (including hands) to arrange, transform, and manipulate objects in the world.

> ▶ **Musical:** The ability to discern meaning and importance in sets of pitches rhythmically arranged and also to produce such metrically arranged pitch sequences as a means of communicating to other individuals.

> ▶ **Interpersonal:** The external aspect of a person: the ability to notice and make distinctions among other individuals—in particular, their moods, temperaments, motivations, and intentions.

▸ **Intrapersonal:** The internal aspects of a person: the capacity to effect discriminations among feelings, range of affects, or emotions, and to label them, enmesh them with symbolic codes, and draw upon them to understand and guide one's own behavior.

▸ **Naturalist:** The ability to identify and classify patterns in nature. The person has the ability to relate to the surroundings and the role each part of your surroundings play.

▸ **Existential:**   The sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here.

Taxonomy of Instructional Verbs and Tasks
(reprinted from the *New Jersey Visual and Performing Arts Curriculum Framework* [Winter 1999])

The words we use to instruct in the classroom should be carefully chosen. Lesson plans and instruction should be scrutinized for the use of appropriate, instructive verbs and tasks that elevate a child's cognitive functioning. Bloom's taxonomy of thinking skills identifies some of these instructional verbs and tasks/products and places them in a five-tiered table (with *recall* as the lowest level and *evaluation* as the highest level). Since the standards require that all students be challenged to reach their maximum potential, the higher- or lower-functioning students can be assigned higher- or lower-level task challenges using Bloom's taxonomy...("A Taxonomy of Educational Objectives" conference presentation by Benjamin S. Bloom, 1949).

Table A.1

INSTRUCTIONAL VERBS AND TASKS/PRODUCTS ASSOCIATED WITH THE LEVELS OF BLOOM'S TAXONOMY

RECALL*		APPLICATION		ANALYSIS	
Verbs	**Products**	**Verbs**	**Products**	**Verbs**	**Products**
list	label	show	photograph	summarize	questionnaire
identify	name	apply	illustration	abstract	survey
locate	list	translate	diagram	classify	report
memorize	definition	illustrate	collection	dissect	graph/chart
review	fact	record	map	compare	outline
match	test	teach	puzzle	deduce	diagram
reproduce	reproduction	construct	model	order	conclusion
name	recitation	demonstrate	diary	investigate	list
read			report	differentiate	plan
recall			lesson	categorize	summary
				separate	catalog

SYNTHESIS		EVALUATION	
Verbs	**Products**	**Verbs**	**Products**
compose	film	decide	conclusion
imagine	formula	rate	judgment
infer	invention	evaluate	panel
hypothesize	poem	dispute	opinion
invent	prediction	discuss	verdict
create	project	verify	scale
estimate	new game	judge	value
produce	story	grade	recommendation
forecast	machine	choose	
design	media	assess	
predict		select	

knowledge/comprehension

E. Paul Torrance (1962) in *Guiding Creative Talent* described student behaviors and cognitive skills identified with the creative thinker. The factors and behaviors below are characteristic of creative thinkers.

- ▶ **Fluency** and **Flexibility:** Thinks about many things; generates lots of ideas; is a divergent thinker; creates many characters; sees various viewpoints; and sees things in a humorous perspective.

- ▶ **Originality:** Is unique and intuitive; comes up with original ideas; finds clever solutions to problems; and suggests unique methods and novel innovations.

- ▶ **Elaboration:** Embellishes jokes and stories; adds detail; expands ideas; builds on; embroiders.

- ▶ **Risk Taking:** Is courageous and daring; experiments and explores possibilities; risks failure; and tries new approaches and tasks.

- ▶ **Complexity:** Organizes unrelated data; recognizes relationships; restructures; and encapsulates visual and verbal presentations.

- ▶ **Curiosity:** Wonders; follows hunches; ponders outcomes; pursues inquiry; questions; and puzzles over people's reactions.

- ▶ **Imagination:** Fantasizes; daydreams; thinks up characters and story lines; visualizes change; and imagines images and events.

Appendix B

Cross–Content Workplace Readiness Standards and Indicators

Cross–Content Workplace Readiness Standards

Standard 1:   ALL STUDENTS WILL DEVELOP CAREER PLANNING AND WORKPLACE READINESS SKILLS.

Descriptive Statement: Students will be expected to develop the skills to seek, obtain, maintain, and change jobs. These skills are critical to each student's future ability to navigate in the complex world of work. Prior to leaving school, each student should possess the skills needed to sustain him/herself as an adult in the labor force.

Cumulative Progress Indicators:
1.1   Demonstrate employability skills and work habits, such as work ethic, dependability, promptness, and getting along with others, needed to get and keep a job.
1.2   Describe the importance of personal skills and attitudes to job success.
1.3   Identify career interests, abilities, and skills.
1.4   Develop an individual career plan.
1.5   Identify skills that are transferable from one occupation to another.
1.6   Select a career major and appropriate accompanying courses.
1.7   Describe the importance of academic and occupational skills to achievement in the work world.
1.8   Demonstrate occupational skills developed through structured learning experiences, such as volunteer, community service, and work-based experiences or part-time employment.
1.9   Identify job openings.
1.10   Prepare a resume and complete job applications.
1.11   Demonstrate skills and attitudes necessary for a successful job interview.
1.12   Demonstrate consumer and other financial skills.

Standard 2:   ALL STUDENTS WILL USE INFORMATION, TECHNOLOGY, AND OTHER TOOLS.

Descriptive Statement: Students will be expected to develop skills in the use of information, up-to-date educational technology, and other tools to improve learning, achieve goals, and produce products and presentations. They will learn to develop, locate, summarize, organize, synthesize, and evaluate information. Students will be expected to use technological tools, such as telecommunications networking, for problem-solving, writing, and research.

Cumulative Progress Indicators:

2.1   Understand how technological systems function.

2.2   Select appropriate tools and technology for specific activities.

2.3   Demonstrate skills needed to effectively access and use technology-based materials through keyboarding, troubleshooting, and retrieving and managing information.

2.4   Develop, search, and manipulate databases.

2.5   Access technology-based communication and information systems.

2.6   Access and assess information on specific topics using both technological (e.g., computer, telephone, satellite) and print resources available in libraries or media centers.

2.7   Use technology and other tools to solve problems, collect data, and make decisions.

2.8   Use technology and other tools, including word-processing, spreadsheet and presentation programs, and print or graphic utilities, to produce products.

2.9   Use technology to present designs and results of investigations.

2.10   Discuss problems related to the increasing use of technologies.

Standard 3:   ALL STUDENTS WILL USE CRITICAL THINKING, DECISION-MAKING AND PROBLEM-SOLVING SKILLS.

Descriptive Statement: Students will be expected to develop original thoughts and ideas, think creatively, develop habits of inquiry, and take intellectual and performance risks. They will be expected to recognize problems, devise a variety of ways to solve these problems, analyze the potential advantages and disadvantages of each alternative, and evaluate the effectiveness of the method ultimately selected.

Cumulative Progress Indicators:

- 3.1   Recognize and define a problem, or clarify decisions to be made.
- 3.2   Use models, relationships, and observations to clarify problems and potential solutions.
- 3.3   Formulate questions and hypotheses.
- 3.4   Identify and access resources, sources of information, and services in the school and the community.
- 3.5   Use the library media center as a critical resource for inquiry and assessment of print and nonprint materials.
- 3.6   Plan experiments.
- 3.7   Conduct systematic observations.
- 3.8   Organize, synthesize, and evaluate information for appropriateness and completeness.
- 3.9   Identify patterns and investigate relationships.
- 3.10 Monitor and validate their own thinking.
- 3.11 Identify and evaluate the validity of alternative solutions.
- 3.12 Interpret and analyze data to draw conclusions.
- 3.13 Select and apply appropriate solutions to problem-solving and decision-making situations.
- 3.14 Evaluate the effectiveness of various solutions.
- 3.15 Apply problem-solving skills to original and creative/design projects.

Standard 4:   ALL STUDENTS WILL DEMONSTRATE SELF-MANAGEMENT SKILLS.

Descriptive Statement: Students will be expected to address issues related to personal development, such as accepting responsibility for their own learning and understanding expectations for performance. They are also expected to demonstrate positive work behaviors and ethics, the ability to work individually and cooperatively in groups, and respect for others of diverse cultural and social backgrounds.

Cumulative Progress Indicators:
- 4.1   Set short and long term goals.
- 4.2   Work cooperatively with others to accomplish a task.
- 4.3   Evaluate their own actions and accomplishments.
- 4.4   Describe constructive responses to criticism.
- 4.5   Provide constructive criticism to others.
- 4.6   Describe actions that demonstrate respect for people of different races, ages, religions, ethnicity and gender.
- 4.7   Describe the roles people play in groups.
- 4.8   Demonstrate refusal skills.
- 4.9   Use time efficiently and effectively.
- 4.10 Apply study skills to expand their own knowledge and skills.
- 4.11 Describe how ability, effort, and achievement are interrelated.

Standard 5:   ALL STUDENTS WILL APPLY SAFETY PRINCIPLES.

Descriptive Statement: Safety is an important component of all content areas, especially the arts, health and physical education, science, occupational education programs, and any content area where hands-on activities take place. Students need to learn behaviors that will ensure their own safety and health and that of others. They also should become familiar with the rules and laws governing safety and health so that they can act responsibly and implement these standards.

Cumulative Progress Indicators:

5.1   Explain how common injuries can be prevented.
5.2   Develop and evaluate an injury prevention program.
5.3   Demonstrate principles of safe physical movement.
5.4   Demonstrate safe use of tools and equipment.
5.5   Identify and demonstrate the use of recommended safety and protective devices.
5.6   Identify common hazards and describe methods to correct them.
5.7   Identify and follow safety procedures for laboratory and other hands-on experiences.
5.8   Discuss rules and laws designed to promote safety and health, and their rationale.
5.9   Describe and demonstrate procedures for basic first aid and safety precautions.

Cross–Content Workplace Readiness Indicator Descriptive Statements

Standard 1:   **ALL STUDENTS WILL DEVELOP CAREER PLANNING AND WORKPLACE READINESS SKILLS.**

Indicator 1:   ***Demonstrate employability skills and work habits.***

▸ Students will demonstrate reliable work behavior, which includes being consistently punctual, maintaining regular attendance, completing tasks effectively, meeting assignment deadlines, following the chain of command, and following rules and grievance procedures.

▸ Students will demonstrate positive work attitudes such as initiative, self-confidence, patience, dependability, honesty and integrity, confidentiality, emotional maturity, willingness to learn, pride in work, and loyalty to the employer.

▸ Students will exhibit good interpersonal skills which include being courteous; showing respect and empathy for others; cooperating with and assisting others; accepting and following directions; performing as a team member; and showing respect for cultural diversity, individuals in nontraditional jobs, and physically and mentally challenged individuals.

▸ Students will maintain an image appropriate to the employment situation.

Indicator 2:   ***Describe the importance of personal skills and attitudes to job success.***

▸ Students will describe the relationship between the positive work attitudes and personal skills listed under indicator 1 and success on the job.

Indicator 3:   ***Identify career interests, abilities and skills.***

▸ Students will complete activities to determine career interests. Activities include completing assessment instruments that help the learner identify his/her own interests, abilities, and skills as they might apply to career choices. Students will verify abilities through awareness, exploratory, and career-counseling activities and classes. Examples include activities that help students make decisions on career opportunities based on such factors as economic rewards, economic security, personal security, physical surroundings and facilities, manual dexterity, involvement with people, emotional climate, interpersonal relations, leadership responsibilities, independence, advancement opportunities, use of creativity, intellectual stimulation, etc.

Indicator 4:   *Develop an individual career plan.*

▸ Students will develop and maintain a portfolio that documents their activities and skills as well as the results of the interest and ability assessments used to make career decisions. The portfolio will include specific information on structured learning experiences.

▸ Students will develop a career plan, including tentative plans for participation in courses and activities in secondary and postsecondary articulated programs.

Indicator 5:   *Identify skills that are transferable from one occupation to another.*

▸ Students will identify employability skills and occupational skills that are common to multiple occupations and clustered disciplines, focusing on critical-thinking, decision-making and problem-solving skills.

Indicator 6:   *Select a career major and appropriate accompanying courses.*

▸ Students will explore career interests within, but not limited to, one or more of the following clustered disciplines linked to the Core Curriculum Content Standards: Arts and Humanities; Business and Information Systems; Mathematics, Science and Technology; and Health and Human Services.

Indicator 7:   *Describe the importance of academic and occupational skills to achievement in the work world.*

▸ Students will recognize the need for learning academic and occupational skills required for success in employment (see the first bullet under indicator 8).

Indicator 8:   *Demonstrate occupational skills developed through structured learning experiences, such as volunteer, community service, and work–based experiences or part–time employment.*

▸ Students will demonstrate occupational skills such as reading policy documents, log books, training materials, safety manuals, e-mail, and other operational correspondence; writing technical documents; using calculators, graphs, and statistics; and working cooperatively to solve problems.

▸ Students will elect to participate in structured learning experiences as rigorous activities integrated into the curriculum and linked to the Core Curriculum Content Standards; elect to participate in selected cocurricular or extracurricular activities; or elect to participate in external experiences such as volunteer activities, community service, paid or unpaid employment opportunities, or an apprenticeship program.

Indicator 9:   *Identify job openings.*
   ▸ Students will research job availability through personal contacts, use of printed materials, and use of the Internet or other information-processing systems.
   ▸ Students will use resources available through the One-Stop Career Centers.

Indicator 10:   *Prepare a resume and complete job applications.*
   ▸ Students will develop a resume in an acceptable business format, a sample letter of application, and an application form for a real or sample position. Materials should be developed using appropriate technology (e.g., scanners, Internet, electronic submissions).

Indicator 11:   *Demonstrate skills and attitudes necessary for a successful job interview.*
   ▸ Students will dress appropriately for the interview, research and prepare possible questions to be asked in an interview, and perform the necessary steps to complete a successful job interview. Students will also demonstrate a professional demeanor appropriate to the job setting.

Indicator 12:   *Demonstrate consumer and other financial skills.*
   ▸ Students will develop a personal budget, plan for investments and savings, and explain the relationship between the use of credit and future spending and credit rating.
   ▸ Students will demonstrate the ability to use current technology to write checks, make deposits, and perform other banking procedures necessary in everyday life.
   ▸ Students will select goods and services consistent with budgetary limits; values; needs; goals; durability, safety, and reliability standards; and market analysis information.
   ▸ Students will exercise consumer rights and responsibilities.
   ▸ Students will demonstrate entrepreneurial skills and practices.
   ▸ Students will demonstrate skills appropriate to a job setting, for example, cost analysis skills and fiscal responsibility.

Standard 2:   ALL STUDENTS WILL USE INFORMATION, TECHNOLOGY AND OTHER TOOLS.

Notes on Technology Use

Technology is playing an increasingly important role in education. Its definition includes three disciplines: educational technology, technology education, and information technology. *Educational technology* is the use of technology to acquire, manage, and communicate information as an integral part of the learning process. Technology education refers to the study of technology and applications of the design process using materials, tools, and resources to produce a product. *Information technology* deals with the management and interpretation of information and includes organizing and creating a process to manipulate information. Standard 2 encompasses all three disciplines.

Students will use *educational technology* (which includes but is not limited to computers, calculators, and video and audio devices) appropriately as learning, research, and communication tools. Educational technology also includes information processing. It requires all students to acquire the current technology-based research skills necessary to manage, access, locate, select, organize, analyze, research, and disseminate information electronically. It also requires that students collaborate using the electronic tools of the work force.

Technology education focuses on the design process, the development and application of technologies, and the effect technology has on individuals, society, and the environment. Included is the understanding of technological systems, both open and closed. Technological systems are composed of material process, energy, and information systems.

Indicator 1:   *Understand how technological systems function.*
  ▶ Students will explain, design, and create their own solutions to practical problems.
  ▶ Students will classify systems as open-loop or closed-loop systems.
  ▶ Students will determine whether the system can process materials, energy, and information.

Indicator 2:   *Select appropriate tools and technology for specific activities.*
  ▶ Students will apply selected criteria to choose and use the appropriate tools and technology in a given situation.

Indicator 3:   ***Demonstrate skills needed to effectively access and use technology–based materials through keyboarding, troubleshooting, and retrieving and managing information.***
▸ Students will produce a finished product such as a newsletter, a multimedia presentation, a product label, a model, or a structure using technological equipment and processes.

Indicator 4:   ***Develop, search, and manipulate databases.***
▸ Students will use computer data programs to record, process, and disseminate information.

Indicator 5:   ***Access technology–based communication and information systems.***
▸ Students will disseminate information and communicate ideas effectively through a variety of technological systems.

Indicator 6:   ***Access and assess information on specific topics using both technological (e.g., computer, telephone, satellite) and print resources available in libraries or media centers.***
▸ Students will select and use both technological products and services and print materials to research, retrieve, assess, and report appropriate information from a variety of media available in classrooms, libraries, and media centers.

Indicator 7:   ***Use technology and other tools to solve problems, collect data, and make decisions.***
▸ Students will use the tools, materials, procedures, and data available to arrive at multiple solutions to problems. Students will choose the best solution based on goals and consequences.

Indicator 8:   ***Use technology and other tools, including word–processing, spreadsheet and presentation programs, and print or graphic utilities, to produce products.***
▸ Students will use the tools, materials, procedures, and data available to produce a product.

Indicator 9:   ***Use technology to present designs and results of investigations.***
▸ Students will develop and present designs, results, and solutions to a variety of audiences using the appropriate technology.

Indicator 10:   ***Discuss problems related to the increasing use of technologies.***
▸ Students will describe the benefits of technology, assess the trade-offs and risks associated with the design and implementation of technological solutions, make rational decisions about technological issues, and relate the increased use of technological systems to future development.

Standard 3:   ALL STUDENTS WILL USE CRITICAL THINKING, DECISION-MAKING, AND PROBLEM-SOLVING SKILLS.

Indicator 1:   ***Recognize and define a problem, or clarify decisions to be made.***
▶ Students will complete the initial steps in solving a problem and making a decision, which include identifying and explaining the problem.

Indicator 2:   ***Use models, relationships, and observations to clarify problems and potential solutions.***
▶ Students will select appropriate models, data, and observations related to the problem and its projected solutions.

Indicator 3:   ***Formulate questions and hypotheses.***
▶ Students will identify issues and concerns that help to define the problem and develop hypotheses.

Indicator 4:   ***Identify and access resources, sources of information, and services in the school and the community.***
▶ Students will select and use products, information, and services available through the school and the community.

Indicator 5:   ***Use the library media center as a critical resource for inquiry and assessment of print and nonprint materials.***
▶ Students will use library media centers as sources of print and nonprint materials. Students will use the materials to research a topic or an idea and will assess the value and reliability of the information source.

Indicator 6:   ***Plan experiments.***
▶ Students will develop experiments to solve a problem. Students will define the materials and equipment needed to conduct the experiment, the type of environment, and the length of time required, and the safety precautions to be followed in performing the experiment.

Indicator 7:   ***Conduct systematic observations.***
▶ Students will record data using appropriate criteria and equipment at specified intervals as defined in the experiment plan. Students will conduct subsequent experiments as necessary to verify the data.

Indicator 8:   ***Organize, synthesize, and evaluate information for appropriateness and completeness.***
▶ Students will organize the data collected from the experiment, compare results, and evaluate the conclusions for appropriateness and completeness.

Indicator 9:   *Identify patterns and investigate relationships.*
  ▸ Students will recognize the patterns in and explore the relationships among data or events.

Indicator 10:   *Monitor and validate their own thinking.*
  ▸ Students will analyze data or situations/circumstances and each will evaluate his or her own thinking in relation to the information. Students will conduct self-assessments.

Indicator 11:   *Identify and evaluate the validity of alternative solutions.*
  ▸ Students will identify possible solutions and examine the pros and cons of each.

Indicator 12:   *Interpret and analyze data to draw conclusions.*
  ▸ Students will draw conclusions by comparing data.

Indicator 13:   *Select and apply appropriate solutions to problem–solving and decision–making situations.*
  ▸ Students will evaluate possible solutions, determine the appropriateness of each, and apply the best solution(s) in a given situation.

Indicator 14:   *Evaluate the effectiveness of various solutions.*
  ▸ Students will gather peer, adult, and self-assessments based on the implementation of each solution. Students will factor in the consequences of each solution and determine how close it comes to the desired result.

Indicator 15:   *Apply problem–solving skills to original and creative or design projects.*
  ▸ Students will use the problem-solving process to create original and creative/design projects.

Standard 4:   ALL STUDENTS WILL DEMONSTRATE SELF-MANAGEMENT SKILLS.

Indicator 1:   **Set short and long term goals.**
▸ Students will identify and set short- and long-term goals and objectives based on personal and group needs.

Indicator 2:   **Work cooperatively with others to accomplish a task.**
▸ Students will work cooperatively as part of a team; listen attentively; show appreciation for the contributions of others; compromise in areas of dispute; participate in completing tasks; accept responsibility for achieving goals; show mutual respect for diversity of ideas and people; and think constructively to allow the group to complete its tasks.

Indicator 3:   **Evaluate their own actions and accomplishments.**
▸ Students will compare their accomplishments with what was expected; identify areas for improvement and/or the changes needed to reach a higher level of performance; and identify any long-term impact.

Indicator 4:   **Describe constructive responses to criticism.**
▸ Students will describe ways to use feedback to improve performance and heighten effectiveness.

Indicator 5:   **Provide constructive criticism to others.**
▸ Students will provide feedback in an effective and nonthreatening manner so that the recipient will feel empowered to be more effective during future tasks. Effective feedback needs to focus on behaviors, not personality traits; it must be descriptive, not judgmental, and specific and concrete, not general or abstract.

Indicator 6:   **Describe actions that demonstrate respect for people of different races, ages, religions, ethnicity, and gender.**
▸ Students will explain actions that show respect for human dignity. These include internalizing the responsibility to protect and extend the worth and rights of all persons; avoiding deception and dishonesty; promoting human equality; respecting freedom of conscience; working with people who hold different views; refraining from prejudiced actions; and respecting public and private property.

Indicator 7:   ***Describe the roles people play in groups.***
▶ Students will explain the roles one might play in a group and how a person might play one role in "Group A" and a different role in "Group B." Common roles that are identified according to their functions include timekeeper, facilitator, recorder, and summarizer. Roles are designed to ensure that members work together smoothly and effectively.

Indicator 8:   ***Demonstrate refusal skills.***
▶ Students will demonstrate the ability to say no or to refrain from participating in an activity or action with which they do not agree. The following are important elements of the communication process: I-messages, eye contact, speaking clearly, and the use of expressions and gestures that are genuine.

Indicator 9:   ***Use time efficiently and effectively.***
▶ Students will understand and apply time-management principles such as knowing how to use the time available and knowing how to solve problems encountered in using time wisely. Time-management tools include calendars, daily "to do" lists, tickler files, strategies to organize tasks, strategies for handling interruptions, and strategies to avoid procrastination. Managing time wisely includes setting aside time for leisure or recreational activities.

Indicator 10:   ***Apply study skills to expand their own knowledge and skills.***
▶ Students will build their own knowledge and skill base by applying study skills. This includes using techniques such as tackling the hardest parts of a task at the beginning; studying in a comfortable place free of distractions; gathering all materials before starting to study; studying when rested; reviewing what has been learned during the day; writing down key points when taking notes; using a variety of resources and techniques to accomplish tasks; and giving one's full attention to the study time.

Indicator 11:   ***Describe how ability, effort, and achievement are interrelated.***
▶ Students will define ability, effort, and achievement and explain how each has an impact on the others. For example, abilities indicate skills and activities that one can perform successfully. Effort is related to the amount of time and thoroughness a person puts into a specific task. Achievements are goals that have been accomplished or tasks that were done well.

Standard 5:   **ALL STUDENTS WILL APPLY SAFETY PRINCIPLES.**

Indicator 1:   *Explain how common injuries can be prevented.*
> ▶ Students will explain how injuries may result from unsafe conditions, attitudes, and actions, and/or environmental conditions, and the ways in which injuries can be prevented.

Indicator 2:   *Develop and evaluate an injury prevention program.*
> ▶ Students will create and evaluate an injury prevention program that focuses on safe practices, attitudes and actions, and /or environmental conditions.

Indicator 3:   *Demonstrate principles of safe physical movement.*
> ▶ Students will employ safety principles and techniques when completing tasks.

Indicator 4:   *Demonstrate safe use of tools and equipment.*
> ▶ Students will employ safety principles and techniques when using tools and equipment.

Indicator 5:   *Identify and demonstrate the use of recommended safety and protective devices.*
> ▶ Students will select and employ appropriate safety and protective devices following employer, Occupational Safety and Health Act of 1970 (OSHA), and school safety and health standards and rules. Students will follow recommended procedures to report injuries and/or illness.

Indicator 6:   *Identify common hazards and describe methods to correct them.*
> ▶ Students will recognize common hazards found in the home, in the community, and in the workplace. Students will also describe ways to provide a safe environment and control hazards.

Indicator 7:   *Identify and follow safety procedures for laboratory and other hands–on experiences.*
> ▶ Students will employ safety procedures and techniques during experiential activities.

Indicator 8:   *Discuss rules and laws designed to promote safety and health, and their rationale.*

▶ Students will identify the need for rules and laws to promote safety and health. Students will also discuss the costs associated with the rules and laws and the impact of disregarding them on self and on others.

Indicator 9:   *Describe and demonstrate procedures for basic first aid and safety precautions.*

▶ Students will identify and demonstrate the first aid procedures needed to provide immediate, temporary treatment to a person before medical help arrives.
▶ Students will follow universal precautions and practices in first aid situations.

Appendix C

The Career Development Process

The career development process has been addressed by educators in much of the literature. This chapter reflects the thinking of multiple groups on the local, state and national levels. It is important to bear in mind that career development is a continuing process. Career development models are available at the national level. New Jersey piloted the National Career Development Guidelines (NCDG), which were adopted in 1989 by the National Occupational Information Coordinating Committee (NOICC). These guidelines represent the consensus of a collaborative group of state and professional associations, as well as national leaders, practitioners, and career development experts. The National Standards for School Counseling Programs, adopted in 1997 by the American School Counselor Association, promote and enhance student learning through academic development, career development, and personal/social development.

National Career Development Guidelines

In recent years, consensus around the provision of comprehensive and effective guidance and counseling for youth has coalesced around the National Career Development Guidelines. The guidelines emphasize three primary features of the career development program: content, process, and structure.

Content

According to the NCDG, the content of the career guidance and counseling program is defined by the state or local standards organized around three broad areas: self-knowledge, educational and occupational exploration, and career planning. To show the extent to which the cumulative progress indicators from the first New Jersey Cross-Content Workplace Readiness Standard align with national guidelines, the cumulative progress indicators are categorized by self-knowledge, educational and occupational exploration, and career planning categories in Table C.1. Keep in mind that the New Jersey cumulative progress indicators represent what students should know and be able to do by the time they complete high school.

Table C.1

NCDG CROSSWALK FOR STANDARD 1

NEW JERSEY CROSS-CONTENT WORKPLACE READINESS
STANDARD 1: All students will develop career planning and workplace readiness skills.

Self-Knowledge	**1.1**	Demonstrate employability skills and work habits, such as work ethic, dependability, promptness, and getting along with others.
	1.2	Describe the importance of personal skills and attitudes to job success.
	1.3	Identify career interests, abilities, and skills.
	1.11	Demonstrate skills and attitudes necessary for a successful job interview.
	1.12	Demonstrate consumer and other financial skills.
Educational and Occupational Exploration	**1.5**	Identify skills that are transferable from one occupation to another.
	1.7	Describe the importance of academic and occupational skills to achievement in the work world.
	1.8	Demonstrate occupational skills developed through structured learning experiences, such as volunteer, community service, and work-based experiences or part-time employment.
Career Planning	**1.4**	Develop an individual career plan.
	1.6	Select a career major and appropriate accompanying courses.
	1.9	Identify job openings.
	1.10	Prepare a resume and complete job applications.

Process

Various strategies are used to deliver the program content. Ideally, a range of people such as teachers, counselors, employers, and other community members are involved in the process and deliver these strategies at different points in a student's educational career, according to Nancy Perry in *How Do We Design a Comprehensive Career Guidance and Counseling Program?*, the National Career Development Guidelines include the following strategies or elements of a successful career development program:

▶ **Outreach** to students about the career guidance and counseling services available at the school.

▶ **Instruction** such as group activities and career related instruction that is integrated into academic instruction to help student acquire career development competencies.

▶ **Counseling** between individuals or small groups and a professional counselor to explore issues related to personal and career development.

▸ **Assessment** to help students gain an understanding of their individual skills, abilities, interests, achievements, and needs.

▸ **Career Information** resources such as computer-based career information, print materials, and videos to give students current and unbiased information.

▸ **Work Experience opportunities** for students in actual work settings.

▸ **Placement resources** are organized so that students are given the assistance they need to make successful transitions to work and/or postsecondary education.

▸ **Consultation** of career guidance specialists and counseling resources to provide information to staff, administrators, teachers, employers, parents, and others to expand the level of support that students are able to receive.

▸ **Referral** to encourage contact and cooperation with outside organizations to offer additional services needed by students.

▸ **Follow–up** that maintains long-term contact with students to determine the effectiveness of career-related decisions.

Structure

The National Career Development Guidelines recommend the following elements of a strong organizational structure to enable the successful delivery of the program processes listed above:

▸ **Leadership** support for the counselor and career development specialists.

▸ **Management** support to organize program planning, clarify staff roles and responsibilities, secure resources, and monitor program delivery.

▸ **Personnel** such as other staff and community resource persons to help link students and schools with other organizations.

▸ **Facilities** including adequate space, materials, and equipment to deliver quality career guidance and counseling.

▸ **Resources** to purchase materials, equipment, and other items.

The National Career Development Guidelines provided a strong foundation for New Jersey's Cross-Content Workplace Readiness standards and indicators. For comparison, Table C.2, a chart of the NCDG by area and level, follows. Note that the National Career Development Guidelines competencies were organized by educational level: elementary, middle/junior high school, high school, and adult.

Table C.2

NCDG COMPETENCIES BY AREA AND LEVEL

	Elementary	Middle/Junior High School	High School	Adult
Self-Knowledge	Knowledge of the importance of self-concept	Knowledge of the influence of a positive self-concept	Understanding the influence of a positive self-concept	Skills to maintain a positive self-concept
	Skills to interact with others	Skills to interact with others	Skills to interact positively with others	Skills to maintain effective behaviors
	Awareness of the importance of growth and change	Knowledge of the importance of growth and change	Understanding the impact of growth and development	Understanding developmental changes and transitions
Educational and Occupational Exploration	Awareness of the benefits of educational achievement	Knowledge of the benefits of educational achievement to career opportunities	Understanding the relationship between educational achievement and career planning	Skills to enter and participate in education and training
	Awareness of the relationship between work and learning	Understanding the relationship between work and learning	Understanding the need for positive attitudes toward work and learning	Skills to participate in work and life-long learning
	Skills to understand and use career information	Skills to locate, understand, and use career information	Skills to loate, evaluate, and interpret career iinformation	Skills to locate, evaluate, and interpret career information
	Awareness of the importance of personal responsibility and good work habits	Knowledge of skills necessary to seek and obtain jobs	Skills to prepare, to seek, obtain, maintain, and change jobs	Skills to prepare, to seek, obtain, maintain, and change jobs

Table C.2

NCDG COMPETENCIES BY AREA AND LEVEL

	Elementary	Middle/Junior High School	High School	Adult
Educational and Occupational Exploration	Awareness of how work relates to the needs and functions of society	Understanding how work relates to the needs and functions of the economy and society	Understanding how societal needs and functions influence the nature and structure of work	Understanding how the needs and functions of society influence the nature and structure of work
Career Planning	Understanding how to make decisions	Skills to make decisions	Skills to make decisions	Skills to make decisions
	Awareness of the interrelationship of life roles	Knowledge of the interrelationship of life roles	Understanding the interrelationship of life roles	Understanding the impact of work on individual family life
	Awareness of different occupations and changing male/female roles	Understanding the continuous changes in male/female roles	Understanding the continuous changes in male/female roles	Understanding the continuing changes in male/female roles
	Awareness of the career planning process	Understanding the process of career planning	Skills in career planning	Skills to make career transitions

Source: http://www.noicc.gov/files/ncompete.html (November 11, 1999).

National Standards for School Counseling Programs

The American School Counselor Association has also adopted standards, which are included Table C.3. The association's National Standards for School Counseling Programs address and support aspects of the CCWR (e.g., safety and self-management).

Table C.3

ASCA NATIONAL STANDARDS

**AMERICAN SCHOOL COUNSELOR ASSOCIATION
NATIONAL STANDARDS FOR SCHOOL COUNSELING PROGRAMS**

OVERVIEW
The purpose of a counseling program in a school setting is to promote and enhance the learning process. To that end, the School Counseling Program facilitates Student Development in three broad areas: Academic Development, Career Development, and Personal/Social Development. The following chart describes the standards for each area.

Chapter 4   Academic Development
      Standard A: Students will acquire the attitudes, knowledge, and skills that contribute to effective learning in school and across the life span.
      Standard B: Students will complete school with the academic preparation essential to choose from a wide range of substantial postsecondary options, including college.
      Standard C: Students will understand the relationship of academics to the world of work, and to life at home and in the community.

Chapter 4   Career Development
      Standard A: Students will acquire the skills to investigate the world of work in relation to knowledge of self and to make informed career decisions.
      Standard B: Students will employ strategies to achieve future career success and satisfaction.
      Standard C: Students will understand the relationship between personal qualities, education and training, and the world of work.

Chapter 4   Personal/Social Development
      Standard A: Students will acquire the attitudes, knowledge, and interpersonal skills to help them understand and respect self and others.
      Standard B: Students will make decisions, set goals, and take necessary action to achieve goals.
      Standard C: Students will understand safety and survival skills.

Source: Chari Campbell and Carol A. Dahir, *Sharing The Vision: The National Standards for School Counseling Programs,* 1997.

Appendix D

Academic Area Framework Crosswalks to Cross–Content Workplace Readiness Standards

To help prepare students for a rapidly changing world, the New Jersey State Board of Education adopted five Cross-Content Workplace Readiness Standards to be integrated within the seven academic content areas. These standards define the skills students need as they pursue higher education, careers, and responsibilities as adult citizens. Educators are charged to integrate these concepts into all programs in content-specific and developmentally appropriate ways.

In order to bring the standards and indicators to life in the context of the classroom, frameworks were developed in each of the seven content areas. These frameworks are a resource for local educators as they develop district curriculum and instructional plans. The framework provides activities and vignettes as well as the educational rationale for them.

To strengthen the linkages between each content area and the Cross-Content Workplace Readiness Standards, framework activities and scenarios have been designed to include interdisciplinary approaches to workplace readiness. The interdisciplinary approach combines several content disciplines and workplace readiness in a common activity that helps students recognize the relationships that exist between the disciplines. In addition, the use of a systems approach allows educators to develop an overview perspective. The result is a highly motivating and engaging framework for learning.

The following sample activities *were taken directly from the academic content area frameworks.* They illustrate the infusion of Cross-Content Workplace Readiness standards and indicators *as they appear in those frameworks.*

Visual and Performing Arts

Standard 1.6
Visual Arts: All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

Cumulative Progress Indicator 2: Plan and execute solutions to design problems.

Grade Levels: K to 4

Activity: *Box Cars*

Students will design a vehicle. Consider the varied uses of vehicles, such as automobiles, boats (all kinds), buses, planes, trains, trucks, futuristic vehicles, etc. They also discuss bumper cars, all-terrain vehicles, rafts, hot air balloons, etc. Bring in model or toy vehicles to display. Students learn that "Form follows function" so they must decide:

- What will their vehicle be used for?
- Who and how many will use it? How old are they?
- What does the vehicle need?
- What will make it safe? (Develop through discussion.)
- How will the exterior be designed?

Students select from a variety of boxes, such as shoe boxes, cereal boxes, egg cartons, and appliance cartons (for group project). They also select from various media.

Workplace Readiness Skills: 3.1/3.8/3.12/3.15/5.1/5.6/5.7/5.8

Comprehensive Health and Physical Education

Standard 2.3: **All students will learn the physical, mental, emotional, and social effects of the use and abuse of alcohol, tobacco, and other drugs.**

Indicator 2.3–15: Analyze the short and long-term effects of chemical use, abuse, and dependency on the body, behavior, work and school performance, and personal relationships

Grade Levels: 9–12

Teacher Tip: For the next activity use local companies that employ students (e.g., in cooperative employment experiences, internships, mentorship programs).

Activity H: *On the Job*
Students interview individuals employed in various occupations to determine how alcohol, tobacco, and other drugs might interfere with job performance. Find out if the individuals are aware of employee assistance programs or benefits from their health insurance companies that support treatment for chemical dependency.

Variation: Invite former students to discuss issues and problems associated with substance use in college, on the job, or the military.

Variation: Divide the class into small groups. Each group selects a different type of business (e.g., construction, computers, healthcare) and develops substance abuse policies for the company. Groups share their ideas and discuss them with a human resources director from a local company.

Workplace Readiness Skills: 1.2/1.3/1.11/5.1

Language Arts Literacy

Standard 3.4:   All students will read a variety of materials and texts with comprehension and critical analysis.

Cumulative Progress Indicator 21: Analyze text using patterns of organization, such as cause and effect, comparison and contrast.

Grade Level: Middle School

Activity: Students examine various text types that demonstrate patterns of cause/effect, comparison/contrast, persuasive/argumentative, etc. Then, using an overhead projector, the teacher shows partially completed graphic organizers that match the text types examined and asks the students to complete the organizers. Next, students examine unfamiliar texts and construct the ideas in an organizer of their own choice. After completing the organizer, they write a narrative explaining the process they used for this activity.

Workplace Readiness Skills: 3.7/3.8

Mathematics

The First Four Standards—Grades K–2
Vignette—Will a Dinosaur Fit?

Standards: In addition to the First Four Standards, this vignette highlights Standards 6 (Number Sense), 7 (Geometry), 9 (Measurement), and 11 (Estimation).

The problem: The second grade was in the midst of a unit on dinosaurs when the teacher read to her class the book *Danny and the Dinosaur* by Syd Hoff (Harper & Row, 1958). After the first reading, the children re-examined some of the illustrations. One picture depicted the dinosaur larger than a block of homes, another showed the dinosaur almost completely hidden by one house. One picture showed the dinosaur taller than an apartment building and yet another showed the dinosaur not quite as tall as a lamp post. Students were intrigued by the idea that Danny's dinosaur friend did not seem to be of a consistent size. They voiced opinions about the dinosaur's actual size. Since students seemed to have a sustained interest in exploring the sizes of dinosaurs, the teacher presented students with this question: *Do you think that a dinosaur could fit into our classroom?*

The discussion: Brainstorming was encouraged by the teacher as questions such as the following were posed by students and by the teacher. *What does it mean to "fit" in the classroom? What information would we need to get in order to determine if a dinosaur could fit in our classroom? Do you think all of our answers will be the same? Why? What do we know already that might help us? What materials do you think we would need?*

Solving the problem: Students worked in groups of 3 over a period of several days. They began by choosing a specific dinosaur and then they used a variety of books and computer software in the classroom to find the size of their dinosaur. They determined the size of the classroom, choosing to measure with a trundle wheel or a tape, or by using estimation. Then they decided, by comparing the measures found in books with those made of the classroom, whether the dinosaur would fit into the classroom. Each group was responsible for creating a display and making a presentation to the class to answer the question. The displays made use of models, pictures, and text. Students with more than a few sentences to write were encouraged to make use of the word processor available in the classroom.

Summary: Students used their displays to make presentations to the class. There were a variety of answers. Those who had chosen one of the smaller dinosaurs, the velociraptors, for example, found that the dinosaur could walk through the doorway and several dinosaurs would fit in the room. Others, who had chosen larger dinosaurs, the stegosaurus, for example, found that if the dinosaur could have gotten through the doorway, several would have fit in the room. Still others, who had chosen very large dinosaurs, the brachiosaurus, for example, found that the dinosaur would not have fit into the room at all. As the presentations ended, several children suggested further explorations that might be interesting: *Would the dinosaur I chose fit into the multipurpose room? Was the dinosaur I chose as long as the driveway in front of the school? Was the dinosaur I chose taller than the school building?*

Workplace Readiness Skills: 3.1/3.2/3.3/3.4/3.5/4.2

Science

Standard 9: **All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.**

Indicator 13: Explain that the sun is a major source of the earth's energy and that energy is emitted in various forms, including visible light, infrared, and ultraviolet radiation.

Grade Levels: 7–8

Learning Activity: *Energy Conservation*
Students brainstorm ideas for reducing their dependence on nonrenewable energy sources (e.g., use less, conserve, or change to a renewable source). Selecting from the best brainstorming ideas, students will engage in technology by designing and making/modeling items for an improved energy utilization in their school, home, or community.

For example they can
- Design solar heaters or ovens
- Reduce air infiltration
- Plan for carpooling
- Suggest a sweater/sweatshirt day and lower building temperatures
- Develop a system to reduce unnecessary lighting
- Design a new line of clothing
- Develop a system that automatically turns off lighting in unoccupied rooms

Workplace Readiness Skills: 2.1/2.9/3.15

Social Studies

Standard 6.5.: **All students will acquire historical understanding of varying cultures throughout the history of New Jersey, the United States and the world.**

Indicator 18: Evaluate the mutual influence of technology and culture.
Science and technology have a profound effect on the attitudes, values and "world views" of cultural groups. Conversely, cultural groups define the uses of science and new technologies. This indicator asks students to explore the dynamic between science and culture.

Grade Levels: 9–12

The Cultural Impact of Scientific Revolutions

Historical Period(s): The Age of Global Encounters (to 1700)
The Age of Revolutions (to 1850)
The Age of Imperialism and World War (to 1950)
The Modern World

Historical Theme: The History of Social Thought

Overview
Science and technology have a major impact on culture, as can be seen by studying the progression of scientific thought from Galileo to Isaac Newton to Albert Einstein. Coupled with the ideas of "paradigm shift" (Thomas Kuhn) and the problem of the gap between the scientific and popular cultures (C.P. Snow), such study will introduce students to how science and technology have changed the culture in which we live.

Cosmologies. Provide students with selected readings on the general world-view at the time of Copernicus. Why did people in general believe the earth was the center of the universe? How was this belief related to religious convictions? If the earth is not the center of things, what does this say about man and his place in the universe? If man is not the center, then what is his/her appropriate place in the cosmos? Students can begin to develop explanations of why European cultures were slow to replace the geocentric theory with the heliocentric theory in response to the findings of Galileo in the 16th century.

Literary version. Students read literary versions of the story of Galileo, especially the play by Bertolt Brecht. What are the issues of conscience in this play? When should religious conviction over-rule scientific discovery? These are difficult and complex issues for students to consider. The teacher should be sensitive to religious convictions of students in any such consideration. Teach the conflicts but pro-

vide students with a model of the ability to consider alternate viewpoints and explanations for complex phenomena.

Newton and Einstein. Our world view is based in most cases on what science has discovered about space, time, matter, energy and other matters of import. This world view also effects our everyday lives and thoughts and beliefs about many things. Teachers can explain how the work of Issac Newton in the 17th century and Albert Einstein's work in the 20th century laid the groundwork for such significant developments as atomic energy and television, and the impact of these developments on culture. Ask students to use the encyclopedia in the school library or to consult HYPERLINK http://www.encyclopedia.com to study the life and times of both Newton and Einstein.

- How did their discoveries change the world view at the time?
- What did the laws of gravity mean to the people of Newton's time, the 17th century?
- Did people begin to develop a more mechanistic view of the universe?
- How did Einstein's discoveries affect the thinking and cultures of the 20th century?

Metatheories. Students are ready now to begin to consider the impact of science on culture in a broader context. Provide reading selections from Kuhn's *The Structure of Scientific Revolutions* and Snow's *The Two Cultures*. Have students do book reviews on their reading, to be presented to the class for general discussion and critique.

The following are basic understandings for students while studying the impact of science and technology on civilizations:

- Change is a basic mechanism for the growth of civilizations.
- Such change comes from either science or art.
- There can be great resistance to change if basic views and assumptions are challenged.
- People who educate the community to accept salutary changes are frequently rejected in their own time and honored later.
- Some proposed changes are good; some are not.
- It is our individual responsibility to be able to determine the difference. This is a major role for education in everyone's life.

Students begin to list and discuss changes that have happened in their lifetimes. Each student selects a good change and does some research to be able to describe the change and its effects on the culture.

Further Exploration
There are a number of possibilities for extension of this unit. Students can illustrate heliocentric and geocentric theories in a pair of three-dimensional displays; they can survey the number of hours students watch television and relate the findings to Einstein's work on photoelectricity; and they can prepare a chart showing all of the ways that knowledge of atoms and their structures affects daily life.

Connections

The above activities allow students to compare customs of societies over time (Standard 6.4, Indicator 6) and to analyze how cultural and scientific institutions function either to maintain continuity or to promote change.

Resources

Kuhn, Thomas S. *The Structure of Scientific Revolutions.* Revised Edition. Chicago: University of Chicago Press, 1970.

Jacob, Margaret C. *The Cultural Meaning of the Scientific Revolution.* Philadelphia: Temple University Press, 1988.

Snow, C.P. *Two Cultures: and a Second Look. Second Edition.* New York: New American Library, 1964.

Laughton, Chas. (translator) *Galileo* by Bertolt Brecht. New York: Grove Press, 1991.

Workplace Readiness Skills: 2.10/3.3/3.4/3.5/3.8/3.9

World Languages

Standard 7.1: **All students will be able to communicate at a basic literacy level in at least one language other than English.**

Standard 7.2: **All students will be able to demonstrate an understanding of the interrelationship between language and culture for at least one world language in addition to English.**

Cumulative Progress Indicators:

7.1.1   Respond to and initiate simple statements and commands such as greetings, introductions, and leave-takings.
7.1.4   Describe people places things and events using short phrases and simple sentences.
7.1.5   Provide and obtain information on familiar topics.
7.2.1   Demonstrate an awareness of culture.
7.2.2   Demonstrate knowledge of the cultures of speakers of the language studied.

Grade Levels: K to 2

Activity: *Come Home With Me*

Activity Overview: By constructing model homes that are found in the target culture, students learn about a tangible cultural product through a hands-on classroom experience. Language is used in a meaningful way as students discover the similarities and differences between their own homes and dwellings in the target culture.

Resources and Materials: Clay, play dough, building blocks, construction paper, craft sticks, poster board, brown manila paper, tissue and crepe paper, recycled materials in a variety of shapes and sizes, and library media center.

Assessment:

- Formative: Monitor students' use of the target language during classroom activities with a checklist rubric.
- Summative: Evaluate students' drawings for clarity and completeness. Evaluate oral presentations for comprehensibility and accuracy using an oral language rating scale. Tape students' model-home presentations, and include audio-cassettes in students' portfolios with their drawings.

Steps for Planning and Implementation:

1. With assistance from the library media specialist, students use available resources to locate pictures of typical target-culture dwellings.
2. Enlarge the pictures and display them around the room. Place pictures of houses and apartment buildings found in the students' communities next to the pictures of the target-culture dwellings.
3. Introduce vocabulary about dwellings using a variety of techniques, including puppets.
4. Students work on paired activities designed to review weather expressions and vocabulary about the environment that influence the type of home typically built in the target culture.
5. Elicit responses from students about the similarities and differences between target-culture dwellings and dwellings in their own community. Graph the responses on a T-chart.
6. Read a story in the target language on the theme of homes.
7. Students draw a picture of the outsides of their houses (or apartments), or bring in a photo of their homes.
8. Students make simple oral presentations to the class about their houses/apartments. Record the presentations on audiocassettes. Display the drawing(s) or photo(s) on a bulletin board with a label indicating whose dwellings they are.
9. Along with the art specialist, help the students make a model of dwellings in the target culture. Encourage students to use the target language during this phase of the activity by walking around the room and asking students simple questions about their projects.
10. Invite parents to visit when the students present their model homes to the class. Students prepare simple foods from the target culture, which they serve to guests and friends.
11. Display the students' models of homes in the school and in appropriate community sites.

Extension Activities:

- Using guided questions, students write paragraphs to accompany their model dwellings.
- Students sing songs and/or play games from the target culture on the theme of homes.
- Students create a model of a town in the target culture.

Interdisciplinary Connections:

- *Visual and Performing Arts:* 1.5.3: Apply knowledge of historical, social, and cultural influences to understanding a work of art. 1.6.2: Plan and execute solutions to design problems.
- *Language Arts:* 3.1.1: Use listening, writing, reading, and viewing to assist with speaking. 3.2.1: Use speaking, writing, reading, and viewing to assist with listening.
- *Science:* 5.10.4: Collect and record weather data to identify existing weather conditions, and recognize how those conditions affect our daily lives.
- *Social Studies:* 6.8.2: Discuss the similarities, differences, and interdependencies among rural, suburban, and urban communities. 6.8.5: Compare the physical characteristics of places and regions.
- *Library Information Skills:* Locate, select, retrieve, and assess a variety of print, CD-ROM, and online materials.

Workplace Readiness Skills: 2.6/2.8/3.4/3.5/3.15/4.2

Appendix E

Glossary

Academy model — Operating as schools-within-schools, academies provide the following three unique components: (1) *block rostering,* which allows each entering class of students to take core subjects together with the same teachers; (2) *long-term relationship* with the core teachers, who teach the required core subjects for all academy students every year; and (3) formal business ties which provide the real-world basis for the occupational focus of the academy as well as sources of mentors, internship experiences and potential postsecondary employment opportunities (*National Center for Research in Vocational Education [NCVRVE]*, MDS-768).

All aspects of the industry — Exposure to each of the components of the industry or industry sector a student is preparing to enter, including planning, management, finances, technical and production skills, underlying principles of technology, labor and community issues and health, safety and environmental issues related to such industry or industry sector (P.L. 103-239, *The School-to-Work Opportunities Act of 1994,* Section 4, and *School-to-Work Opportunities: Glossary of Terms,* June 1995).

Apprentice — A worker who is at least 16 years of age, except where a higher minimum age standard is otherwise fixed by law, who is employed to learn a skilled trade under standards of apprenticeship fulfilling the requirements of the *United States Department of Labor, Labor Standards for the Registration of Apprenticeship Programs* (Title 29 CFR Part 29) and the *Equal Employment Opportunity in Apprenticeship and Training Act* (Title 29 CFR Part 30).

Apprenticeship program — A plan containing all terms and conditions for the qualification, recruitment, selection, employment and training of apprentices, including such matters as the requirement for a written apprenticeship agreement in conformance with the *United States Department of Labor, Labor Standards for the Registration of Apprenticeship Programs,* (Title 29 CFR Part 29) and the *Equal Employment Opportunity in Apprenticeship and Training Act* (Title 29 CFR Part 30).

Block scheduling — A means of circumventing the time constraints of a single class period. The traditional school day is typically divided into six or seven classes that each last from forty-five to fifty-five minutes. With few exceptions, classroom instruction begins and ends within the allotted time period. Blocked courses may be scheduled for two or more continuous class periods or days to allow students greater time for laboratory or project-centered work, field trips or work-based learning and special assemblies or speakers. Moreover, block scheduling reduces the instruction time lost in passing between classes (*School-to-Work Opportunities: Glossary of Terms,* June 1995).

Business/industry relationships — Connections between educational entities and local business/industry organizations for the purpose of meeting the needs of the students and employers as customers of the educational process.

Career academy — A school-within-a-school in which a team of teachers offers a career related academic curriculum to students in grades 10-12 or sometimes grades 9-12 *(School-to-Work Transition: Resources for Counseling).*

Career awareness and exploration — Instruction and programs that assist students to clarify career goals, explore career possibilities, develop employability skills, and make the transition from school to work and/or postsecondary education.

Career guidance and counseling — Programs that
- ▶ pertain to the body of subject matter and related techniques and methods organized for the development in individuals of career awareness, career planning, career decision making, placement skills and knowledge and understanding of local, state and national occupational, education and labor market needs, trends and opportunities;
- ▶ assist individuals in making and implementing informed educational and occupational choices;
- ▶ aid students in developing career options with attention to surmounting gender, race, ethnic, disability, language or socioeconomic impediments to career options and encouraging careers in nontraditional employment (P.L. 103-239, *The School-to-Work Opportunities Act of 1994,* Section 4, and *School-to-Work Opportunities: Glossary of Terms,* June 1995).

Career development — A comprehensive, competency-based developmental program designed to assist students in making and implementing informed educational and occupational choices. The competencies, identified in the National Career Development Guidelines, focus on the areas of self-knowledge, education, occupational exploration, and career planning. Programs include competency-based activities and services that emphasize knowledge, skills, and abilities that enable the learner to

- ▶ identify various aspects of occupational careers;
- ▶ use critical-thinking skills to make meaningful occupational choices;
- ▶ qualify for entry to occupational education programs.

The basic skills and abilities the individual should master in order to deal successfully with daily life and career development tasks in a technological society are introduced and developed. This includes, but is not limited to, problem solving, decision making, balancing work and life, evaluation of one's uniqueness, and acquiring basic knowledge of different occupations.

Career pathway/career interest areas — The New Jersey Department of Education, through code has designated four career interest areas for students to explore as part of career development activities from K-12. The four career interest areas are (1) arts and humanities; (2) business and information; (3) mathematics, science and technology, and health and human services.

Career portfolio — A carefully selected collection of information that demonstrates a student's talents, interests, abilities, achievements and experiences. It documents the development of education/career goals and one's successful transition from school-to-work *(School-to-Work Transition: Resources for Counseling)*.

Career preparation — Involves high school students in selecting a career major for study. During this time, the student is acquiring the academic and occupational skills and knowledge for entry-level employment and/or admission to postsecondary training. The acquiring of skills occurs in contextual and applied-learning settings. Through the process, a skills certificate must be developed for each student indicating the general workplace and/or specific occupational skills to be achieved. Support services are provided for those who need them. The student continues to evaluate the career plan and is allowed tomake the necessary changes based on individual needs.

Community–based organizations (CBOs) — Private nonprofit organizations which are representative of communities or significant segments of communities and which provide job-training services. Include organizations serving nonreservation Indians as well as tribal governments and Native Alaskan groups (*Job Training Partnership Act,* [JTPA], Section 4,29 U.S.C. 1503 [5]).

Contextual learning — Instruction that imparts knowledge within the context in which it will later be used. Linking abstract concepts with real-life problems, contextual learning enables students to personally test and prove academic theories via tangible, real-world applications. Stressing the development of authentic problem-solving skills, contextual learning is designed to blend the teaching of skills and knowledge in a specific industry or occupational area (*School-to-Work Opportunities: Glossary of Terms,* June 1995).

Design — An iterative decision-making process that produces plans by which resources are converted into products or systems that meet human needs and wants or solve problems. (*Standards for Technological Literacy,* ITEA).

Integrated curriculum — In integrated curriculum, academic and occupational or career subject matter—normally offered in separate courses—are taught in a manner that emphasizes relationships among the disciplines. Integrated curriculum may take many forms, ranging from the simple introduction of academics into traditional occupational courses to comprehensive programs that organize all instruction around career themes (*School-to-Work Opportunities: Glossary of Terms,* June 1995).

Job shadowing – As part of career exploration activities, a student follows an employee for one or more days to learn about a particular occupation or industry. Job shadowing is intended to help students hone their career objectives and select a career major for the latter part of high school (*School-to-Work Opportunities: Glossary of Terms,* June 1995).

Mentoring – Pairing a student with an individual over an extended period of time during which the individual helps the student master certain skills and knowledge the individual possesses, models workplace behavior, challenges the student to perform well and assesses the student's performance. Mentoring may be combined with other work-based learning activities, such as internships or on-the-job training (*School-to-Work Opportunities: Glossary of Terms,* June 1995).

National Career Development Guidelines – An initiative, sponsored by the National Occupational Information Coordinating Committee (NOICC), intended to establish national guidelines that state and local organizations can use to strengthen and improve career guidance and counseling programs and enhance individual competence.

Project–based learning – A method of instruction that offers learners totally integrated work and learning experiences developed around the completion of finite projects that produce tangible results. SCANS skills, academic content, and knowledge permeate the projects. Learners use research, critical thinking, and problem-solving skills to implement the projects. Supervisors and teachers shift away from telling learners what to do and let learners take on the role of overseer.

Rubric – A rubric is a scoring guide that describes criteria for student performance and differentiates among different levels of performance within those criteria.

SCANS – The Secretary's Commission on Achieving Necessary Skills (SCANS) was convened in February 1990 to examine the demands of the workplace and to determine whether the current and future workforce is capable of meeting those demands. The commission was directed to (1) define the skills needed for employment; (2) propose acceptable levels in those skills; (3) suggest effective ways to assess proficiency; and (4) develop a strategy to disseminate the findings to the nation's schools, businesses, and homes.

Based on its research, the commission identified five competencies – skills necessary for workplace success, and three foundation skills and qualities that underlie competencies.

> *Competencies:* effective workers can productively use
>
> ▸ Resources – allocating time, money, materials, space and staff;
>
> ▸ Interpersonal Skills – working on teams, teaching others, serving customers, leading, negotiating and working well with people from culturally diverse backgrounds;

▸ Information — acquiring and evaluating data, organizing and maintaining files, interpreting and communicating and using computers to process information;

▸ Systems — understanding social, organizational and technological systems, monitoring and correcting performance and designing or improving systems;

▸ Technology — selecting equipment and tools, applying technology to specific tasks and maintaining and troubleshooting technologies.

Foundations: competence requires

▸ Basic Skills — reading, writing, arithmetic and mathematics, speaking and listening;

▸ Thinking Skills — thinking creatively, making decisions, solving problems, seeing things in the mind's eye, knowing how to learn and reasoning;

▸ Personal Qualities — individual responsibility, self-esteem, sociability, self-management, and integrity (*School-to-Work Opportunities: Glossary of Terms*, June 1995).

School–sponsored enterprise — The production of goods or services by students for sale to or use by others. School-sponsored enterprises typically involve students in the management of the project. Enterprises may be undertaken on or off the school site (*School-to-Work Opportunities: Glossary of Terms*, June 1995).

System — A system is a group of interacting, interrelated, or interdependent elements that together form a complex whole. All the parts of the system are related to the same overall process, procedure, or structure, yet they are (most likely) all different from one another and often perform completely different functions (Kauffman 1980).

Service learning — A method in which youth develop through active participation in organized service that is conducted in and meets the needs of a community; that is coordinated with a community-service program; that helps foster civic responsibility; that is integrated into and enhances the educational components of the community-service program in which the participants are enrolled; and that provides structured time for the participants to reflect on the service experiences.

Structured learning experience — Supervised student cocurricular or extracurricular activities, school-based enterprises, volunteer or paid employment, apprenticeship programs, or community service within disciplines linked to the Core Curriculum Content Standards.

Systems thinking — Systems thinking is a way of thinking about, and a language for describing and understanding, the forces and interrelationships that shape the behavior of systems. This approach allows participants to change systems more effectively and to act in tune with the larger processes of the natural and economic world. Systems thinking articulates the interrelationships between the complex elements of real-life situations as they evolve over time (Kauffman 1980).

Volunteerism — Volunteerism is the service performed by people of their own free will, sometimes without the benefit of a program to coordinate the efforts. It means a person who donates his or her service for the projection of the health and safety of the general public. Such a person would include, among others, a volunteer fireman, rescue worker, an aide in the care of the sick, aged, young, mentally ill, destitute and the like or assistant in religious, charitable, educational, hospital, cultural and similar activities (N.J.A.C. 12:56-2.1).

Appendix G

Resources

The following resources are provided by the National Center for Research in Vocational Education (NCRVE).

CAREER DEVELOPMENT ORGANIZATIONS

American School Counselor Association	www.schoolcounselor.org
National Career Development Association	www.ncda.org

NATIONAL RESOURCES FOR TEACHERS

American Federation of Teachers	www.aft.org
American Vocational Association	www.avaonline.org
Association for Supervision and Curriculum Development	www.ascd.org
Center for Occupational Research and Development (CORD)	www.cord.org
Center for Research on Evaluation, Standards, and Student Testing (CRESST)	www.cse.ucla.edu
Council of Chief State School Officers	www.ccsso.org
Education Week	www.edweek.org
Eisenhower National Clearinghouse for Mathematics and Science Education	www.enc.org
Institute for Educational Leadership	www.iel.org
International Society for Technology in Education (ISTE)	www.iste.org
Learning First Alliance	www.learningfirst.org
National Education Association	www.nea.org
National Education Goals Panel	www.negp.gov
National Governors Association/Center for Best Practices	www.nga.org/CBP
National PTA (Parent Involvement Standards)	www.pta.org
National Skill Standards Board	www.nssb.org
New Standards Project, National Center on Education and the Economy	www.ncee.org
Teacher Magazine	www.teachermagazine.org

SUBJECT MATTER ORGANIZATIONS

Center for Civic Education	www.civiced.org
International Reading Association	www.reading.org
National Communication Association	www.natcom.org
National Academy of Sciences, National Research Council (NAS)	www nas.edu/nrc
National Council for the Social Studies (NCSS)	www.ncss.org
National Council of Teachers of English (NCTE)	www.ncte.org
National Council of Teachers of Mathematics (NCTM)	www.nctm.org

FEDERAL INFORMATION

U.S. Department of Education	www.ed.gov
Office of Adult and Vocational Education	www.ed.gov/offices/OVAE
Goals 2000	www.ed.gov/G2K
Academic and Skill Standards	www.ed.gov/G2K/standard.html
U.S. Department of Labor	www.dol.gov
Employment and Training Administration	www.doleta.gov
National School-to-Work Office	http://www.stw.ed.gov

VOCATIONAL STUDENT ORGANIZATIONS

DECA (Marketing Education)	www.deca.org
FCCLA (Family and Consumer Sciences)	www.fhahero.org
Future Business Leaders of America-Phi Beta Lambda (FBLA-PBL)	www.fbla-pbl.org
Health Occupations Students of America (HOSA)	www.hosa.org
National FFA (Agriculture)	www.ffa.org
Technology Student Association (TSA)	www.tsawww.org
Vocational Industrial Clubs of America (VICA)	www.vica.org

Districts may find the following web sites useful in obtaining information and services. Sources are provided by the Center on Education and Training for Employment, the Cumberland County School-to-Career Initiative, the Millville Public Schools, Department of Education searches, National Career Guidance News, resources from the School-to-Work Opportunities Act, and others. The New Jersey Department of Education does not recommend or endorse any materials. Web site addresses frequently change and searching titles may result in different address.

Standard 1: All Students will develop career planning and workplace readiness skills.

Interest and Ability Assessments

The Career Key	http://www.ncsu.edu/careerkey/index.html
Birkman Method Career Style Summary	http://www.review.com/birkman/
The Interest-Finder Quiz	http://www.myfuture.com/secondary/career/ch_interestquiz.html
The Career Questionnaire	http://www.collegeboard.org/career/html/searchQues.html
Interest Finder Quiz	http://www.schoolfinder.com/career/carquiz.htm
Traditional IQ Tests on the WWW	http//www.2h.com/Tests/iqtrad.html

Personality Assessments

The Keirsey Temperament Sorter	http://keirsey.com/
Myers-Briggs Personality Types and Careers	http://www.cs.monash.edu.au/~damian/Personality/
Personality I.D.	http://www.cfcministry.org/personalityID/index.htm
The Kingdomality Personal Preference Profile	http://www.cmi-lmi.com/kingdomality.html
Behavioral Style Survey	http://www.platinumrule.com/surveyi.html
A Quick Personality Test	http://www.users.interport.net/~zang/personality.html

Occupational Exploration

The Occupational Outlook Handbook	http://stats.bls.gov/ocohome.htm
The Occupational Outlook Quarterly Online	http://stats.bls.gov/opub/ooq/ooqhome.htm
Bureau of Labor Statistics Home Page	http://state.bls.gov/
Teacher's Guide to the Bureau of Labor Statistics Career Information	http://stats/bis.gov/k12/html/edu_tch.htm
America's Career InfoNet	http://www.acinet.org/acinet/
What Can I Do with a Major In...?	http://www.uncwil.edu/stuaff/career/majords.htm
On-Line Mission Statement Builder	http://www.franklincovey.com/customer/missionform.html
Practical Experience	http://bgsu.edu/offices/careers/process/step3.html
Oklahoma Department of Vocational and Technical Education Curriculum and Instructional Materials Center	www.okvotech.org/cimc
Cornell Youth and Work Program, (focus on work-based learning)	http://www.human.cornell.edu/youthwork/

Connecticut Business and Industry Association	http://www.cbia.com/edtraining/STC/Video%20pages/default.htm
	http://webdesign/eduate/school_to...ch_ch jobs/Health andBio/hlthbio.htm
	http://webdesign/educate/school_to...logist/laboratory_technologist.htm
	http://webdesign/educate/school_to...Specialist/support_specialist.htm
	http://webdesign/educate/school_to...Animal_Technician/lab_an_tech.htm
	http://webdesign/educate/school_to...ech_jobs/Environmental/environ.htm
	http://webdesign/educate/school_to...ield_Technician/env_field.tech.htm
	http://webdesign/educate/school_to...chnician/instrument_technician.htm
	http://webdesign/educate/school_to...l/Reg_Comp_Tech/regu_comp_tech.htm
	http://webdesign/educate/school_to...Ag_Hort_Technician/agriculture.htm
	http://webdesign/educate/school_to...m-tech_jobs/Technologies/tech2.htm

Developing Career Plans

College Focus	http://careers.crosswalk.com/cf/
C3	http://www.c3apply.org/index.html
Yahoo's College Search	http://features/yahoo.com/college/search.html
Peterson's College Quest	http://216.33.117.163/plugin.nd/CollegeQuest/pgGateway
CollegeNet	http://www.collegenet.com/
College Edge Career Search	http://CollegeEdge.com/cm/car/search/
Career Mosaic	http://www.careermosaic.com/
Kaplan	http://www1.kaplan.com/
Career Magazine	http://www.careermag.com./
Think College Early	http://www.ed.gov/think/college

Career Awareness and Exploration

The Career Interest Game	www.missouri.edu/~cppcwww/holland.shtml
CHOICES	http://www.choicesedgroup.org
Junior Achievement Inc. National Headquarters	http://www.ja.org
KAPOW	www.kapow.org
Micro-Society	http://www.microsociety.org
Mini-Society	http://www.minisociety.com
Study Web	http://www.studyweb.com/
Kaplan Career Center	http://www.kaplan.com/library/Career.html
The Real Game	http://www.realgame.com
National Life Work Center	http://lifework.ca
America's Learning Exchange	http://alx.org
School-to-Work Learning Center	http://www.stw.ed.gov
Elementary Lessons	http://www.contractor.edu

Employment Sites

America's Job Bank	http://www.ajb.dni.us/
Career Builder Network	http://www.careerbuilder.com/
Career Mosaic	http://www.careermosaic.com/

Monster.Com	http://www.monster.com/
Career Magazine	http://www.careermag.com/
HotJobs.com	http://www.hotjobs.com/
The Chronicle of Higher Education	http://chronicle.com/
Jobs in Higher Education	http://www.gslis.utexas.edu/~acadres/jobs/index.html
Washington Post	http://washingtonpost.com/wp//-adv/classifeds/careerpost/
National Association of Colleges and Employers JOBWEB	www.jobweb.org
Career City	http://www.careercity.com
N.J. Labor Market	http://state.nj.us/labor/lra
America's Job Network	http://usworkforce.org/

Job-Seeking Tips (Resumes, Interviewing, etc.)

Fortune Magazine's Job Hunting Guide	http://www.pathfinder.com/fortune/careers/guide/index.html
Princeton Review Career Page	http://www.review.com/career/templates/temp1.cfm?body=index.cmf
Mike Farr's On-Line Get a Job Workshop	http://www.jist.com/jist/jobwork.htm
College Grad Job Hunter	http://www.collegegrad.com/
10 Minute Resume	http://www.10minuteresume.com/
The Resume Shop	http://www.cyber-north.com/resume/
Careers On Line	http://www.careersonline.com/

Comprehensive Sites

The Job Hunters Bible (What Color is Your Parachute?)	http://www.jobhuntersbible.com/
Fortune Magazine Career Resource Center	http://www.pathfinder.com/fortune/careers/
U.S. News & World Report's Career Guide	http://www.usnews/nycu/work/wo99car.htm
The Riley Guide	http://www.rileyguide.com
Workforce New Jersey Public Information Network	http://www.wnjpin.state.nj.us/
One-Stop Sites	http://www.wnjpin.state.nj.us/OneStopCareerCenter/ Welcome/onestops_new/onestops_main.htm
U.S. Department of Education	http://www.ed.gov/free/comment.html
John J. Heldrich Center for Workforce Development	www.heldrich,rutgers.edu

Internet Search Engine Career-Planning Sites

Yahoo Career Resource Directory	http://dir.yahoo.com/Business_and_Economy/Employment_and_Work/
Excite Career Planning Directory	http://www.excite.com/careers/career_planning
Go Network/Infoseek Career Center	http://infoseek.go.com/Careers/
Lycos Career Directory	http://lycos.com/careers
Altavista Career Directory	http://careers/av.com/
HotBot Career Info	http://directory.hotbot.com/Business/Jobs/Careers/

Financial Aid Information

Student Financial Assistance Program	http://www.ed.gov/offices/OSFAP/Students/sfa.html
College Connection Financial Aid Resources	http://www.careermosaic.com/cm/cc/cc23.html
The Smart Student Guide to Financial Aid	http://www.finaid.org/
Education Assistance Corporation	http://eac-easci.org/

Academic Connections to the Real World

The Futures Channel	http://www.thefutureschannel.com
NEA Useful Web Sites for Educators	http://www.nea.org/cet/links
	http://nea.org/cet/bits.html

Consumer and Financial Skills

Consumer Rights	http://www.state.me.us/ag/clg1.htm
Office of Fair Trade	http://www.oft.gov.uk/html/consume/general.htm
AARP Webplace	http://www.aarp.org/programs/consumer/
CreditComm Services	http://creditcomm.com/reference/bconrite.html
Kids' Money Kids' Page	www.kidsmoney.org/kids.htm
Jump Start	www.jumpstartcoalition.org

Business and Industry Information

New Jersey Business and Industry Association	http://www.njbia.org/
National AFL-CIO	http://www.aflcio.org/home.htm
National Alliance of Business	http://www.nab.org/
National Skills Standards Board	http://www.nssb.org
United States Department of Labor	http://www.dol.gov/
National Alliance of Business	http://www.nab.com/
Employment N.J. Network	http://www.employ.com/schedule/enjsched.html
Consumer Information Center	www.pueblo.gsa.gov
EntrepreNet	www.enterprise.org
Home Office Association of America	www.hoaa.com
Minority Business Development Agency	www.mbda.gov
National Foundation for Women Business Owners	www.nfwbo.org
Smart Business Supersite	www.smartbiz.com
U.S. Business Advisor	www.business.gov
U.S. Small Business Administration	www.sba.gov
American Bar Association	www.abarnet.org

Standard 2. All students will use technology, information and other tools.

American Library Association	http://www.ala.org
ERIC/EECE Resource List	http://ericeece.org/pubs/reslist/compsw.html
Microsoft in Education	http://www.microsoft.com/education/schools/default.htm
Information Technology K-6	http://crilt.canberra.edu.au/lessonplans/
ITAA Workforce and Education	http://www.itaa.org/workforce
Techforce Initiative	http://www.technworkforce.org/programs/stw.htm
U.S. Department of Commerce	http://www.ta.doc.gov/Go4IT/
The Computer Museum	http://www.tcm.org
America's Learning Exchange	http://www.alx.org
Jones Telecommunications and Multimedia Encyclopedia	http://www.digitalcentury.com/encyclo/update/comp_hd.html
NetLingo	http://www.internet-trainer.com/glossary.htm

Standard 3. All students will use critical thinking, decision-making, and problem-solving skills.

U.S. Department of Education	http://npin.org/respar/texts/home/sum9to12.html
The Learning Resource	http://fox.nstn.ca/~huot/generic.html
Design a Study	http://www.designastudy.com/teaching/tips-0198.html
EduPlace Games	http://www.eduplace.com/kids/links/kids_2.htm
AboutCom	http://7-12educators.miningco.com/education/7-12educators/msub21.htm
MegaSpider	http://www.hawaii.edu/suremath/sites.html
ERIC	http://ericae.net/edo/ed297003.htm
ERIC	http://ericae.net/edo/ed385606.htm
National Parent Information Network	http://npin.org/
10 Suggestions for Teaching...	http://www.id.ucsb.edu/IC/TA/tips/prob.html

Standard 4. All students will demonstrate self-management skills.

KCDC	http://www.kcdc.sk.ca/sea/page1.asp
California Department of Education	http://www.cde.ca.gov/iasa/cooplrng.html
The Cooperative Learning Center at the University of Minnesota	http://www.clcrc.com/pages/assess.html
Center for the Study of Classroom Processes	http://artsci-ccwin.concordia.ca/education/cscp/Try.htm
Learning Together, Canisius College	http://www.canisius.edu/~weibelt/together.html
EdWeb	http://www.edweb.com.au/StudyGuides/index.html
New York Department of Labor	http://www.wdsny.org/visions/keep_your_flavor.htm
University of Maryland, Gender Studies	http://www.inform.umd.edu:8080/EdRes/Topic/WomensStudies/GenderIssues/

Sexual Harassment Issues	http://www.vix.com/pub/men/harass/harass.html
Sexual Harassment	http://www.cs.utk.edu/~bartley/other/9to5.html
The Study Skills Home Page	http://www.geocities.com/Athens/Parthenon/5866/
Memory Principles	http://www.mtsu.edu/~studskl/mem.html
Study Skills for Effective Living	http://sol.brunel.ac.uk/~jarvis/study/index.html

Standard 5. All students will apply safety principles.

First Aid Online	http://www.wps.com.au/business/firstaid/firstaid.htm
Healthanswers.com	http://www.healthanswers.com/health_answers/search_get_answer/ forums/safety/info.htm
Young Worker Safety	http://www.stw.ed.gov/youngworkers/index.htm
Occupational Safety and Health Administration	http://www.osha-slc.gov/OshStd_toc/OSHA_Std_toc.html
USDOE Cross-Site Indexing Project	http://search.ed.gov/csi/eric.html
OSHA Compliance and Regulations	http://www.osha.gov/comp-links.html
OSHA Facts	http://www.osha-slc.gov/OshDoc/OSHFacts/OSHAFacts.html
Workplace Literacy	http://ericacve.org/docs/wkpl158.htm
Safe Schools	http://www.eohsi.rutgers.edu/
National Fire Protection Association	www.nfpa.org
Federal Emergency Management Association	www.fema.gov
United States Fire Administration	www.usfa/fema/gov
American Red Cross	www.redcross.org
American Industrial Hygiene Association	www.aiha.org
Fire and Safety Directory	www.firesafe.com
Safety Information	www.safetyinfo.com
Daily News Service/Security Magazine	www.secmag.com
International Association of Fire Fighters	www.sprinklemet.org
Crowd Management Strategies	www.crowdsafe.com
National Crime Prevention Council	www.ncpc.org
American Cancer Society	www.cancer.org
N.J. Cancer Information	www.state.nj.us/health/cancer.htm
Environmental Consultation and Enforcement	www.state.nj.us/dep
EPA Indoor Air Quality Information Clearing House	www.epa.gov/iaq
EOHSI Resource Center	www.eohsi,rutgers.edu/cet
NIOSH Technical Information Service	www.cdc.gov/niosh/inquiry.htm
Public Employers Occupational Safety and Health (PEOSH)	www.state.nj.us/health/eoh/peoshweb
CDC Office on Smoking and Health	www.cdc.gov/tobacco
Right to Know (RTK) about hazardous substances public sector	www.state.nj.us/health/eoh/rtkweb

Consumer and Environmental Health Services	www.state.nj.us/health/eoh/leasb/index.html
NJ Poison Information and Education	
System (NJPIES)	www.state.nj.us
Center for Disease Control-Prevention	www.cdc.gov

PROJECT-BASED LEARNING

School-to-Work Project Based Learning:	
A How-To-Guide	http://www.nysed.gov/workforce/stw.htm
Buck Institute for Education: PGL Overview	www.bie.org/pbl
Less Teaching and More Learning	http://gseweb.harvard.edu/`ncsall/gaer.htm
Knowledge in Action: The Promise of	
Project-Based Learning	http://gseweb.harvard.edu/`ncsall/wrigley.htm
Turning Obstacles into Opportunities	http://gseweb.harvard.edu/`ncsall/johnson.htm
Project-Based Learning	http://scholar.coe.uwf.edu/pacee
Project-Based Learning with Multimedia	http://pblmm.K12.ca.us/PBLGuide
Why do "Project Based Learning"?	http://arundel.sancarlos.k12.ca.us/a_staff/garber/PBL_why.html

Integrated Curriculum and Interdisciplinary Teaching

ClosepUp #16 Integrated Curriculum	http://www.ssec.org/idis/cohasset/InteCur.htm
Integrated Curriculum, Performance Assessment,	
and Authentic Learning	http://www.parkcce.org/id/3/intgr.html
Contextual Teaching & Learning	http://www.contextual.org/abs2.htm
In Search of Understanding	http://www.ascd.org/readingroom/books/brooks99book.html
Integrated & Interdisciplinary Curriculum	
Units/Penn State	http://www.personal.psu.edu/faculty/a/m/amj8/curric
People and Their Work-PreK	
Career Choices/Grades 4-5	
Inventions/Grade 6	
Teamwork-Take Me to the Ball Game/Grades 7-8	
Camp Confidence-Creating a Caring Community/Guidance	
Choices/Guidance	
Planning Integrated Curriculum	http://ascd.org/readingroom/books/drake93book.html
Six Steps in Creating a Thematic Unit	http://etrc33.louisiana.edu/etrc/projects/chalpriv/lessons/steps.html
What's Essential? Integrating the	
Curriculum in Essential Schools	http://www.essentialschools.org/pubs/horace/09/09n04.html
Integrated Curriculum: A Selected Bibliography	http://www,qednsl.qld.gov.au/INTECURR.HTML

OTHER

New Jersey Department of Education	http://www.state.nj.us/education
Public Private Ventures	
(focus on research and youth)	http://www.ppv.org
Project-Based Learning	www.bie.org
Children, Families, and Learning	http://cfl.state.mn.us/mcis/mcishme.htm
U.S. Department of Education Publications	http://www.ed.gov/pubs/edpubs.html
NCRVE	http://ncrve.berkeley.edu
Olympics	www.olympics.com
Special Olympics	www.specialolympics.org
NASA/Kennedy Space Center	www.ksc.nasa.gov
Liberty Science Center	www.lsc.org
The Real Games	www.realgame.com
Guidelines for Using Students' "Natural Jobs" to Achieve New Jersey Work-Based Learning Handbook	www.stw.ed.gov/Database/Subject2.cfm?RECNO=562
New Jersey Job Shadowing Handbook	www.stw.ed.gov/Database/Subject2.cfm?RECNO=1003
New Jersey's Employer Guide on Insurance-Liability Issues	www.stw.ed.gov/Database/Subject2.cfm?RECNO=1318
Kindness and Justice Challenge	www.dosomething.org/kjchallenge
New Jersey Mathematics Coalition	http://dimacs.rutgers.edu/nj_math_coalition
Invent America	www.inventamerica.com
Young Inventors Award Programs	www.nsta.org/programs
Mind/Brain Learning Principles	http://www.newhorizons.org/ofc_21clicaine.html
Let Me Learn Process	http://www.letmelearn.org
N.J. NIE Project	http://njnie.dl.stevens-tech/edu/curriculum
Teachers' Corner	http://www.specialspecies.com/Pages/teachers_corner/index.html
Acid Rain Watch	http://www.geocities.com/CapeCarnaveral/launchpad/8127/acidrain.html
Styles of Education	http://www.edweb.cnidr.org
National Math Trail	www.thefutureschannel.com/nationalmathtrail

Appendix F

Bibliography

Brooks, Jacqueline Grennon, and Martin G. Brooks. *In Search of Understanding: The Case for Constructivist Classrooms.* Alexandria, VA: Association for Supervision and Curriculum Development, 1993.

Campbell, Chari, and Carol A. Dahir. *Sharing the Vision: The National Standards for School Counseling Programs.* Alexandria, VA: American School Counselor Association, 1997.

Erickson, H. Lynn. *Stirring the Head, Heart, and Soul: Redefining Curriculum and Instruction.* Thousand Oaks, CA: Corwin, 1995.

Gardner, Howard. *Frames of Mind: A Theory of Multiple Intelligences.* New York, NY: Basic Books, 1983.

Hitchins, Derek. "Systems Engineering the Pyramids." Presentation at Texas Gulf Chapter, International Council on Systems Engineering, November 8, 1995.

International Technology Education Association (ITEA). *Standards for Technological Literacy.* Reston, VA: ITEA, 2000.

Kauffman, Draper L., Jr. *Systems One: An Introduction to Systems Thinking.* The Innovative Learner Series. Minneapolis, MN: Future Systems, Inc., 1980.

Lester, Juliette N., and Nancy S. Perry. *Assessing Career Development with Portfolios.* ERIC Clearinghouse on Counseling and Student Services, OERI. U.S. Department of Education, 1995. Available online at <http://icdl.uncg.edu/ft/082099-05.html> (November 11, 1999).

Marzano, Robert J., Debra Pickering, and Jay McTighe. *Assessing Student Outcomes.* Alexandria, VA: Association for Supervision and Curriculum Development, 1993.

Miller, William D. "Systems Competencies and the World of Education," INCOSE *Insight* (April 2000): 30–31.

National Center for Research in Vocational Education (NCRVE). *National Roster of Local Practices in the Integration of Academic and Vocational Education*. Berkeley, CA: NCRVE, 1994. MDS-768.

National Center for Research in Vocational Education (NCRVE). *Getting to Work: A Guide for Better Schools*. Berkeley, CA: NCRVE, 1996.

New Jersey Department of Education (NJDOE). *A Reference Manual of NJDOE SRAII Performance Frameworks and Exemplars in Reading, Writing, and Mathematics.* (Draft) Trenton, NJ: NJDOE.

NOICC. *National Career Development Guidelines. K–Adult Handbook*: Washington, D.C.: NOICC, 1989.

Perry, Nancy. *How Do We Design a Comprehensive Career Guidance and Counseling Program?* ERIC Clearinghouse on Counseling and Student Services, OERI, U.S. Department of Education, 1995. Available online at <http://icdl.uncg.edu/ft/081699-03.html> (November 11, 1999).

Rahn, Mikala L., and Gary Hoachlander. *Getting to Work: A Guide for Better Schools.* Module 4, *Student Assessment.* Supported by the Office of Vocational and Adult Education, U.S. Department of Education. Berkeley, CA: MPR Associates, National Center for Research in Vocational Education, 1995.

Reich, Robert B. *The Work of Nations.* New York, NY: Alfred A. Knopf, Inc., 1991.

Senge, Peter, Nelda Cambron-McCabe, Timothy Lucas, Bryan Smith, Janis Dutton, and Art Kleiner. *Schools That Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares about Education.* New York, NY: Doubleday, 2000.

Southern Regional Education Board (SREB). *Advancing Students' Academic and Technical Achievement by Improving Classroom Assessment.* Site Development Guide #10. *High Schools That Work.* Atlanta, GA: SREB, 1999.

Stecher, Brian M., Mikala L. Rahn, Allen Ruby, Martha Naomi Alt, and Abby Robyn. *Using Alternative Assessments in Vocational Education.* Supported by the Office of Vocational and Adult Education, U.S. Department of Education. Santa Monica, CA: RAND, 1997.

Appendix H

Framework Contributors

Leadership Team

JAY DOOLAN
Acting Assistant Commissioner
Division of Academic and Career Standards
New Jersey Department of Education

THOMAS A. HENRY
Director
Office of School-to-Career and College Initiatives
Division of Academic and Career Standards
New Jersey Department of Education

ROBERT J. RIEHS
Acting Director
Office of Standards and Professional Development
Division of Academic and Career Standards
New Jersey Department of Education

JOSEPH HATRAK, JR.
Manager
Office of Standards and Professional Development
Division of Academic and Career Standards
New Jersey Department of Education

ANN DIGIACOMO
Framework Project Coordinator
Workplace Readiness Coordinator
Office of Standards and Professional Development
Division of Academic and Career Standards
New Jersey Department of Education

WILLIAM D. MILLER
Framework Project Coordinator
Business Representative
Retired AT&T District Manager
Systems Engineering and Program Management

PHYLLIS GARNANT
Education Program Development Specialist
Office of School-to-Career and College Initiatives
Division of Academic and Career Standards
New Jersey Department of Education

PATRICIA O'DRISCOLL
Career Development Consultant
Project Manager
Public Works, Inc.
Pasadena, California

New Jersey Department of Education

KARIN ABBEY
Education Program Development Specialist
Office of Assessment
Division of Academic and Career Standards

NANCY HAZELGROVE
formerly with Office of Innovative Programs
and Initiatives
Division of Academic and Career Standards

DONNA DIMATTIA DOOLY
Management Assistant
Office of Standards and Professional Development
Division of Academic and Career Standards

DIANE KUBINSKI
Education Program Development Specialist
Office of Assessment
Division of Academic and Career Standards

WILLIAM L. HORAHAN
Managing Examiner
New Jersey Department of Banking
and Insurance

FRANK S. KARPATI
Counselor
Clifton School District

TANYA OSNOWICH
Office of Communications
New Jersey Department of Environmental
Protection

BRIAN PETERS
Director
New Jersey Department of Labor
Division of Business Services

ANA PICCININNO
Transition Specialist
Middlesex Day Program

JEAN PILLET
Food Industry Advisor
Food Council

MIKALA RAHN
President
Public Works

THOMAS MURPHY
President
The Harwich Group

ALBERT MUSSAD
Morris School District

HARRY ROMAN
Chair, Education Committee
New Jersey Business and Industry
Association/PSE&G

BARRY SCHLEGEL
Executive Director
Employers Occupational Safety and Health Institute–CET

LAURENCE H. SEIDEL
Staff Director
Career Resource Network

RITA WOOD
Family and Consumer Sciences Educator
Rutgers Cooperative Extension of Burlington County

ROBERT WOODFORD
formerly with
New Jersey Business and Industry Association

CALVIN WOODLAND
Vice President of Student Services
Bergen Community College

Writing Team

DEBORAH ADAMS
Passaic Public Schools

JOHN BRADY
Tinton Falls School District

PATRICIA BRAXTON
Woodstown-Pilesgrove Regional School District

HENRY KEARNS
North Burlington Regional Schools

JOSEPH KEENAN
Vineland School District

JANINA KUSIELEWICZ
Clifton School District

New Jersey
Language Arts Literacy
Curriculum Framework

Chapter 7

Adaptations for Students

ADAPTATIONS FOR STUDENTS

Effective instruction follows from choices teachers make about strategies appropriate for learners in the classroom. These choices or adaptations create learning conditions that include a variety of activities, multimodal learning, modeling and guided practice, pacing appropriate to learners' needs, and groupings that provide timely peer collaboration as well as teacher input and independent work. Such conditions are evident throughout this framework to underscore the varying needs that students have and the varied choices or adaptations that inform effective instruction in any classroom.

This section of the document organizes these adaptations in terms of instruction for unique groups of learners: students with disabilities, students with limited English proficiency, and exceptionally able learners. Although the strategies presented here are appropriate for use with all learners at different times, they are typical of instruction in these specific contexts and may be for some students a critical factor in their literacy development.

▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼

ADAPTATIONS FOR STUDENTS WITH DISABILITIES

Introduction

The New Jersey Core Curriculum Content Standards and related curriculum frameworks are the focus of curriculum and instruction for all pupils, including students with disabilities. Students with disabilities may require instructional adaptations in order to gain access to curriculum and instruction based on the content standards. Adaptations are not intended to compromise the content standards. Instead, adaptations provide these students the opportunity to maximize their strengths and compensate for their learning differences.
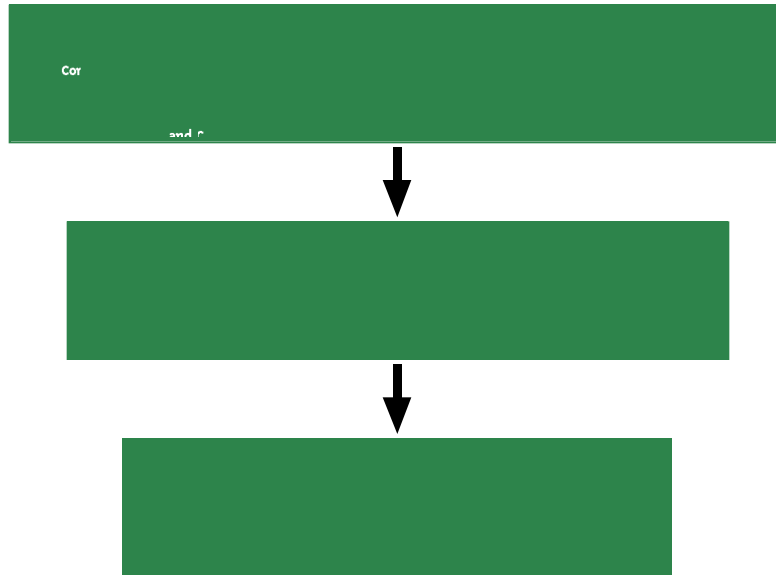
Figure 1

Consistent with the expectation that students with disabilities participate in the general education curriculum is the requirement that the Individualized Education Programs (IEPs) of students with disabilities reflect the core content standards and the local school district's general education curriculum (see Figure 1).

Adaptation: A Federal Requirement

The Individuals with Disabilities Act Amendments of 1997 and Section 504 of the Rehabilitation Act of 1973 guarantee students with disabilities the right to general education program adaptations, as specified in their Individualized Education Programs (IEPs) or 504 plans. These federal requirements are intended to result in adaptations that provide these pupils access to the general education program and general education curriculum.

Students with disabilities demonstrate a broad range of learning, cognitive, communication, physical, sensory, and social/emotional differences that may necessitate adaptations to the general education program. Each pupil manifests his or her learning abilities, learning style, and learning preferences in a unique way. Consequently, the type of adaptations needed and the program in which the adaptations will be implemented are determined individually within the Individualized Education Program (IEP) or 504 planning processes (see Figure 2).
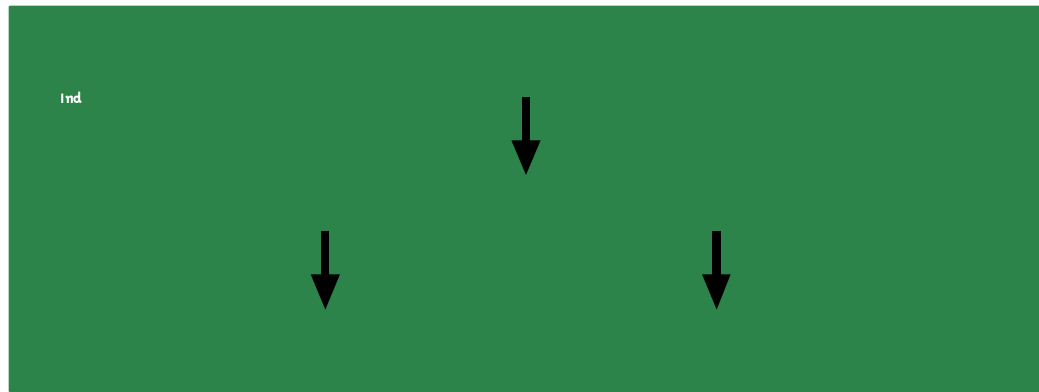
Ind

Figure 2

Within the context of this framework, adaptation is defined as:

Any adjustment or modification to the general education program enabling students with disabilities to:

- Participate in and benefit from learning activities and experiences based on the Core Curriculum Content Standards; and

- Demonstrate understanding and application of the content standards.

Categ

The standards and indicators for language arts literacy are critically important for students with disabilities, as they are for all students. All students need to learn to read, write, listen, speak, and view in order to function as independently as possible and to gain enjoyment from a variety of language experiences. However, many students with disabilities are identified initially due to their difficulties in developing proficiency in these literacy behaviors. While it is vital that students with disabilities receive appropriate instruction to promote their progress in literacy, the nature of that instruction will vary according to the individual needs of the students.

The *New Jersey Language Arts Literacy Curriculum Framework* emphasizes multiple, integrated dimensions of language arts—speaking, listening, writing, reading, and viewing—as processes for actively constructing meaning from experience. Therefore, the vignettes and activities support an

integrated, constructivist approach in which students think about, develop, and share their understandings using a combination of these literacy processes. While the experiences represented in the framework embody "best-practice" instruction beneficial for all students—including students with disabilities—they also illustrate how the standards and indicators are implemented in classroom activities.

To engage fully in these rich, language-based activities, students with disabilities may need instructional adaptations. These adaptations, which may take a variety of forms, structure students' learning in a more explicit, systematic way, often beginning with teacher-directed instruction and moving gradually toward the release of teacher control as students gain proficiency. Other adaptations provide alternative means for students to acquire or demonstrate their knowledge while they are developing language arts literacy proficiencies at their own rate and style of learning (e.g., listening to books on tape while learning to read independently, or dictating to a peer while learning to write independently).

Note: The adaptations included this chapter were developed to complement and make accessible the vignettes and activities developed for the language arts literacy framework. Additional adaptations, not included in this chapter, may be needed for some students with disabilities to provide further instruction in the foundation skills that underlie the processes described in this framework (e.g., word recognition skills, spelling, and handwriting).

The categories listed below are intended to guide the process of selecting instructional adaptations for an individual student with disabilities. Adaptations include, but are not limited to, the following:

Student Motivation
Teacher Involvement
Student Involvement

Instructional Presentation
Instructional Preparation
Instructional Prompts
Instructional Applications

Instructional Monitoring
Teacher Management
Student Self-management

Classroom Organization
Instructional Groups
Instructional Support
Environmental Conditions
Instructional Materials/Adaptive Equipment

Student Response
Response Format
Response Procedures

Descriptions, including the rationale, specific functions, and examples for each category of adaptation, are provided below. The sample adaptations included at the end of this section were selected to illustrate a range of possible adaptations that could be used across language arts literacy standards and indicators. These examples were developed from selected activities or vignettes contained in the language arts literacy framework.

Note:....... The adaptations that follow, although based on instructional practices that are effective for all students, may be an essential component of the instructional program for a student with disabilities.

STUDENT MOTIVATION

Rationale: ... Some students with disabilities may be reluctant to engage or persist in language arts literacy activities. This reluctance may be due to difficulties with aspects of language or literacy processes resulting in repeated failures despite students' initial efforts and desire to learn. Because of these difficulties, motivational strategies are important to help students with disabilities become successfully involved in a variety of literacy experiences to develop proficiency, confidence, and enjoyment.

Purpose:	Strategy:
· Create interest	· Personally meaningful activity
· Develop persistence	· Activity choice
· Build confidence	· Hands-on, multimodal activities
· Promote enjoyment	· Doable tasks
· Foster independence	· Learning styles
	· Student involvement in goal setting and assessment activities
	· Choice to work with others or alone

INSTRUCTIONAL PRESENTATION

Rationale: . . . Students with disabilities may require instructional presentations that will enable them to acquire, comprehend, recall, and apply literacy processes to a variety of activities and content. In addition, instructional presentation adaptations can enhance a student's attention and ability to focus on instruction.

The primary purpose of these adaptations is to provide special education students with teacher-initiated and teacher-directed interventions that prepare students for learning and engage students in the learning process (Instructional Preparation); structure and organize information (Instructional Prompts); and foster understanding of new concepts and processes (Instructional Application) addressed in the language arts literacy framework vignettes and activities.

Instructional Preparation—Purpose:

· Heighten students' interest and understanding
· Establish purpose or goals of lesson
· Activate prior knowledge
· Build background knowledge of content or strategy
· Focus attention and thinking
· Introduce key concepts and information

Instructional Preparation—Examples:

· Relate to personal experiences
· Previewing information–materials
· Advanced organizers
· Brainstorming/webbing
· Questioning techniques
· KWL strategies
· Predicting
· Preteach vocabulary
· Preteach or review strategy
· Visual demonstrations, illustrations, models
· Mini-lesson

Instructional Prompts—Purpose:

· Organize information
· Build whole-part relationships
· Cue associations–connections
· Highlight and clarify essential concepts
· Generate classifications–comparisons
· Activate recall
· Summarize

Instructional Prompts—Examples:

· Graphic organizers
· Semantic organizers
· Outlines
· Mnemonics
· Analogies
· Imagery
· Feature analysis
· Color coding
· Highlighting/underlining
· Segmenting techniques–task analysis, chunking
· Key words/labels
· Writing frames/templates
· Notetaking guides
· Restatement or clarification of oral directions
· Directions on overhead or board
· Cue cards
· Pictures
· Movement cues

Instructional Applications—Purpose:

· Simplify abstract concepts
· Provide concrete examples
· Extend ideas–elaborate understanding
· Build connections–associations
· Relate to everyday experiences
· Promote generalization
· Engage multiple modalities

Instructional Applications—Examples:

· Hands-on activities
· Constructions
· Dramatization
· Props and manipulatives
· Illustrations
· Music or movement
· Drawing or painting
· Graphics and charts
· Field trips
· Guest speakers
· Interviews/surveys
· Personally relevant actions
· Real-life applications (write letter to editor)
· Model process–"think aloud"
· Examples and nonexamples
· Games and puzzles
· Simulations

INSTRUCTIONAL MONITORING

Rationale:. . . . Frequent monitoring of the performance and progress of students with disabilities is essential to ensure that students are in fact understanding and benefitting from learning activities. Monitoring provides teachers with a means of obtaining information about students and their ability to participate effectively in learning activities. It also provides a means for teachers to determine when and how to adjust learning activities and instructional supports to promote student development. Equally important is student self-monitoring, self-evaluation, and self-management to promote student self-reflection and self-direction regarding tasks demands, goal attainment, and performance accuracy.

Instructional Monitoring—Purpose:

· Provide periodic (ongoing) check for understanding
· Redirect attention
· Direct on-task behavior
· Promote participation
· Check progress
· Assist in goal setting
· Establish time lines
· Clarify assignments, directions, instructions
· Provide reinforcement; corrective feedback
· Promote strategy use and generalization
· Manage student behavior–interactions
· Develop self-questioning and self-regulation

Instructional Monitoring—Examples:

· Goal setting
· Anecdotal records/graphs of progress towards goals
· Self-monitoring checklists
· Rubrics
· Time lines for assignments
· Think-alouds
· Journal entries
· Portfolios
· Conferences
· Peer reviews
· Questioning techniques
· Student contracts
· Reward system

CLASSROOM ORGANIZATION

Rationale:. . . . Students with disabilities may require specific adaptations to classroom organization in order for them to actively engage in the concepts and processes addressed through the framework activities.

Purpose: . . . . The primary purpose of these classroom organization adaptations is to maximize student attention, participation, independence, mobility, and comfort; to promote peer and adult communication and interaction; and to provide accessibility to information, materials, and equipment.

Instructional Groups—Examples:

· Cooperative learning groups
· Peer partners
· Buddy systems
· Teams

Instructional Support*—Examples:

· Assist physically
· Clarify
· Prompt–cue
· Gesture–signal
· Interpret
· Reinforce
· Highlight
· Organize
· Focus

*from another individual

Environmental Conditions—Examples:

· Classical background music to enhance concentration
· Variety of workspace arrangements (individual, small and large group)
· Privacy work spaces–carrels
· Conferencing area
· Wall posters to enhance memory and self-reliance (e.g., directions, steps)
· Organizational tools–labeled bins or cabinets for materials, assignments, or supplies
· Seating arrangements–minimize distractions, provide positive student models

Instructional Materials/ Adaptive Equipment—Examples:

· Materials for a range of readability levels
· Books on tape
· Directions on tape
· Tape recorder
· Simplified written directions
· Adjusted formats (spacing, item arrangement)
· Personal computers
· PC software (e.g., Dragon Dictate–writing; Ultimate Reader–reads text on Internet aloud; Inspirations–mapping/outlining)
· Speech synthesizer
· Communication board
· Close-captioned video–TV/decoder
· Braille
· Enlarge print
· Low-vision equipment (e.g., clock)
· Talking watch–calculator
· Lap board
· FM system
· Large-diameter or modified pencil grip

STUDENT RESPONSE

Rationale:. . . . Students with disabilities may require specific adaptations in order in demonstrate acquisition, recall, understanding, and application of language arts literacy processes in a variety of situations with varied materials while they are developing proficiencies in these areas.

Purpose: . . . . The primary purpose of student performance responses is to provide students with disabilities a means of demonstrating progress toward the lesson objectives related to the language arts literacy framework vignettes and activities.

Response Formats—Examples:

· Dictation to peer/adult/tape/PC
· PC/multimedia for composition/response
· Video/audiotapes
· Braille writer
· Sign to interpreter
· Information/graphic organizers
· Illustrations—posters, collage, mural
· Diagrams (e.g., Venn, plot)
· Constructions—models, dioramas, mobiles
· Songs, raps, or poems
· Brochure
· Game or puzzle
· Flip book
· Create test questions
· Journal entries
· Portfolio entries
· Gallery walk
· Role play
· Debate
· Presentation/oral report
· Teach a lesson

Response Procedures—Examples:

· Extended time
· Practice exercises
· Interpreter
· Use of preferred response mode (e.g., written, dictated, oral)

INSTRUCTIONAL ADAPTATIONS—LANGUAGE ARTS LITERACY FRAMEWORK

Core Curriculum Content Standard: 3.5   Indicator: 1   Elementary-Level Activity

Instructional Presentation
Instructional Preparation: Activate prior knowledge

Activating prior knowledge requires students to think about what they already know, or think they know, about a topic before new information is presented. Making students aware of what they already know helps them to develop associations between new and previously acquired information, thereby enhancing memory. Recording and organizing students' ideas as they are generated can aid in understanding and recall of information.

Elementary-Level Activity: Preparation for reading *Little House on the Prairie*

- Listen to and sing familiar songs of the Old West (e.g., "Home on the Range," "Happy Trails to You").

- Activate prior knowledge through class discussion and creation of an A-Z chart on "What I Know About the West."

- List and discuss four categories about life in the Old West: transportation, school, jobs, and clothing, to focus students' attention before they view pictures about the West.

- Circulate a model of a Conestoga wagon and pictures of the Old West to students in cooperative groups.

- Direct student groups to complete a four-section chart by listing or drawing what they see about life in the Old West.

Instructional Groups

- Cooperative learning groups (4 members) view pictures of the wagon and the Old West and complete the four-section chart.

- To promote participation within the group, the sections of the chart are rotated so that each person has a turn to add one item (word or drawing) to each category.

- Each student has an option to pass after listing at least one idea per category.

- The group continues to work until all ideas are listed.

- Each group displays and shares its chart with the class.

Environmental Conditions

- Use Western music as an introductory singing activity, and later play softly as background music while students work.

- Organize cooperative learning group areas with sufficient space for students to work with large chart paper to complete the four-section chart.

Instructional Materials/Adaptive Equipment

- A–Z chart
- Model of Conestoga wagon
- Pictures of the Old West
- Four-section chart on poster paper
- Markers

Motivation

- Singing familiar songs
- Viewing old pictures and wagon model
- Talking and working with other students in cooperative groups
- Responding in a variety of ways

Student Response

- Each student contributes to the group discussion and final product.

- For individual accountability, each student uses a different color to write responses and signs his or her name to the bottom of the chart in that color.

A to Z Chart

What I Know about the Old West

Arrows

Bows
barns

Cowboys
cactus
cattle

Dust bowls
dangerous

Education in one-room schoolhouse

Fighting between Indians and Settlers
forts

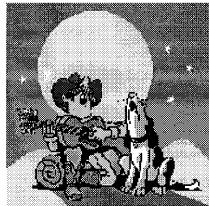# LIFE IN THE OLD WEST

Transportation

School

Jobs

Clothing

INSTRUCTIONAL ADAPTATIONS—LANGUAGE ARTS LITERACY FRAMEWORK

Core Curriculum Content Standard: All   Indicator: All   Elementary-Level Vignette

Instructional Presentation
Instructional Preparation: Vocabulary development—Word wall

A **word wall** is a large visual display of vocabulary words and their definitions that serves as a visual reference for spelling and meanings. Word walls can be created for particular themes or units of instruction. Words can be selected because of a student's interests or because the teacher has identified these words as important for students to learn. As a ready reference, word walls promote student independence in discussion, reading, and writing activities.

Elementary-Level Vignette: Thematic Unit—From Research to Oral Production

- Create a word wall posting new vocabulary and definitions for all to see.

- Write each word and definition on long strips of paper.

- Organize the words alphabetically and adjust the sequence as additional words are added.

- Leave space between words beginning with a new letter of the alphabet to aid in location.

- Students can also maintain their own vocabulary logs as a permanent record and reference guide.

Instructional Groups

- Individual or groups of students can identify and suggest words for the word wall prior to or during the course of reading or writing activities.

- Students individually may study the spelling of their new words using the "see, say, finger trace, cover, write, and check method."

- As part of the daily routine, student pairs can spend a few minutes reviewing each other's knowledge of new words.

Environmental Conditions

- Display wall

Instructional Monitoring: Student Self-Management

- Students can keep track daily of the number of new words learned.

Instructional Materials/Adaptive Equipment

- Paper strips
- Colored markers
- Student vocabulary logs organized alphabetically

Instructional Support

- To assist some students who may have difficulty seeing or copying words and their definitions from a distance, provide a teacher's handwritten or typed copy of these words, which students may use at their desks as they enter the words and definitions into their personal logs.

- To assist students with fine-motor difficulties, provide access to a PC and printer to maintain their vocabulary logs.

Motivation

- Student-identified words are ones students are eager to learn.

- Students can keep track daily of the number of new words they have learned.

- Post the names of students who have mastered a certain number of new words—Word Wall Champs!

Student Response

- Each student maintains his or her log.

- Use the word wall in class literacy activities.

- Include daily peer review and assessment (oral or written).

▾ ▾ ▾ ▾ ▾ ▾ ▾ ▾ ▾ ▾ ▾ ▾ ▾▾▾

WORD WALL: TRAVEL TO MARS

Word	Definition
Astronaut	A person who travels in space.
Atmosphere	layer(s) of gases surrounding a planet.
Barometer	An instrument to measure the pressure of the atmosphere.
Black hole	A star that emits no light.
Climate	The weather conditions (temperature, wind, rain) in a certain place.
Combustion Chamber	An area where the rocket burns fuel
Constellation	Grouping of stars in the night sky.
Diameter	Length of a line that passes through the middle of a sphere.
Drag	A force that slows down an object as it moves forward.
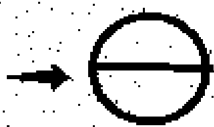
Student Vocabulary Logs

A page 2

Word	Definition	Memory Cue
1. Astronaut	space explorer	Astro = star Naut = navigate
2. Atmosphere	layers of "gases" surrounding a planet (Earth)	

D page 4

diameter	length of line that passes through the middle of a sphere	di = two

INSTRUCTIONAL ADAPTATIONS—LANGUAGE ARTS LITERACY FRAMEWORK

Core Curriculum Content Standard: 3.3   Indicator: 15   Middle-Level Activity

Instructional Presentation
Instructional Preparation: Mini-lesson—Business letter format
Instructional Prompt: Graphic organizer—Templates

A **mini-lesson** is a short, focused instructional activity to introduce, clarify, or review a concept, procedure, or strategy. Use of demonstrations, models, and illustrations reinforce key elements of the lesson. The short time span and focused nature helps to maintain student attention and understanding.

Templates are a form of graphic organizer that provides a visual illustration to guide the preparation of a document. Templates include the type of information needed and the physical arrangement of that information. The visual display of the complete layout serves as an supplement to text or verbal directions, which is helpful to students who have difficulty following linear directions.

Middle-Level Activity: Conducting research and writing persuasive letters to various audiences

- As part of their research activities, students will write letters requesting information from various sources.

- Before students begin writing, conduct a mini-lesson on business letter format using an overhead with teacher-developed templates to model writing the business letter and addressing the envelope. Label key parts of the business letter with colored highlighters.

- Demonstrate using the an almanac as a source for business addresses.

- Review positive and negative models of business letters requesting information on an overhead. Identify the strengths of the positive models and the missing elements and weakness of the negative models.

Instructional Groups

- As guided practice, brainstorm a list of possible topics based on students' selected research interests.

- Each student selects one topic and writes a business letter requesting information using the template.

- Pairs review and provide suggestions for revising and editing partner's work using the Writing Workshop process.

- Volunteers share their work for class review and comment.

Environmental Conditions

- Set up interest centers around the room with books, magazines, and newspapers to spur student interest and serve as resources for topic selection and research. Provide time for students to explore these materials.

- Students are seated together in pairs.

Instructional Monitoring: Student Self-Management

- Students can examine the information they receive in response to their written request. Questions to consider might include: Did they receive what they expected? Were they clear in their written request? Is follow-up necessary?

Instructional Materials/Adaptive Equipment

- Almanacs
- Local newspapers
- Popular magazines (e.g., *Time* and *Newsweek*)
- Access to Internet

Instructional Support

- Enclose a teacher's note with the students' letters, explaining the class activity and encouraging a response.

Motivation

- Letter writing is done for a real purpose.

- Students will receive responses to their letters.

- Encourage students to bring in resources from home to add to the classroom interest centers. Use these resources to identify and research topics of personal interest.

Student Response

- Students will mail the letters requesting information for their research.

TEMPLATE FOR BUSINESS LETTER - BLOCK FORMAT

Your street address
Your city, state ZIP
Today's date

4 spaces[

Addressee's Name/Company
Addressee's street address
Addressee's city, state ZIP

2 spaces[

Salutation:

2 spaces[

Body of letter (flush left) _____
_____
_____
_____

2 spaces[

_____
_____
_____

2 spaces[

Closing,

4 spaces[

Signature
Typed Name

TEMPLATE FOR ADDRESSING A BUSINESS ENVELOPE

Your name
Your street address
Your city, state ZIP

ADDRESSEE'S FULL NAME

ADDRESSEE'S STREET ADDRESS

ADDRESSEE'S CITY STATE ZIP

*Use the two-letter postal abbreviation – no periods.
(Examples: New Jersey = NJ; Pennsylvania = PA; Delaware = DE)

As of July, 1996 the US Postal Services has requested that all mail
be addressed using all caps and no punctuation except for the hyphen
in nine-digit ZIP codes.

INSTRUCTIONAL ADAPTATIONS—LANGUAGE ARTS LITERACY FRAMEWORK

Core Curriculum Content Standard: 3.2   Indicator: 6   Secondary-Level Activity

Instructional Presentation
Instructional Preparation: Mini-lessons—Strategies for notetaking
Instructional Prompt: Notetaking formats

Notetaking strategies and formats provide students with organizational structures and strategies to assist with listening and taking notes during lectures. Determining what information to attend to and how to write that information in key words and phrases within useful formats are sophisticated skills requiring substantial instruction, modeling, and guided practice.

Secondary-Level Activity: Listening to lectures and taking notes

- Instruct students on different techniques for taking notes: Cornell method, mapping, and outlining. Introduce each strategy or format in short sessions with familiar, high-interest topics (e.g., rock stars).

- Model notetaking on an overhead and discuss the rationale for decisions made. Emphasize: (1) cues to determine important information (e.g., restatements, ordering words, notes on the board); and (2) patterns to record (e.g., cause and effect, sequence).

- Ask students to identify the patterns and cues used in their different classes.

- Provide guided practice with peers and the opportunity for students to compare notes taken.

- Show models of notes already taken in several formats on overhead.

- Have students try to reconstruct the important points of the lecture as a group.

Instructional Groups
- Pair students to include one person with greater proficiency.

- Partners share and compare their guided-practice notes, with each student helping the other to determine strengths and at least one thing to target for improvement.

Environmental Conditions
- Place students who have difficulty attending in the center of the room to have a direct view of the board and teacher.

Instructional Monitoring: Student Self-Management
- Students can write journal entries responding to questions concerning: the strengths of their notetaking; areas they are trying to improve; and changes they have seen over time.

Instructional Materials/Adaptive Equipment
- Videos for guided practice (with teachers in the school)
- Laptops with notetaking templates for students with fine-motor difficulties
- Partially completed outlines for students who require assistance in noting key information

Instructional Support
- Share notetaking strategies targeted in instruction so other teachers can provide helpful visual and verbal cues during lectures to reinforce students' application of the new skills.

Motivation
- Introduce the activity by showing a video of a person giving a speech and instructing students to record every word the person says. Afterwards, discuss the difficulty of recording every word since a person usually says 285 words per minute. The need to find an alternative provides the incentive to learn.

- Use high-interest topics for mini-lessons on strategy.

- Provide rewards for students who can decipher notes and identify important points of the lecture.

Student Response
- Students who require more time to process information may tape lectures and take notes on them later. Provide these students with copies of the teacher's or another student's notes to read as they listen again to lectures at their own pace. The students can add their own summary comments.

Cornell Notetaking Method

LECTURE DATE

QUIZ COLUMN
Use this column to create questions to go with the lecture notes. Questions help students study.

THINK ABOUT

How much space do you need for the quiz column?

How can you keep up with the speaker?

Why should you read your notes aloud when you go home?

TITLE OF LECTURE

Notes are written in this space.

They have a lot of white space around them to separ. imp. points.

Notes are writ. w/symbols & abbrev. & sometimes w/o vowels like this so that a prson trying to kp up will be abl to.

Lots of people use numbers to keep points organized

1.   math symbols such as + and = help 2
2.   ➡ s help people to see relationships

Reread aloud all that you take down in note form — helps memorize.

Page #

Map for "Where is Water"
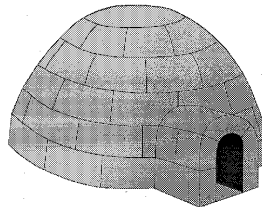
Forms
of
Water
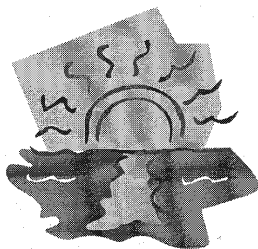
Liquid
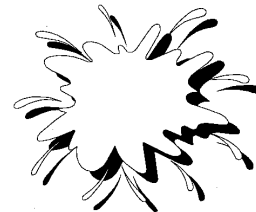
Solid

Vapor

What are some examples of liquid forms of water?

What are some examples of solid forms of water?

Where can you see vapor?

Rivers
Oceans
Lakes
Rain
Puddles

Ice
Hail
Glaciers
Icebergs
Snow

Clouds
Breath
Fog

Summary: There are three major forms of water.

INSTRUCTIONAL ADAPTATIONS—LANGUAGE ARTS LITERACY FRAMEWORK

Core Curriculum Content Standard: 3.2   Indicator: 3   Elementary-Level Activity

Instructional Presentation
Instructional Prompt: Multisensory cues
Instructional Application: Games

Multisensory cues provide varied sensory cues to heighten awareness of and association with new information. Multiple cues requiring students to touch, hear, see, say, and/or move provide multiple learning modalities that appeal to diverse learning styles.

Games are fun methods of reinforcing learning by providing an opportunity for repeated practice of new information or procedures. Games, which can be organized as whole-class or small-group activities using a variety of formats, are highly motivating to students and provide additional learning experiences, especially when the activities are structured to provide high levels of responding by all students.

Elementary-Level Activity: Listening for "s" and "sl" sounds in a poem

- Provide each student with a hand mirror.

- Activate prior knowledge of the sound by displaying a large card with the letter /s/ and asking students to make the sound in unison as they look, first at the teacher and then at the mirror.

- Discuss the way the mouth looks and feels, and prompt students to attend to the position of the lips, teeth, and tongue as they make the /s/ sound.

- Ask the class to think of as many words as they can beginning with the sound the letter /s/ makes. Write these words on the board and highlight the letter /s/ in a different color.

- Introduce a large card with the letter /l/ and review the sound and sensory cues with the mirror.

- Slide the /l/ card next to the /s/ and blend the sounds using the mirror and multiple sensory cues.

- Generate a new list of words beginning with the /sl/ sound and highlight these letters in a different color.

- Play a visual or auditory yes/no game to be sure students are discriminating the initial sounds (see attachment).

Instructional Groups

- Work in large groups for the initial review of sounds.

- As a follow up to reading the poem, peer partners might work together to write an additional line and illustrate the poem using /s/ and /sl/ words.

Environmental Conditions

- Seat students in a semicircle close to the teacher.

Instructional Materials/Adaptive Equipment

- Hand mirror for each student
- Large letter cards /s/ and /sl/
- Yes/No and picture signs for the game

Instructional Support

- Observe closely students who have difficulty discriminating sounds to ensure students are participating and attending to multisensory cues.

- Review cues during the game to reinforce discriminations as needed.

Motivation

- Students enjoy the movement and a high rate of responding in the game.

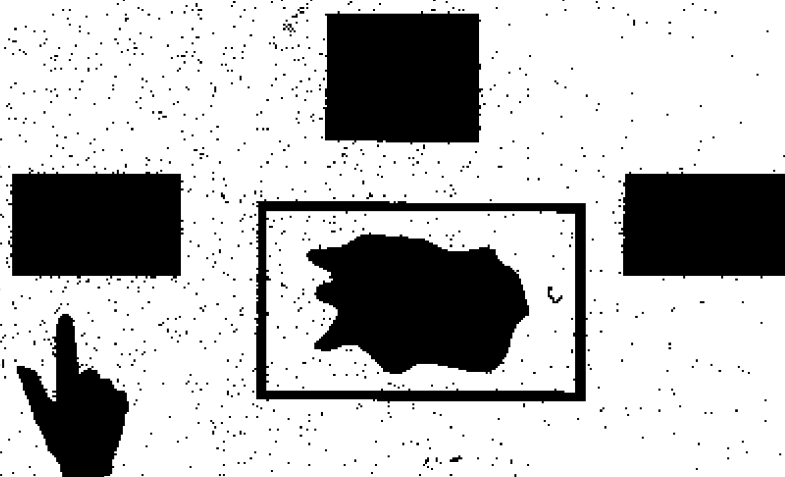- Provide chicken soup to "sip" and "slurp".

Student Response

- Choral responding during whole-class activity

▾▾▾▾▾▾▾▾▾▾▾▾▾▾▾

Yes/No Game

1. Post two signs some distance apart at the front of the room. One sign with the word YES and the other with the word NO.
2. Post the key sound card (/S/) between these two words.

VISUAL FORMAT

1. Select pictures of familiar objects and actions that include the /s/ and /sl/ sounds.
2. Begin by using only the /s/ sound and pictures that have very different beginning sounds (e.g., /m/, /s/, /p/, /h/) made by different parts of the mouth.
3. Tell students what they will be listening for - the /s/ sound- as they look and say aloud the name of each picture.
4. Model the display of each card and students' expected response.
5. Exaggerate the beginning sound of each picture as you say the name and display it for the students.
6. The students repeat the picture name and then point to the YES or NO card.
7. After each /s/ picture is identified, have the students repeat the word aloud and the beginning sound. (Snake begins with the /s/ sound, /s/nake.

AUDITORY FORMAT

The teacher uses the same procedure but presents the words orally without picture cues.

INSTRUCTIONAL ADAPTATIONS—LANGUAGE ARTS LITERACY FRAMEWORK

Core Curriculum Content Standard: 3.4   Indicator: 29   Secondary-Level Activity

Instructional Presentation
Instructional Preparation: Advanced organizers
Instructional Prompt: Highlighting and notation

Advanced organizers structure student attention and thinking before an activity begins by making explicit key information students are to learn. Advanced organizers, which may be presented in such forms as charts, pictures, verbal directions, or questions, provide a focus for learning, particularly for those students who have difficulty independently determining what is important to know.

Highlighting and **notating text** not only increases attention to key words or sentences (which aids memory) but also facilitates locating information again. Highlighting can be done by marking text with colored pens, underlining, or bracketing. Writing key words or symbols in the margins aids comprehension and recall.

Secondary-Level Activity: Review of an author's work

- After reviewing the definition and popular examples of literary criticism, brainstorm and list <u>key elements</u> of a literary review.

- Categorize these ideas and display a group chart of key elements as an advanced organizer. Tell students they will be looking for these elements as you read a review aloud.

- Using the overhead, read aloud a review of an author whose work the class has read. On the second reading, model "thinking aloud" by pausing after each paragraph to identify any elements listed on the chart. Underline and note in the margin the element(s) found.

- Provide guided practice to complete the review by having students identify key elements.

- Demonstrate how to use a notetaking guide to record comments under each category.

- Demonstrate how to use the notetaking guide to summarize the reviewer's comments and respond to the question of change (see attached illustration).

Instructional Groups
- Pair students with complementary abilities for guided-practice activities.

Environmental Conditions
- Post a chart with elements of literary criticism on the wall and refer to it as you demonstrate how to identify and note each element.

Instructional Monitoring: Student Self-Management
- Use the notetaking and summary sheet to structure group work.

Instructional Materials/Adaptive Equipment
- Chart with elements of literary criticism
- Student notetaking guide
- Summary response form

Instructional Support
- Model and demonstrate "thinking aloud."

- Monitor by circulating and reviewing pairs' work.

- Peers help each other identify and explain the selection, recording, and summary of each element.

Motivation
- Use authors that students have enjoyed and studied to provide a meaningful context.

- This activity might be a culminating activity at the end of a unit on a particular author.

Student Response
- For individual accountability, each student is responsible for completing the notetaking and summary response sheets.

▼▼▼▼▼▼▼▼▼▼▼▼▼▼

Literary Criticism

- Characters & Setting

- Plot

- Language

- Theme

- Other Works

- Author's Life

- History & Society

Notetaking Guide: for Literary Criticism

Page # Para #	Key Elements

	Plot:
	Characters:
	Language & Style:
	Themes:
	Other Works:
	Author's Life:
	History & Society:

Literary Review Summary

Name of Author: _____

Source of Literary Criticism: _____

Question
How did the reviewer describe the plot?

How would that description change today?

Question
How did the reviewer compare this work with others that the author has written?

How would that comparison change today?

Question
How did the reviewer think that the author's life had influenced his work?

How would the reviewer's opinion change today?

Question
How does the reviewer relate what happens in the literary work to what was happening in the world at that time?

How would the literary work relate what is happening today?

Question
What does the reviewer consider to be the major themes of this work?

How would that change today?

INSTRUCTIONAL ADAPTATIONS—LANGUAGE ARTS LITERACY FRAMEWORK

Core Curriculum Content Standard: 3.5   Indicator: 10   Middle-Level Activity

Instructional Presentation
Instructional Prompt: Graphic organizer—PMI chart

Graphic organizers are a visual means of structuring information to aid attention, comprehension, and recall of important information. Graphic organizers can structure information categorically through maps or charts or illustrate patterns such as sequence of events, cause and effects, or problems and related solutions. Organizing information spatially, assigning labels to categories, and synthesizing supporting information in a few words reduces reading, writing, and memory demands.

The **PMI chart** is one type of graphic organizer containing prompts to record observations about the strengths and weaknesses of a situation, event, or in this case, a celebrity. "P" stands for pluses about the character, "M" stands for minuses, and "I" indicates a summary of interesting observations.

Middle-Level Activity: Viewing celebrities on TV and recording observations

- Define the terms *celebrity* and *fame*.

- Preselect for class discussion characters that demonstrate both positive and negative characteristics, for example, Michael Jordan/Dennis Rodman; Sinbad/Eddie Murphy; Spice Girls/Li'l Kim; Garfield/Beavis and Butthead

- Create and display a class checklist of characteristics that contribute to celebrity.

- Discuss how appearance and actions, which are observable, can serve as evidence to support students' opinions of a celebrity's positive or negative characteristics.

- Discuss and demonstrate the power of body language.

- Demonstrate on an overhead how to complete a PMI chart to record student observations about the celebrities identified above.

- Provide guided practice for watching short video segments of TV talk shows, and recording and justifying observations and opinions about them.

Instructional Materials/Adaptive Equipment
- PMI chart
- Preselected video clips

Instructional Support
- Model creating a PMI chart.

- Emphasize recording observable behavior as evidence to support students' opinions.
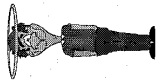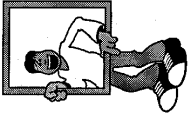
Motivation
- Select celebrities relevant to students' ages.

- Have students create a parallel positive and negative chart based on celebrities they choose.

Student Response
- In class discussion or in journal response, students consider the following: Does celebrity justify inappropriate behavior? Is money the common denominator defining success?

▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼

PMI CHART

Pluses about this character: Positive characteristics of this celebrity	**Minuses** about this character: Negative characteristics of this celebrity	**Interesting** things about this character: Unusual or interesting things about this celebrity
Celebrity 1		
Celebrity 2		
Celebrity 3		
Celebrity 4		

INSTRUCTIONAL ADAPTATIONS—LANGUAGE ARTS LITERACY FRAMEWORK

Core Curriculum Content Standard: 3.3   Indicator: 9   Elementary-Level Activity

Instructional Presentation
Instructional Application: Manipulatives
Instructional Prompt: Graphic organizer—Color poetry guide

Manipulatives are concrete objects that students can see, touch, and move. Having students perform activities with manipulatives makes learning fun and develops understanding of abstract ideas or concepts.

An **information organizer** is a type of graphic organizer used to record students' ideas or information obtained from discussion or readings. Headings provide prompts to focus students' thinking and direct their activity.

Elementary-Level Activity: Similes

- Use a grab bag filled with everyday objects to generate simile sentences. Ask students to take turns feeling an object and describing how it <u>feels</u>. Record students' descriptions on the board.

- When the mystery object is revealed, ask students to use the descriptive words to make a sentence comparing the mystery object to something else: "Cotton is soft and fluffy like a cloud".

- Introduce the concept of simile to refer to the "colorful" descriptions students just made using key words "like" and "as".

- Read aloud *Hailstones and Halibut Bones* by Mary O'Neil, as students read along, and then discuss with students how colors are compared to objects. Stop at each simile, and add it to the simile chart.

- Display a rainbow of different colors, and ask students to choose their favorites.

- Demonstrate on an overhead how students can create color similes using the Color Poetry Guide.

- Work in cooperative groups to record ideas for creating color similes.

Instructional Groups

- Students work in cooperative groups to generate ideas for color similes.

- Role assignments include: recorder, reader, and timekeeper.

Environmental Conditions

- Create classroom wall displays using examples of similes from book and poetry selections.

- As students complete their similes and illustrations, create a special display for student authors.

Instructional Materials/Adaptive Equipment

- Students read silently in a copy of the teacher's book.

- An audiotape of *Hailstones and Halibut Bones* is available for students to listen to as they reread the book.

Instructional Support

- Circulate as students work in groups to ensure that students understand the concept of similes and are completing their tasks.

Motivation

- The grab-bag mystery game creates suspense and excitement.

- Choosing their own color prompts students' personal associations.

Student Response

- Students create individual simile books with illustrations as an ongoing project throughout the year.

- Students can create "sunbursts" using paper plates painted in their favorite color with their color simile displayed in the center.

▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼

Color Poetry

My color is _____

What things <u>look</u> like your color?	What things <u>sound</u> like your color?
What things <u>smell</u> like your color?	What things <u>taste</u> like your color?
How does your color <u>feel</u>?	Can you think of any <u>places</u> your color reminds you of?
How does your color <u>make you feel</u>?	Color similes

Color similes:

_____ is like _____
(color)

_____ is like _____
(color)

_____ is like _____
(color)

_____ is like _____
(color)

INSTRUCTIONAL ADAPTATIONS—LANGUAGE ARTS LITERACY FRAMEWORK

Core Curriculum Content Standard: 3.3   Indicator: 8   Middle-Level Activity

Instructional Presentation
Instructional Application: Role-playing

Role-playing is a creative way for students to develop and express their understanding and inter-pretation of information. Students who have difficulty with traditional learning and response modes of reading or writing may experience success by acting out their ideas. Creating and portraying dia-logue and actions to illustrate different ideas promotes development of higher-order thinking.

Middle-Level Activity: Writing summaries of common themes

- Define and review themes of works students have read.

- Display the themes and related works on a chart for reference.

- To help students integrate their understanding of these themes, arrange students in coop-erative role-playing groups and give each group a brief written description of a different scenario and theme to portray. Scenarios are based on familiar life experiences.

- Students are instructed to prepare their own actions and dialogue using exaggeration to help their classmates identify the theme.

- On the day of the performance, students are given an answer sheet to identify and explain the theme of each scenario. They are also asked to identify a work they have studied with a similar theme.

- Teams receive bonus points if the majority of their classmates are able to correctly iden-tify their theme.

Instructional Groups

- Select groups to include both extroverted and introverted members.

- Instruct groups to emphasize clues to their themes though they cannot mention the theme directly in their role-play.

- Encourage students to use props to enhance their performances.

- Provide time for teams to develop their skits.

Environmental Conditions

- Cleared area for performance and audience viewing

Instructional Monitoring: Student Self-Management

- At the end of the activity, students complete an evaluation, rating their contribution to the success of the group as well as their group's ability to complete the task. The self-evaluation will include the following: (1) what they did well and (2) what they could improve next time.

- Evaluations will be shared with group members.

- Grading will be based on the individual's self reflection and effort to help the group complete its task.

Instructional Materials/Adaptive Equipment

- Scenarios that appeal to student interests

Instructional Support

- Monitor the development of portrayals to ensure that students are clear in understanding and illustrating their theme.

- Monitor that all students are participating actively in the creation and portrayal.

Motivation

- Role-playing provides students with freedom of expression.

- Videotaping facilitates follow-up class discussion and review.

Student Response

- Students' understanding of themes will be expressed through their own group's portrayal of a theme as well as their observation of the themes introduced through their classmates' role-plays.

- Written responses will summarize students' understanding of themes by relating the themes to real-life experiences as well as works they have read.

Name:_____   Date:_____

GREAT THEMES

Human Spirit	**Change**	**Rebellion**	**Heroism**
Crime & Punishment	**Love**	**Disillusionment**	**Greed**

Directions: For each role play,
1. List the **theme**
2. List the **title of a book** we have read that has the **same theme**.
3. Explain **why the theme** is the **same**.

Role Play

1. Theme	Book Title	Explanation

2. Theme	Book Title	Explanation

3. Theme	Book Title	Explanation

4. Theme	Book Title	Explanation

INSTRUCTIONAL ADAPTATIONS—LANGUAGE ARTS LITERACY FRAMEWORK

Core Curriculum Content Standard: All   Indicator: Middle-Level Vignette

Instructional Presentation
Instructional Prompt: Planning guide

Planning guides, which help students organize their thinking before they begin a task, are particularly useful for those students who have a tendency to begin work without carefully considering what they must do or how they must do it. Planning guides contain key elements and/or steps to complete the activity appropriately. Students should be taught how to use their guides as they are working to help them follow their plans.

Middle-Level Vignette: Comic Strip Creation

- After reviewing the parts of a comic strip, display a sample comic strip on the overhead with the final scene omitted.

- Form cooperative groups to create a final scene and to explain the conclusion.

- Demonstrate on the overhead how to use the planning guide to create a comic strip.

- Working in pairs, students complete their planning guides to sequence events prior to drawing.

- Circulate as students are working on their guides to monitor clarity and logic of their work.

- Display completed work in a gallery tour and ask students to discuss their planning process as well as their product.

Instructional Groups
- Form pairs to complete the planning guide and develop the comic strip.

- Distribute students with artistic as well as verbal abilities.

- Identify roles for each activity. The planning guide might have a recorder and reporter. The comic strip might have an artist as well as a dialogue recorder.

Instructional Monitoring: Student Self-Management
- Students use the planning guide prior to drawing their comic strip and refer to the guide as they draw their scenes.

Instructional Materials/Adaptive Equipment
- Overhead and handout of an incomplete comic strip
- Comic strip planning guide
- Outline of four panels to draw the comic strip

Instructional Support
- Teacher demonstrates how to use the planning guide.

- Partners help each other to plan and develop the comic strip.

- Additional guided practice may be needed before students are asked to create a comic strip on their own.

Motivation
- Comic strips are intrinsically interesting to most students.

- Displaying their work in a gallery tour provides an opportunity for students to show off what they have done to their peers.

Student Response
- After students complete the planning guide and comic strip, both students sign their products. The partners then present their work, describing their process and explaining their comic strip.

- As a follow-up, each student develops a comic strip independently.

▾▾▾▾▾▾▾▾▾▾▾▾▾▾▾

Comic Strip Planning Guide

Characters: Who are they?   What do they look like?

_____   _____

_____   _____

_____   _____

Setting: What is the setting for the action? _____

Conflict: What is the conflict? _____

Resolution: How is the conflict resolved? _____

Scene 1	Scene 2	Scene 3	Scene 4
Introduce the characters and setting.	Set up the conflict in two steps.		Show the resolution.

Frame the Action

Plan the action and dialogue to support each scene.

1. <u>Introduction</u> Setting: Action: Dialogue:	2. <u>Conflict</u> Setting: Action: Dialogue:
3. <u>Conflict</u> Setting: Action: Dialogue:	4. <u>Resolution</u> Setting: Action: Dialogue:

Now have fun and draw your comic strip.

ADAPTATIONS FOR STUDENTS WITH LIMITED ENGLISH PROFICIENCY

New learners of English are often overwhelmed by the language and culture of a new school setting. Most students entering New Jersey schools from other countries have acquired the ability to think, speak, and reason in their home languages. However, they come with various levels of schooling and life experiences. These factors, along with differences in learning styles and physical, social, and intellectual abilities, affect the students' progress in learning and must be considered in the design and delivery of their instructional programs. This chapter of the framework provides teachers of students with limited English proficiency (LEP) with examples and illustrations of specific adaptations for teaching in the content areas.

Who are limited English proficient (LEP) students?

- Students moving to the United States from other countries whose native language is not English.
- Students coming from homes where the first language is not English.
- Students having difficulty speaking, reading, writing, and understanding the English language.

Providing students who are linguistically and culturally diverse with an appropriate education is a national concern. The growing numbers of learners who are considered to be linguistically diverse represent a 38% increase over the past 10 years (*Census Reports*, 1993). A comparison of the Bilingual/ESL program enrollment in New Jersey between September 1987 and October 1997 shows that the number of limited English proficient students increased 41 percent during the ten-year period. New Jersey now ranks seventh in the nation in the number of LEP students. This diversity is further distinguished in the range of circumstances that inform students' identification as second language learners. With such vast differences in the demographic backgrounds of the students, teachers must have access to and use a variety of strategies and materials to address the individual needs of the learners.

Identifying the primary language and assessing the relative English and native language proficiency of students is a critical first step in providing LEP students with an effective language support program. These students vary greatly in their readiness for school, and this initial process of identification and assessment will enable educators to adapt the learning experience to the appropriate skill level of their students. When such practices are not followed, instruction is not as effective, and students struggle in misguided programs with little benefit. For students to prosper in their educational program, teachers need to know who their LEP students are and what these learners know and can do.

The Purpose of Adaptations for Students with Limited English Proficiency

Research supports the notion that children from different cultures or different economic levels differ meaningfully in how they learn. When the native language of the learner is different from the dominant language of the classroom, these differences become all the more pronounced. Regular classroom teachers need to be familiar with and have access to the literature that describes the educational needs of these students. In addition, all teachers, including mainstream educators and bilingual/ESL teachers, must work collaboratively in the sharing of ideas, strategies, and resources for making appropriate adaptations.

The purpose of adapting content lessons for limited English proficient students is to lower the language barrier and make the English used in such lessons as comprehensible as possible. Two factors affect the comprehensibility of language:

- the degree to which the language used is contextualized through visible situations, and
- the student's level of experience and familiarity with the content of the spoken or written text.

Thus, to be successfully communicative, the lessons must be designed to build upon the students' background knowledge and to rely on nonlinguistic cues so that LEP students can comprehend the material and the teacher's messages.

Students' initial progress will also depend on the level of literacy each attained in his or her first language. If a student is a good reader in L_1 (the first language), he or she will be a good reader in L_2 (the second language). Conversely, if a student is a poor reader in L_1, then the same will hold true for L_2. A major goal in bilingual education, therefore, is to ensure that while a student is learning a new language, cognitive development and literacy continue to develop without interruption.

Instructional Strategies for Students with Limited English Proficiency

Adaptation strategies will vary depending on the language proficiency level of the LEP student. Initially, these learners understand little in English and will respond by guessing from context what is expected or by imitating other students. At this stage, the teacher should provide many visual cues, such as pictures, videos, filmstrips, picture books, and demonstration lessons, to aid understanding.

With increasing exposure to English, the LEP student will begin to understand simple language but may not be ready to produce language. During this "silent period," rather than force speaking, the teacher should focus on making speech comprehensible to the student by using simple language and visual aids. For example, the teacher says, "Open your book," as the student listens and observes the teacher opening a textbook. This concurrent demonstration of behavior and modeling of spoken language enables the student to develop constructs—that is, to think—in English.

As the student begins to produce language, s/he will imitate words and phrases used by the teacher and other students but will make many errors. The teacher should support the student's efforts by responding positively to build self-confidence and correcting errors sensitively and judiciously. At this stage, the teacher continues to engage the learner in many classroom activities and asks him or her to respond to questions nonverbally or with simple one-word or short-phrase utterances. Evaluation of student's progress should focus on measuring understanding rather than production.

As the student begins to use speech creatively (spontaneously using previously learned language in a new way), s/he may continue to make many grammatical mistakes and have trouble understanding and producing the complex structures of academic language, even though s/he may appear or sound fluent in a social setting. The continuing aim should be to lower the language barrier by making classroom communication simple and clear. Information should be presented visually by means of graphic organizers, such as semantic webs, charts, and graphs as well as pictures. All students, particularly second language learners, should be encouraged to work in small-group activities, which provide ongoing opportunities to build language proficiency, self-confidence, and respect for the ideas of others. Keep in mind that being limited in English is a temporary situation and that students are capable of attaining full fluency in the language. A student's capacity to become fluent in English will be greatly enhanced by activities in oral and written language that connect to one's own life in meaningful and engaging ways.

Following is a list of strategies to make classroom communication comprehensible to the LEP student. Many of these strategies are exemplified in the sample adaptations included at the end of this chapter.

Good Teaching Practices

- Learn the backgrounds of LEP students and, working with the ESL/bilingual teacher, plan a lesson that is both culturally and linguistically appropriate.

- Group students flexibly, in small groups based on individual or group interests as well as instructional need or ability. These groups should be fluid and change, depending on the lesson objectives.

- Give clear, simple directions to LEP students. Ask them to retell, in their own words, what you are asking them to do before they attempt a task.

- Model a "lead and support" strategy where the content teacher leads the lesson as the ESL/bilingual educator provides background information and examples that support the lesson.

- Model a "shadow" strategy where the ESL/bilingual educator reiterates in the student's native language or in simplified English the key concepts learned in content areas.

- Paraphrase information and main ideas.

- Reorganize and reinforce information.

- Provide bilingual classroom resources, such as bilingual dictionaries, picture books and dictionaries, and English language encyclopedias for LEP students.

Preparing the Students for the Lesson

LEP students need to develop a clear understanding of the teacher's lesson objectives (e.g., Students will be able to understand the stages of the water cycle, the causes of the Civil War, or how to write a descriptive paragraph). They also need instruction that presents the main concepts of the lesson in a clear, concrete, and comprehensible manner and that excludes all nonessential or ancillary information. Help students conceptualize classroom lessons by translating ideas into concrete form through hands-on activities (e.g., conducting science experiments, recording notes in a learning log, or conducting an interview).

Because LEP students have such varied educational and life experiences, they may need more comprehensive background information than other students. Teachers should not take for granted that these learners will understand or have experience with some of the concepts being taught. The content area teachers should work with bilingual/ESL educators to identify specific problems confronting these students. Instructional preparation should also focus on:

Building background information. This can be done through brainstorming; semantic webbing; use of maps, photos, and illustrations; and use of the KWL strategy.

Simplifying language for presentation. Teachers can use "sheltered English," in which they make content-specific language more comprehensible for LEP students by using short, simple syntactic structures; introducing one concept per sentence; limiting structures to one tense; using the active

voice; substituting common words for unfamiliar vocabulary; and eliminating any unnecessary language or ideas.

Developing content area vocabulary. Vocabulary specific to the content area may be developed through various activities, including the following:

- starting a picture dictionary or word bank;

- teaching the vocabulary appropriate to a given subject before introducing the content;

- reviewing and reinforcing the vocabulary during the content activities;

- labeling objects in the classroom;

- taping vocabulary words in context so that students learn to recognize the words;

- using realia (actual objects, such as a variety of foods or textures) as tools for teaching so that vocabulary becomes real and tangible; and

- encouraging students to use a dictionary to learn or confirm word meanings.

Giving Directions

Routines help create a secure learning environment in which LEP students are able to anticipate what will happen without having to rely solely on language cues. Expectations and routines such as arriving on time or checking homework should be communicated clearly and positively early in the school year so students have these structures to guide them. Working with buddies and peer tutors will also help second language learners acclimate to the school and classroom settings and routines.

Directions should be stated clearly and distinctly and delivered in both written and oral forms to ensure that LEP students understand the task. Students with limited English proficiency are further supported when they have access to a list of commonly used "directional" words such as *circle*, *write*, *draw*, *cut*, *read*, *fix*, *copy*, *underline*, *match*, *add*, and *subtract*. Students can work with a buddy or on their own to find these action words in a picture dictionary and to create their own illustrated file of direction words for future use.

Presenting the Lesson

Because LEP students present such different learning styles and individual needs, teachers should incorporate a variety of strategies in daily classroom activities to ensure that instruction communicates meaningfully to each student. By using multiple strategies and varied instructional tools, teachers increase the opportunities for students to develop meaningful connections between the content and the language used in instruction.

Teaching Strategies

· Simplify vocabulary and sentence structure so that language is uncomplicated and manageable. For example, substitute *begins* for *originates* or *People think* rather than *It is believed* for those students less able to grasp the language structure.

· Build connections and associations that link new knowledge to what students already know about a subject.

· Provide concrete examples through hands-on activities and techniques that make abstract concepts more comprehensible and enable students to construct meaning:

· Promote understanding using demonstrations and think-alouds that model thinking processes and behavior.

· Present materials in a variety of ways: orally, visually, graphically, and auditorially .

graphic organizers	games and puzzles	student-made flash cards
charts and graphs	simulations	student-made books
surveys and interviews	drawing and illustrations	language experience stories
response journals	tape recordings	role-playing and drama
labeling	word banks	posters

· Elaborate on figurative language and idiomatic expressions, which are not universal figures of speech, through paraphrasing, use of concrete examples, and development of meaningful connections to the context and graphic representations.

· Emphasize key words and phrases using intonation and repetition.

· Summarize key points on the board or an overhead transparency as you speak and model the lesson.

· Include the English language learner in all classroom activities. The more the student feels a part of the class, the higher his or her motivation to learn English.

Organizing the Classroom for Learning

Various classroom organizational patterns and tools can be used to help the LEP student grasp the content. Members of learning groups and pairs should be rotated in order to provide the student with varying language and learning style experiences within the classroom. Consider pairing second language learners with same-language peers. Other grouping strategies include the following:

- flexible grouping (mixed-ability groups based on students' interests/experiences; similar-ability groups based on students' needs/abilities; cooperative groups; or whole-class activities);

- paired learning (peer buddies, pairing more proficient second language learners with less proficient learners; or buddies, pairing same-grade native speakers with second language learners); and

- cross-age tutoring.

In addition, teachers can draw on a number of instructional supports and resources to assist LEP students. Of particular value to these students is ongoing access to visual and auditory support.

Instructional Supports

- Use of bilingual dictionaries in the classroom.
- Use of parent volunteers to tape, transcribe, or prepare a written explanation of difficult concepts in the native language.
- Collaboration between bilingual/ESL and mainstream classroom educators.
- Provision of content area lessons/topics on cassette tape or in written form for learners to take home to study as supplements to class discussion.
- Access to native language content texts, available through the library system, in nearby schools, or from parent or senior-citizen volunteers.

Additional Resources

- Close-captioned video or TV
- Specially taped materials for bilingual/ESL classrooms
- Franklin speaking dictionaries
- Electronic translators
- Computer programs
- Teacher-made adaptations, outlines, and study guides
- High interest/low-reading-level content materials
- Books with audio tapes
- Music plus tape recorder (slows down speech on tape)
- Native language reference materials

Checking for Student Understanding

Teachers need to use a variety of strategies for monitoring student progress and to adjust their strategies and expectations to fit the level of language proficiency of the English language learner. With beginning language learners, emphasis should be on comprehension of named things and actions; more advanced students should begin demonstrating understanding of connections between things and subsequently their ability to articulate the relationship between ideas. Content area teachers should work closely with the bilingual/ESL teacher to identify instructional and assessment strategies that are appropriate to all aspects of the student's development and that permit teachers to expand expectations gradually over the school year.

Successful strategies for monitoring student progress in the content areas include:

- Providing periodic checks for understanding;
- Promoting nonverbal as well as verbal participation;
- Encouraging students to think aloud to practice concepts;
- Modeling responses that provide appropriate information using correct grammar;
- Breaking tasks down into sequentially developed parts using simple language;
- Structuring questions to student's language level (e.g., begin with yes/no and embedded questions and advance to open-ended questions).
- Avoiding use of questioning techniques that contain negative structures, such as *all but*, *everything is _____ except*, or *one is NOT the reason/cause.*
- Rephrasing questions and information when students do not understand the first time.

- Observing student's behaviors for evidence that they understand assignments, directions, and instructions.
- Reviewing student's work for evidence that they understand assignments, directions, and instructions.
- Using visual reviews (e.g., lists and charts) that enable students to show what they know and can do.
- Providing increased "wait time" to allow students time to process questions before responding.
- Providing modified "double" grading to assess the content as well as the structure of responses.

Four over-arching strategies are most effective for helping students from a background of limited English proficiency (LEP) to succeed in content area classes. These strategies include the following:

- integrating activities into thematic units;
- tapping students' prior knowledge and experience;
- teaching learning strategies and scaffold complex tasks; and
- grouping students into a variety of learning groups.

Each of these strategies will be expanded below with specific practices to assist English language learners. Following this, content-specific strategies and sample lesson plans are offered at various grade-level clusters based on the major strategies below. In all cases, the lessons were designed for use with a content area class consisting of five LEP students, 15 or more native English speakers, and a content area teacher. The LEP students participate most fully if they have attained at least an intermediate language proficiency level. For students below that level, the ESL teacher should take the lead in presenting content information.

Strategies for Instruction

1. **Integrate activities into thematic units.** One of the ways students learn best is through repetition: of ideas, of words, of actions. When concepts to be developed are being reinforced across several content areas, students benefit from seeing and hearing the same information or vocabulary over and over. English language learners will have more opportunity to use key words and practice desired skills when they work with the same concepts in several classes. Developing and teaching thematic units across content areas takes joint planning by a number of teachers. Certainly, the ESL teacher needs to be involved in the planning. In many cases, the ESL class can reinforce the language skills needed by the students to successfully complete the content area activities. Often, the ESL teacher can suggest ways to assess the student's understanding without depending heavily on language-based tests. In the case of thematic approaches to learning, it is certainly true that "many hands lighten the load."

2. **Tap student's prior knowledge and experience, which different from that of other students in the class.** In the case of immigrant students as well as others who are acquiring English, prior knowledge cannot be taken for granted. Before introducing a new unit or concept, it is wise to find out what information students already have about it. However, students who have not lived in New Jersey all their lives may have a very different background understanding than those born here. The entire class can be multiculturally enriched, but the need to tap into a variety of students' perceptions and experiences still exists. For example, a New Jersey student's understanding of elephant, ostrich, and llama may simply reflect animals found in a zoo. On the other hand, students from Thailand, Australia, and Peru may think of them as farm animals.

With regard to concepts that are typically American (historical figures, artists, fast foods), teachers are advised to expect little or no background knowledge and to build in first-hand experiences. References to television programs, holiday practices, or geographic areas may mean nothing to LEP students. They will not have mental maps of the United States to draw from when Seattle or Miami are mentioned. They will not be likely to defend the Redskins against the Cowboys, or recognize fireworks as symbolic of July. They will, most likely, know distances to other cities, follow other sports teams, or celebrate different holidays. Teachers need to make every effort to explain concepts related to the lesson; a peer tutor can be enlisted in explaining concepts to LEP students.

3. **Teach learning strategies and scaffold complex tasks.** Much has been written recently about students' needs to develop strategies for learning. Some learners have developed a few strategies to help make sense of their learning. Now, teachers at all levels are encouraged to model and demonstrate thinking and learning strategies. Graphic organizers are invaluable tools to create visual relationships between concepts. All students benefit when information is organized graphically for them. Overtly teaching students to reflect on how they are doing, what they are understanding, and what else they need to know will help them to be successful. Appealing to multiple intelligences within the context of a single unit of study enables students to develop or enhance a variety of skill areas. English language learners may have developed strategies different from those of other students. They can be encouraged to share their own learning approaches with the whole class since it builds self-esteem.

English language learners need to be challenged by complex concepts, but they will be better able to grasp complexities if tasks or information is scaffolded by what has gone before. As with the effectiveness of thematic units, scaffolding learning by building in foundation skills will aid LEP students' understanding.

4. **Group students into a variety of learning groups.** English is learned most efficiently when it is used to conduct meaningful, natural communication. To encourage English learning, students need many opportunities to talk, use new vocabulary, and to share ideas with their peers. These opportunities are most available to them when they learn in cooperative learning groups, pairs, or other small-group settings. In classes with native speakers of English, LEP students will hear the content area language modeled by their peers, and have more chance to use it when they participate in group work. Students who have not yet attained intermediate proficiency can shadow the work of a native-English-speaking peer in paired work. Students with greater ability can contribute their ideas in groups of four or five while someone else restates the comments in standard oral or written form. Groups can be formed and disbanded into a variety of sizes depending on the nature of the task. LEP students can be grouped together to develop some background cultural knowledge; then a single language learner can be matched with three native speakers to complete a graphic organizer. However, in all cases, limited English learners benefit from working with peers and from having more chances to use the language.

Content-specific strategies for Language Arts Literacy

1. **Cultural concepts**: Story grammar is culture-specific. Not only will vocabulary and details be challenging to limited English proficient students, but the sequence, actions of heroes and villains, and values portrayed are also likely to be unfamiliar. Teachers need to overtly discuss the discourse style of English literature and, where possible, compare that style with the discourse styles of other language groups.

2. **Vocabulary**: Literature is an exceptional source of vocabulary enrichment for all students.

Some of the new words can be simply defined with a synonym or picture; others are part of an assumed background knowledge and will require extensive "filling in" of gaps. Teachers can teach students how to maintain their own literacy dictionaries and to infer meaning from context.

3. **Language functions and structures**: Besides filling in background knowledge needed to understand a story's context, the ESL student needs to be offered a variety of ways to enjoy literature. Some students may listen to a story or listen and read along. They may orally retell the story to indicate comprehension. Others may read and respond cooperatively by writing a group summary. Some may benefit from a modified version of the text; however, these versions often lose the depth and enrichment that is characteristic of good literature. When a video or movie of the story exists, LEP students benefit from viewing the story before reading or viewing a segment at a time followed by a short reading assignment.

4. **Writing process**: LEP students will need to be taught the writing process. These students also benefit from being shown how to organize and sequence their ideas before writing. A writer's planning sheet, or other graphic organizer, can be a very useful strategy for prewriting activities.

References

Census reports sharp increase in number of non-English language speaking Americans. (1993, May). *NABE NEWS,* p.1.

Chamot, Anna Uhl ,& O'Malley, J. Michael. (1994). *The CALLA handbook: Implementing the cognitive academic language learning approach.* Reading, MA: Addison-Wesley.

Collier, Virginia P. (1995). *Promoting academic success for ESL students: Understanding second language acquisition for school.* Elizabeth, NJ: NJTESOL–BE **address:** P.O. Box 2203, Elizabeth, NJ 07207

Teachers of English to Speakers of Other Languages. (1997). *ESL standards for preK-12 students.* Alexandria, VA: Author **address:** 1600 Cameron Street, Suite 300, Alexandria, VA **e-mail:** tesol@teson.edu **website:** http://www.tesol.edu

Eastern Stream Center on Resources and Training. (1992). *Help! They don't speak English starter kit for elementary teachers.* Oneonta, NY: Author.

O'Malley, J. Michael, & Valdez Pierce, Lorraine. (1996). *Authentic assessment for English language learners: Practical approaches for teachers.* MA: Reading, MA: Addison-Wesley.

Short, Deborah J. (1991). *Integrating language and content instruction: Strategies and techniques.* Washington, DC: National Clearinghouse for Bilingual Education.

Listening in the Writing Response Groups: Bear Biographies
Primary

Strategies for Limited English Proficient Students

Language Arts Literacy Indicators:	3.1 [1, 7-8, 12] 3.2 [1-3, 5-7, 9] 3.3 [1-7, 10-12] 3.4 [2, 4, 8-9, 12] 3.5 [2, 10, 12]
Cross-Content Workplace Indicators:	1 [1] 3 [1-2, 4-5, 10] 4 [2-3, 9]

Students in Mrs. Oliver's class were working on oral and written language skills in a unit on bears. After studying bears to learn about habitat, diet, migration, and hibernation, these students read several fiction and nonfiction big bo[oks] about bears. They also brought in their favorite [bears] from home, "interviewed" them, and wrote dow[n] important information in their learning logs as preparation for a lesson on writing bear biographies. Children who did not have bears at home had selected from Mrs. Oliver's collection a guest bear who "visited" with them for several days.

Use of visual cues, such as pictures of bears, stuffed teddy bears, and other bear realia, helps students associate vocabulary in the new language with their prior knowledge of bears.

Before her students arrived in class, Mrs. Oliver had placed bear paws on the floor of the corridor leading into the classroom. Students entered the room following the paw prints. When they arrived at their desks, students were told to take a moment to write some things they knew about bears. Mrs. Oliver then asked students to share what they had written. As they volunteered their ideas, she wrote each on a felt-backed strip and placed it on the storyboard.

Develop understanding of the biography as a genre by telling a two- to three-sentence story.

Assist LEP students with vocabulary development by having them work with a group of English-speaking peers to complete a graphic organizer with information about bears.

Teachers can assist LEP students by labeling and pointing to objects as the activity proceeds.

Mrs. Oliver pointed to the list of student responses she had listed on the strips. "We know a good deal about bears. I think we can organize this information." She hung four large felt bear paws on the wall. "Your information answers questions about bears: What? Where? How? and When?" On each paw she wrote one of these words. "We need to decide which question each information strip answers. Help me put these strips under the correct paw."

Classification activities to see relationships between ideas.

After they organized the information strips, Mrs. Oliver told the children they would be writing biographies about the bears they had brought from home. "You can use this information, and you can go back to the books you have read for more ideas. You can also use your imaginations. Why don't we write one biography together first about a grizzly bear." Mrs. Oliver began by writing students' volunteered sentences on the board: "My bear is dark and large. He is a grizzly bear. He lives in the north woods." As she wrote, she asked children to point to the paw from which they had gotten information or tell where their idea had come from.

As an alternative to independent writing, students in groups of three or four tell one another a bear biography. Limited English proficient students may follow a story model (see next page). Partners are encouraged to ask questions to elicit more information about the bear's life. The student then retells the story adding new information. After oral practice, students write a first draft of the bear biography.

"Now we'll begin our individual stories. We will write for fifteen minutes. I will be around to help you with your papers; but first, I'm also going to start writing a story. As we write, let's remember to look at our lists when we need more ideas." She sat at the desk and began writing. When Kenneth asked how to spell cage, Mrs. Oliver said, "I'm writing right now, Kenneth. Circle the word, and we'll check for spelling later. This is something everyone can do for troublesome words." Kenneth continued to write. After the class had been writing for seven minutes, Mrs. Oliver circulated to help students, such as Kenneth, with their individual questions and to encourage any students who were having difficulty getting started. She also recorded words students had misspelled but had not circled.

At the end of the writing time, Mrs. Oliver divided her class into groups of four to read their stories to each other. Students in each group selected a number from 1 to 4 to indicate the order in which they would read. Mrs. Oliver then brought four students to the middle of the room to fishbowl the sharing procedure for all her students. She reminded them that these were rough drafts and that they could get more ideas from listening to other students read their writing.

Listening activities can foster critical thinking and improve students' vocabulary. By focusing their listening on descriptive words, LEP students begin expanding their knowledge of language for talking about bears.

First, Peter in the fishbowl group read, "My bear's name is Sparky. He is a brown bear. He eats fish."

Mrs. Oliver asked Veronica what she liked about Peter's story. Veronica answered, "The fish."

Mrs. Oliver responded, "Very good, Veronica. You were listening carefully."

Kristina read, "My bear is *pure white*. She is a polar bear. She lives near the north pole."

Peter said, "I like that her bear is pure white."

Asking questions about bear biographies helps the teacher check for student's comprehension. At the same time, the teacher can use the activity to reinforce and extend the student's knowledge of the language: "Point to the bear that liked to eat fish." or "Which bear is pure white?"

Angela read, "My bear has brown fur. He is sick." Mrs. Oliver asked Angela why she thought her bear was sick. "Because his fur has holes in it." Mrs. Oliver complimented Angela on her original thoughtful observations of her bear and reminded students that they could add additional details to their biographies. After Angela's comment, several children added information to their biographies.

Mrs. Oliver had the other students summarize what they had learned from watching the demonstration group. Then she reminded them, "When you share in your groups, be sure to talk about the things you like in each biography. But be as specific as this group was."

Rereading and retelling afford opportunities for LEP students to practice their oral language and improve their speaking fluency.

All the students met in groups of four and took turns reading drafts to each other and revising their writing. For instance, several students in one group wrote down additional information after hearing Melissa read, "My bear lives in the zoo. He likes to

Peer response is an important part of the writing process.

swim in cold water." At the end of the lesson, Mrs. Oliver told students to place their papers in their folders in order to have them ready for revision the following day.

The following day, Mrs. Oliver instructed students to work with a partner to add any information they thought a reader would need to know. She also told them to circle any words they thought might be misspelled. Mrs. Oliver walked from pair to pair, asking questions about content, reminding students that some misspelled words were written correctly on the paws taped to the walls, or spelling the word for the child. She recorded the words misspelled by several children so that she could include them in a future spelling lesson. The students then prepared edited final drafts for display in the main corridor of the school.

Pairing limited English proficient students with more proficient English-speaking peers increases a student's comfort level and increases risk taking.

Possible Assessments:

1. Observe student performance in groups, including students' ability to make use of peer feedback.

2. Evaluate final drafts for completeness of information, correctness of targeted spelling words, and use of developmentally appropriate conventions.

3. Engage students in self-assessment by asking them to talk about their experience of developing bear biographies after listening to others in class.

Questions for Reflection:

1. What is the value of Mrs. Oliver writing with her class? What problems might arise?

2. What role does personal experience play in each child's success with this activity?

3. What effects do the fishbowl activity and peer listening groups have on student performance?
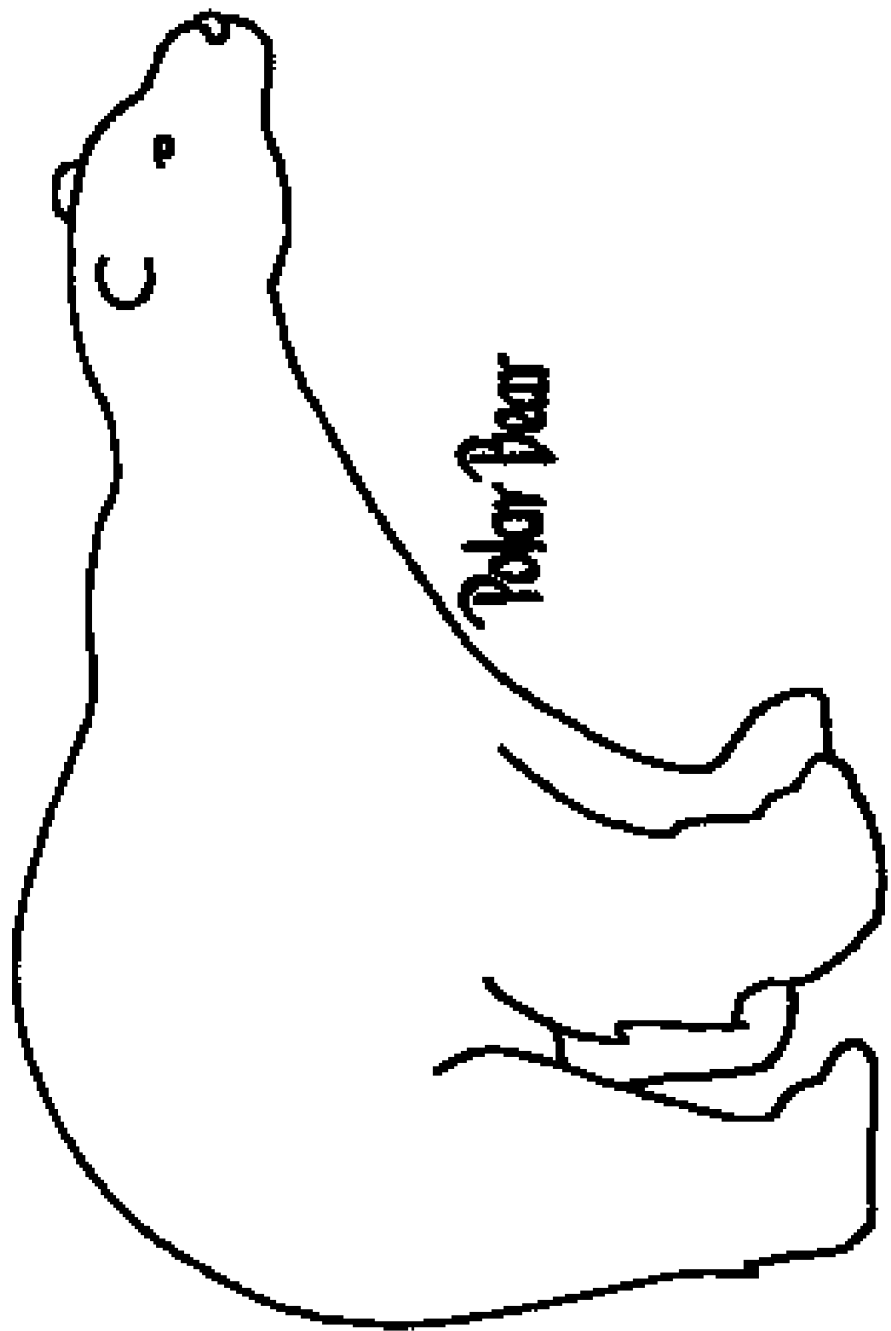
Extension Activities:

1. Students from an upper grade can come to this classroom to discuss those bears that are endangered species.

2. Students can research more bear information with help from the media specialist using the library, books, films, and CD-ROMs.

3. Students can track their bears' habitats and migration habits on a map of the United States or the world.

BEAR FACTS

NAME
snowy

TYPE
plane

COLOR
white

HABITAT
Arctic

FOOD
fish

HIBERNATION
active, awakens

Polar Bear

| Thematic Unit | Create a Display Advertisement |
| | Middle School |

Strategies for Limited English Proficient Students

Language Arts Literacy Indicators:	3.1 [14-16] 3.2 [5, 8] 3.3 [7, 12, 15]
	3.4 [19-20, 23-24] 3.5 [8, 11-13, 15]
Cross-Content Workplace Indicators:	1 [1, 3] 3 [1-3, 7-8, 10-11, 14-15] 4 [1-3, 5, 7, 9]

In response to a selection of literature entitled *The Smallest Dragonboy* by Anne McCaffrey, eighth-grade students created an advertisement for a dragonrider. To complete this task, students analyzed elements of display ads and synthesized information from the story in order to identify the qualities a successful dragonrider would need. They then composed an appropriate display ad reflecting these qualities.

Connecting activities to students' personal experiences helps learners make explicit links between personal and instructional goals and purposes.

The class began with a study of display advertisements brought in by their teacher, Ms. Diaz. She told the class, "We will be studying display ads in preparation for creating your own ad for a dragonrider." Ms. Diaz used an overhead transparency with three examples of display ads that incorporated common features such as illustrations, brief language, and buzz words. The class identified these devices. Then Ms. Diaz distributed new examples of display ads for group analysis. She told the class, "In your groups, consider how the words, phrases, and pictures affect you. Ask yourself: 'How are these advertisements designed? Are they successful?' Remember to have one student in each group record the findings. You'll have fifteen minutes."

Demonstration lessons by the teacher provide students with model for using a new language to think, learn, communicate, and express aesthetic enjoyment.

Teachers can assist LEP students by labeling objects and pointing to those objects as they model and explain the activity.

Working in cooperative learning groups of four or five students, the students identified the common elements of language and purpose of the ads given to their group. During this time, the teacher circulated, interacting with the students, making sure that all were working, and guiding them toward particular choices. Included in these group visits were discussions of word choice and phraseology. After fifteen minutes, Ms. Diaz reassembled the class, and the "reporters" shared their group's findings which she wrote on chart paper. Then other members of the class added comments.

Asking LEP students to locate similar texts (e.g., advertisements) in their native language helps reinforce their understanding of key concepts introduced through classroom instruction.

"In this ad, the picture attracts my attention because it's colorful, and the people look like they're having fun," offered Carlos, a group reporter.

Display charts help second language learners by emphasizing key content concepts and vocabulary.

"Yeah, and look at all the sports you can play in this gym," added Marta.

"This ad uses short, catchy phrases like, *Work Less, Earn More*," Jerod stated.

"Did anyone notice anything about spacing?" questioned Ms. Diaz.

"Well," began Sarah, "the illustration in this ad is in the middle, with the buzzwords below it, in large, dark letters."

"So, let me see if I understand. In your analysis you were able to see the importance of the components of display advertisements. The intent of the ads is to focus your attention," concluded Ms. Diaz.

"Yeah," replied Jon, "the illustration draws you in, and the buzzwords not only catch attention, they make you think."

"Now you are going to use what you've learned to create your own display advertisement for a dragonrider. I want you to consider what qualities a successful dragonrider would need. Think about the story and what you learned. In your groups, brainstorm a list of qualities you consider to be most important for a dragonrider. At the end of ten minutes, I'm going to want to see a list of your top five qualities. Use chart paper to record the qualities so that we can see one another's listing."

After they returned to their small groups, students worked together to first brainstorm qualities and then select the five qualities of a successful dragonrider. A representative from each group listed these qualities on chart paper. After ten minutes, Ms. Diaz led the students in a discussion of similarities and differences among the groups' findings.

Students were then instructed to pretend that they were dragons from Pern looking for riders. Ms. Diaz asked them to create individual visual advertisements highlighting the qualities that they had cited as most important for a dragonrider. Each advertisement was to exhibit details gleaned from the story. "You'll want to attract a potential dragonrider and convince her or him that s/he wants the job," explained Ms. Diaz. "Consider our conversation about buzzwords, illustrations, and brief language. All might be helpful."

The students began working and were encouraged to use a variety of materials such as markers, magazine cutouts, colored pencils, paints, construction paper, and computer software. Although each student had to create an advertisement, Ms. Diaz encouraged students to help each other. Again, she monitored and assisted while they worked.

After students completed their advertisements, they practiced their presentations with a partner before explaining their works to the class. Each talk was limited to two minutes, after which students rated each other using a rubric they had designed for short presentations.

Keeping a notebook of new vocabulary and terminology, including explanations, examples, pictures, and other visual aids, helps learners comprehend and retain information. For the second language learner, the notebook begins building a foundation of understanding in the new language.

Timely questioning and summary are effective means of restating, reinforcing, and elaborating on ideas and information.

Possible Assessments:

1. Have students use a student-designed rubric to rate their peers' oral presentations of ads.

2. Conduct ongoing assessment through observation during collaborative activities.

3. Evaluate students ads in terms of use of illustrations, brief language, buzz-words, and effective display of text and visuals.

Questions for Reflection:

1. How might the students effectively offer suggestion or comments to their peers when the advertisements are orally presented?

2. What is the benefit of first working in cooperative groups and then participating in individual assignments?

3. How does this activity address the needs of gifted learners? students with learning disabilities?

4. How could videotaping be used effectively in this sequence of activities?

Extension Activities:

1. Students might write compositions in the first person taking the persona of the dragon.

2. Students could create an application to become a dragonrider.

3. Students could create and publish a newspaper from Pern (the setting of the selection) and include classified ads.

Becoming American

Jasmine from India to Iowa
Levels 9—12

Language Arts Literacy Indicators:	3.1 [7, 15, 20] 3.2 [5-6, 11] 3.3 [3-4, 7-8]
	3.4 [18, 23, 27-28, 31-32] 3.5 [12-14]
Cross-Content Workplace Indicators:	1 [1] 2 [2] 3 [1-4, 8-14] 4 [1-3, 5-7, 9-10]

Because the heroine in *Jasmine* represents many of the universal struggles encountered by adolescents as they move into adulthood, Mr. Toussaint decided to use the 1989 novel by Indian American author, Bharati Mukherjee, as a key work in his World Literature course.

Before distributing copies of the book, Mr. Toussaint asked his students to respond to several questions in their journals: (1) What ethnic, national, or group affiliations would you use to help define yourself? Why/on what basis do you feel that you belong to these groups? (2) How did you come to live in America? Why did you or your family decide to come to this country? (3) If you could live anywhere on earth, where would that place be? Why would you choose that place? In small groups, students then shared what they wished from their journals.

After a silent reading of the brief first chapter of *Jasmine,* Mr. Toussaint asked his students to brainstorm their initial impressions of the book and its main character while a designated student recorded the group's ideas. A representative of each group outlined that group's "first take" on the board, and the impressions were then compared and contrasted in whole-class discussion.

Working together with his students and their academic calendar, Mr. Toussaint plotted a reading chart of the book's chapters and due dates for assignments and for group presentations based on the reading. He then asked students to use the first chapter and the dust jacket notes to identify aspects of the book they wished to explore. Questions raised included "What does some immigrant girl have to do with me?" "Why does the writer tell her story this way, jumping back and forth in time?" and "Why should someone believe what an old man tells her?"

The answers to these questions, Mr. Toussaint suggested, could be found as the students continued their reading. He reminded the students to write their questions in their journals so they could consider them while reading and discuss the questions upon completing the novel. He added, "As you are reading and ideas occur to you about these questions, jot your ideas down." He then asked students to recall novels they had previously read and discussed earlier in the year and to identify elements common to these novels. Together, they formulated a list of the elements, including story line, themes, characters, structures, style, and setting.

Shared reading based on the universal experiences in students' lives enables LEP students to contribute meaningfully to class discussion from the outset.

The directed-reading-thinking activity (DRTA) provides LEP students with questions or graphic organizers that focus on key aspects of the story.

Introduction to specific vocabulary words as a prereading activity enables LEP students to recognize, learn, and use the new words in meaningful contexts.

Summary comments that restate or expand on important points establish and reinforce LEP students' understanding.

Vocabulary notebooks offer LEP students an effective tool for seeing and copying words in context and using words in language that is understandable to them.

Students were encouraged to keep reading logs on the various aspects of the novel, chapter by chapter. The class was divided into four groups, one considering the portion of the novel that took place in Jasmine's native India, one following her journey from India to Florida, one focusing on her New York experiences, and the fourth and final group, studying the Iowa segment of the book. Since the novel's structure included both straightforward narration and flashbacks, students found the geographic moorings to be very helpful in their comprehension of the novel.

Mr. Toussaint provided class time for the reading/preparation groups to meet twice a week until both the reading and the preparation were completed. Each of the four groups created topical outlines to accompany their presentations and supplemented their presentations with activities that involved peers. These activities included role-playing games, such as character and incident identification through charades.

In the discussion that flowed from the presentations and other activities, students focused on Jasmine's constant invention and reinvention of herself, using her four names, Jyoti, Jasmine, Jase, and Jane, as context clues. One student enlarged the scope of the discussion by recalling Fitzgerald's Jay Gatsby, another character who reinvented himself. A film buff in the class remembered reading that in old-time Hollywood, studios chose new names for performers as they started their screen careers and gave as an example John Wayne, who had been Marion Morrison.

Discussion of the violent scenes depicted in the novel, including Jasmine's rape and the death of her Hindu husband in a Sikh-engineered explosion, reinforced the global relevance of the book's elements. The question of violence as a means to a political end was introduced by the team discussing Jyoti's Indian experiences. Other seemingly intractable conflicts, such as those between the Israelis and the Palestinians, the Muslims, Serbs and Croats, the Protestant and Catholic Northern Irish, and the Hutus and Tutsis of Rwanda and Burundi, were brought up by various students and linked to the Hindu-Sikh animosity in *Jasmine*.

Certain thematic aspects of the book particularly interested the students: the feminist challenge to the patriarchal order which the title character embodies; the inherent difficulties of learning a new language and new customs; and the struggle to become an American while debating whether to remain true to one's roots. Both the team dealing with Jasmine's New York experience and the team dealing with Iowa posed essentially the same questions: "What did she learn from the men around her?" "What did she come to realize about herself?" "How did she defy the men in her life and become her own person?"

To supplement the novel's portrait of life in rural India, Mr. Toussaint showed his students Satyajit Ray's 1973 film, *A Distant Thunder*, which, while set in Bengal in the World-War-II-created famine, made students aware of the poverty and caste system that were so much a part of Jasmine's background. Upon completion

Journal writing is a medium of expression that enables LEP students to synthesize, analyze, and reflect on the learning experience without worrying about spelling and grammar.

Oral reading by proficient readers not only models good reading and speaking skills but also promotes listening comprehension, when students are directed to listen for information needed to complete a graphic organizer.

Advanced practice with the language enables LEP students to participate more fluently and comfortably in role-playing activities with the whole class.

Students from other countries may be interested in sharing experiences related to tensions or political upheavals in their native cultures.

Students' personal knowledge of cultural differences, such as differing female and male roles in cultures around the world, extends class understanding of literary themes.

Class discussion is enhanced when students' parents, friends, and relatives are invited to speak on theme-based issues facing past and present-day societies in other countries.

of the novel and the film, the students returned to their initial questions about the book and the ideas they had jotted down. They used these notes to reflect on the novel and on changes to their questions as a result of having experienced the text.

Students need opportunity to reflect on changes in their thinking as a result of new literary experiences.

Possible Assessments:

1. Monitor student discussions of their initial and final questions about the novel for changes in understanding.

2. Evaluate student group presentations for clarity of communication.

3. Assess students' understanding of the elements of the novel as reflected in their discussion of Jasmine.

Questions for Reflection:

1. In what other ways could the teacher release responsibility for learning to the students?

2. What value is there for a teacher to extend discussion of a literary theme to world events?

3. How can a teacher tell from a student's response whether the student has made connections between the novel and the film?

Extension Activities:

1. Students could see a film based on the immigrant experience, such as America, America; Coming to America; El Norté; Mississippi Masala; and Hester Street. They could then write an essay comparing Jasmine's experiences to those of the main character(s) in the film of choice.

2. Students could generate both visual and print text plotting all of the various points in Jasmine's journey from India to Iowa and the effect that those various places had on the formation of her character.

3. A class debate on the topic, "To assimilate or no to assimilate (to preserve differences) and at what cost?" might be structured. The class could be divided into three groups: the framers/presenters, the pro-assimilationists, and the anti-assimilationists, with the framers deciding which arguments were the more persuasive to them.

4. Students could survey the reviews of Jasmine by professional critics and write an original review as well, or research the critical response to Mukherjee, both as an Indian writer and as an American writer, using Bharati Mukherjee— Critical Perspectives, edited by Emmanuel S. Nelson (1993), as a point of departure.

5. Relatives and/or friends of the students or members of the community at large could be invited to appear as guest speakers, discussing their own experience as immigrants, thus cross-referencing those of Jasmine.

Short Story and Film: **Cross-Grade Collaborations**
     Elementary/Secondary

Language Arts Literacy Indicators:	3.1 [1, 7-8, 10] 3.2 [1, 8] 3.3 [1, 7-8, 18]
	3.4 [1, 23, 26, 32] 3.5 [1, 12, 14, 16]
Cross-Content Workplace Indicators:	1 [1] 2 [2] 3 [1-3, 8-13] 4 [1-3, 6, 9-10]

Strategies for Limited English Proficient Students

Ms. Mellody, first-grade teacher, and Mr. Devereaux, eleventh- and twelfth-grade World Literature teacher, decided to have their students work concurrently on multifaceted projects concerning *The Secret of Roan Inish*, the Celtic-based short story and the film that writer/director John Sayles adapted from it. These projects would culminate in a sharing of the projects at the high school.

Mr. Devereaux visited the elementary classroom to introduce *The Secret of Roan Inish* and begin the oral reading of the story. Before beginning to read, he asked the students to think about favorite relatives they liked to see. At the end of the introductory reading, the children responded in a chain of associations—some more appropriate than others—linking the story to their own experiences:

"I visit my grandmother in Florida, and we go to the beach together."

"My family goes to the shore in the summer."

"My brother lives with my father. I miss him."

Since the children would be asked to keep reading logs throughout their school careers, Ms. Mellody and Mr. Devereaux gave the first graders the opportunity to make picture and/or word records as part of their reactions to what they had heard during the reading. These pictures/word records would become the basis for the children's end-of-project chap books and a class banner.

Both the elementary and secondary students shared the same set of texts, the high schoolers reading the text aloud on their own, the elementary students having the text read aloud to them by their teacher and also taking the text home for parental reading and reinforcement. In both cases, the teachers wanted to approximate the tradition of oral storytelling for the students by having them hear the story as it was read aloud.

The World Literature students discussed the universal thematic components of the story: the search for a lost home and family and the interaction of the human and natural worlds. Having already met the high-level challenges of *King Lear* and *Ran*, the Japanese film adaptation of the Shakespearean play, the World Literature students recognized the archetypal components of *The Secret of Roan Inish*.

"Reunion with a separated family member—that's one thing they both have in common," offered one student. "If you subtract the

Teachers (including bilingual/ESL teachers) working collaboratively and involved in team-teaching interdisciplinary approaches grow professionally in their repertoire of teaching strategies.

In prereading activities, drawing on prior knowledge helps the LEP student make connections based on prior experiences and relationships with favorite relatives in the United States or country of origin.

Acting out a story helps students think actively and visualize what they learn.

Displaying pictures of seals and the Irish coast fosters increased interest in the story, particularly for students having difficulty speaking and understanding the language.

Teacher read-alouds should be an integral part of the weekly lesson so that these students can hear and appreciate the features of both spoken and written English.

Books with audiotapes help students develop listening comprehension skills. Activities should focus the student's attention on specific aspects of the story.

passage of time and the advance of technology, you can see that all these stories are myths," commented another.

"Shakespeare lived only a few hundred miles away from the islands in the story," remarked one particularly geographically astute student.

"Yeah, and if you believe James Tyrone, Sr., Shakespeare was an Irish Catholic anyway," countered the resident class wit/wise guy.

The first-grade children worked on their reading logs both in the classroom and at home since parents and other family members shared the reading responsibilities with the classroom teacher. Each child then created his or her own brochure or chap book based on his or her reading log responses to the story, allowing for individual expression and interpretation. The students also created a group banner illustrating the characters and events in the story, working together with Ms. Mellody and with their art teacher.

The elementary school children were the guests of the high school students at a communal celebration, featuring the first graders' banner and chap books, a viewing of the film, and a buffet of ethnic and American food, prepared by Mr. Devereaux and his students. Invitations to individual first graders were answered with thank-you notes drawn or written by the first graders. Then, during the celebration, the high schoolers read the first graders' chap books and wrote back to them on a sheet of paper attached for these messages.

Drawing based on clear descriptions using descriptive adjectives helps LEP students to visualize the mythological character.

Reading in the native language to their children involves LEP parents in a most-critical aspect of their children's literacy development.

Cooperative group work invites LEP students to take on more active roles in their learning.

Cross-grade literature study allows older students to internalize and reinforce learned skills while providing younger students with effective mentoring and instruction.

Possible Assessments:

1. Ask high school students to complete survey/response sheets assessing the value and success of the enterprise and commenting on things learned from the experience.

2. Monitor and record notes on the participation of individual high school students in the class discussions.

3. Ask students at both levels to discuss how the film changed or confirmed the mental pictures they got from the story. Assess their responses.

Questions for Reflection:

1. How could this activity be modified for use with literature of other cultures?

2. How can skill building be incorporated into the project?

3. What other kinds of activities lend themselves to cross-grade collaboration?

Extension Activities:

1. The teachers can videotape the viewing/celebratory session for later discussion with each of the classes.

2. Guest speakers, including family members or friends of the students, or members of the community, can be invited to talk about their previous homes in this or other countries.

3. Librarians and other media specialists can be invited to offer their input as to possible choices of material from other cultures and to serve as resource persons for student research in children's ethnic literature, film, and music.

4. Students can write their own myths and share them with another age group, using storytelling techniques.

Resource:

Fry, Rosalie K. (1995). The Secret of Roan Inish. New York: Hyperion.

ADAPTATIONS FOR THE EXCEPTIONALLY ABLE LEARNER

The inclusion of the exceptionally able student is addressed in the Core Curriculum Content Standards (1996). The introduction states that, "we must provide all students with appropriate challenges so that the raised expectations do not result in lowered expectations for the exceptionally able." Current regulations require that school districts "shall make provisions for identifying pupils with gifted and talented abilities and for providing them with an educational program and services" (NJAC 6:8-4.5). Gifted students often remain in regular classrooms for the better part of the day and are pulled out for enrichment during a designated amount of time. As a result, teachers face the challenge of accommodating the gifted student in the regular classroom.

Gifted learners are often times overlooked in regular classroom instruction. Consequently, some students find school boring and uninspiring due to knowing many of the concepts being introduced in the regular classroom. The exceptionally able or gifted students are those who:

- demonstrate a high degree of intellectual, creative, and/or artistic ability;
- possess exceptional leadership skills;
- excel in specific fields;
- function above grade level; and
- need accommodations or special instruction to achieve at levels commensurate with a challenge to his or her abilities.

Characteristics of exceptionally able students include but are not limited to:

- the ability to grasp concepts rapidly and/or intuitively;
- intense curiosity about principles and how things work;
- ability to generate theories and hypotheses and pursue methods of inquiry; and
- produces products that express insight, creativity, and/or excellence.

In the past, the term "gifted" described people with high scores on I.Q. tests. Today, new concepts connected to creative thinking models and multiple intelligence have expanded the definition of intelligence to include other dimensions. Giftedness reflects a multifaceted, multicultural, and multidimensional perspective and is defined by aptitude, traits, and behaviors rather than changeless test performance. These students are found in all cultural groups and across all economic levels. Increased understanding of culturally determined and environmentally affected behaviors will enable teachers and administrators to interpret performance indicators of creative potential.

The process of identification is ongoing in that students are continuously entering and exiting school districts. Fluidity should be maintained as students' needs change each year. Identification and placement in a gifted program should be initiated in kindergarten and reviewed annually through grade 12. Identification practices should be in place at the time of school enrollment. Selection of a pool of nominees and final selection of participants should be determined by a committee of at least 3 to 5 individuals in order to maintain a fair and democratic process.

Strategies for the Exceptionally Able Learner

"Differentiating the curriculum" refers to appropriate adjustments to content, teaching strategies, expectations of student mastery, and scope and sequence. In a differentiated classroom, students work at different paces. Gifted students are more likely to develop study and production skills, experience success and struggle, and feel challenged in a classroom setting that encourages learners to master information more quickly. Adaptation strategies include the following:

- interdisciplinary and problem-based assignments with planned scope and sequence;
- advance, accelerated or compacted content;
- abstract and advanced higher-level thinking;
- allowance for individual student interests;
- assignments geared to development in areas of affect, creativity, cognition and research skills;
- complex, in-depth assignments;
- diverse enrichment that broadens learning;
- variety in types of resources;
- community involvement;
- cultural diversity; and
- internship, mentorship, and other forms of apprenticeship.

Adaptation categories include *acceleration, enrichment,* and *grouping.* The following recommendations identify a variety of adaptive efforts within these categories. Acceleration involves grade skipping or changing the rate of presentation of the general curriculum to enable the students to complete the program in less time than usual. Prescribed seat-time is not necessary for achievement of the standards. Acceleration can occur in any subject area. Middle school students should be able to take school courses; high school students take college courses with appropriate credit accrued. Some provision must be made for continued acceleration or high-level enrichment. Unless the student has a pre-identified problem, social or emotional development should not inhibit acceleration.

Following are examples of accelerated types of programs:

Flexible pacing:	Assignment to classes on the basis of ability to be challenged as well as ability to handle the work; assignment should not be age discriminatory.
Content acceleration:	Superior performance in some areas may be addressed with placement in a higher-grade level for the areas warranting it.
Early entrance to school:	Eligibility should be evaluated in terms of (1) degree of advancement in relation to peers; (2) number of areas of advanced achievement; (3) student's self-concept. (The percentage of students attending one to three years of pre-school has increased dramatically and should be considered.)
Multi-age classes:	Class in which two or more grade levels are combined. Students can accelerate through self-pacing.
Compacting:	Compacting, also known as telescoping, refers to a form of acceleration in which part of the curriculum is covered in a shorter period of time than is usual. Previously mastered content materials are determined through pre-evaluation and elimination.
College course work:	Qualified students take college courses for college credits while completing high school requirement (concurrent enrollment). College courses may be taken in the summer.
Early college work:	Once the standards for high school courses are met, early admission to college is an option. Students may leave high school early and enter college.

Advanced placement:	The Advanced Placement program (AP), administered by the College Entrance Examination Board, enables high school students to obtain both high school and college credit for demanding course work offered as part of the school curriculum.

Enrichment is another way to meet the differentiated needs of exceptionally able students. Well-articulated assignments that require cognitive processing, in-depth content and alternate modes of communication can be effective and stimulating. Here are some examples to consider when differentiating classroom instruction to meet the needs of academically talented students:

Alternate learning activities:	Opportunities to pursue alternate activities permit students to engage in new learning and avoid the boredom of repeating instruction or unnecessary practice in skills already mastered.
Independent study:	Students conduct carefully planned, self-directed research projects carefully monitored by the teacher. Prerequisites include instruction in field based and library research skills, the scientific method, and other authentic types of inquiry.
Advanced thinking processes:	Provide assignments in all curriculum areas emphasizing higher level thinking skills such as synthesis, analysis and evaluation.
Guest speakers:	Provide information on topics beyond the teacher's expertise. University, faculty, parents, business and industry leaders or other teachers in specific areas may be used as resources.
Mentors/internships:	Allow students to interact with adult experts in the field of mutual interest. Mentors act as role models. Student's areas of interest, as part of career awareness, should be considered.
Alternate resources:	Use materials from a higher grade level; access to business, university and community resources, such as laboratories, libraries, computer facilities, etc., are appropriate.
Exchange programs:	Attend schools in a different community or country to enrich educational experiences.

Grouping students of like-ability together in homogeneous arrangements such as special classes or clustering in the same classroom allows for more appropriate, rapid and advanced instruction without isolating the exceptionally able student. Research indicates that gifted students are more likely to socialize "normally" when they are with students who share their interests and learning style. When cooperative learning has been used in the regular classroom, gifted students sometimes become tutors for other students, and therefore learn less academic content. Flexible grouping is recommended in the regular classroom to give gifted students an opportunity for development of advanced skills, including skills of expression and production. Grouping flexibly allows exceptionally able students time for advanced work and a chance for independent study.

Students may be grouped using the following scheduling arrangements or project emphasis:

Self-contained classes: Enable exceptional students to be challenged in every area throughout the day and week to be stimulated by their intellectual peers and to have guidance from teachers with experience in sequential, integrated curriculum for the exceptionally able.

Pull-out programs: Combine regular class integration and homogeneous grouping on a part-time, regular basis. Pullout programs requires careful coordination and communication between the teachers of both classes.

Classroom cluster grouping: Permits homogeneous and heterogeneous grouping according to interests and achievement.

Cluster scheduling   Arranges schedules so that exceptionally able students can take their required core courses together to enhance rapid pacing, less drill, greater depth and breadth.

Honors/Enrichment classes: Provide opportunities for practicing higher-level thinking skills, creativity and exploration of in-depth course content.

Seminars: Seminars are aimed at research, interdisciplinary studies, visual and performing arts, academic subjects or other areas of interest. These seminars provide interaction with specialists who can give guidance in specific areas. Gifted specialists can be powerful resources to assist in teacher in-service programs.

Resource centers: Districts should establish a resource center that is available to all students. It may be a good idea to reserve designated time to utilize these facilities for exceptionally able students from a broader geographical area; interdistrict, countywide, region, etc.

References

Challenging the gifted in the regular classroom: Facilitator's guide. (1994). Alexandria, VA: Association for Supervision and Curriculum Development.

Reis, S. M., Burns, D. E., & Renzulli, J. S. (1992). *Curriculum compacting: The complete guide to modifying the regular curriculum for high ability students*. Mansfield Center, CT: Creative Learning Press.

STANDARD 16
EXCELLENCE AND EQUITY FOR ALL STUDENTS

Introduction

This overview discusses excellence and equity and how they are described in the *Mathematics Standards* of the New Jersey State Department of Education's *Core Curriculum Content Standards*. It is followed by five sections entitled *High Expectations in Mathematics for All Students, The Significance of Mathematics*, *Overcoming the Barriers to Equity*, *Challenging All Students to Maximize Their Achievement,* and *Identifying Equity Concerns in Districts and Schools*.

> All students will demonstrate high levels of mathematical thought through experiences which extend beyond traditional computation, algebra, and geometry.

Descriptive Statement

High expectations for all students form a critical part of the learning environment. The belief of teachers, administrators, and parents that a student can and will succeed in mathematics often makes it possible for that student to succeed. Beyond that, this standard calls for a commitment that all students will be continuously challenged and enabled to go as far mathematically as they can.

High Expectations for All Students

The first fifteen standards set out high expectations for all students, and this final standard insists that all students **need to**, **can**, and **will** meet those standards.

Some kids just can't learn math.

THAT'S A MYTH. All kids can learn math; it doesn't take special ability — just persistence and enthusiasm.

Math doesn't run in my family.

THAT'S A MYTH. Children don't inherit their parents' difficulties with math.

As discussed in the Introduction to this *Framework*, our students **need to** meet these standards in order for them to be well prepared for careers in the 21st century, and in order for our state and country to have suitable employees in the 21st century.

But **can** all students meet high standards? Our answer is unequivocally *Yes*. New Jersey's *Mathematics Standards* sets high standards for all students, and at the same time insists that those standards are indeed attainable by all students. There will undoubtedly be exceptions, but those exceptions should be exceptional.

Achieving these standards for all students will not be easy, but it must start from the assumption that every individual student can achieve these standards. There are many barriers that have to be dealt with, and these are discussed later in this chapter, but none of these barriers are more powerful than the pervasive sense that many of our children cannot achieve these standards.

We must take seriously the goal of preparing ALL students for twenty-first century careers. In order to do this, we must overcome the all too common perception among people that many students simply lack mathematical ability. *Everybody Counts*, a report prepared by the Mathematical Sciences Education Board (MSEB) of the National Academy of Sciences (1989), notes the following:

> Only in the United States do people believe that learning mathematics depends on special ability. In other countries, students, parents, and teachers all expect that most students can master mathematics if only they work hard enough. The record of accomplishment in these countries — and in some intervention programs in the United States — shows that most students can learn much more mathematics than is commonly assumed in this country (MSEB, 1989, 10).

Curricula that assume student failure are bound to fail; we need to develop curricula which assume student success. We need to develop attitudes in students, in parents, and in school personnel which assume student success. And we need to translate those positive attitudes and high expectations into programs which ensure that students **will** meet the standards. This chapter is intended to provide information and guidance to districts on how to make that translation.

**Girls are just
not good
at math.**

**THAT'S A MYTH.
All children,
girls and boys,
are equally good
at math.[1]**

Opportunities to Exceed the Standards

By insisting that all students can meet high expectations, the *Mathematics Standards* does not imply that all students will become professional mathematicians, scientists, or engineers. Certainly, as with other areas of human endeavor, some students have more interest in and talent for mathematics than others.

The *Mathematics Standards* does not describe expectations for those students who might be going on to careers which require higher levels of mathematics. Its focus is on the high expectations which are appropriate for all students. However, the *Mathematics Standards* insists that raised expectations for all students should not result in lowered expectations for our high achieving students.

Indeed, to increase the number and success of high achieving students it is necessary to provide all students with opportunities to learn more mathematics than is encompassed in the *Mathematics Standards*. This is discussed further in the section entitled ***Challenging All Students to Maximize Their Achievement.***

What is Equity?

All students need to achieve, and can achieve the high expectations of New Jersey's *Mathematics Standards*. Ensuring that all students have every opportunity to achieve these high expectations is the focus of our concerns about equity.

The United States has traditionally promoted education as the most effective vehicle for access to intellectual development and economic independence. The *Curriculum and Evaluation Standards for School Mathematics* of the National Council of Teachers of Mathematics (NCTM, 1989) cites data to support this premise. For example, jobs requiring mathematical knowledge and skills in such areas as data analysis, problem solving, and statistics are growing at nearly twice the rate of overall employment.[2] In addition, the strongest predictor of earnings nine years after graduation from high school is the number of mathematics courses taken (after having taken into account demographic factors) (NCTM, 1992, 3). In order to compete effectively in today's global, information-based economy, and in today's increasingly high-tech work

---

[1] Drawings by Mira Rosenstein.

[2] *Making Points for Mathematics Education Reform*, the Mathematical Sciences Education Board, p. 3.

environment, students must be able to reason logically, solve problems and communicate effectively. Clearly they must be educated at a more sophisticated level of mathematical and scientific reasoning than ever before. Mathematics and science, therefore, have been called the "critical filters" for determining future success.

Achievement in mathematics, science, and technology, however, has not been equally accessible to all students. Certain ethnic and racial minorities in the United States, including populations of students from economically disadvantaged backgrounds, are substantially *underrepresented* among top achievers, and are included in disproportionate numbers among those whose achievement is unsatisfactory. Young women are still underrepresented in these disciplines, as compared to young men.

According to a statement developed by the Equity Focus Group for the Statewide Systemic Initiative supported by the National Science Foundation (1994) "equity means equitable access to high-quality science, mathematics, and technology education and equitable treatment in the classrooms, schools, and post-secondary education institutions for every student. The goal is to eliminate the academic performance gap between mainstream groups and underrepresented groups, and to raise the level of knowledge and skills in mathematics and science of all students."[3] This goal is reflected in Standard 16 of the New Jersey's *Mathematics Standards*.

A recent study by the Rand Corporation[4] confirmed just such improvement in the last fifteen years: standardized test scores for African-American and Latino teenagers improved significantly between the mid-1970's and 1990, narrowing the gap with Caucasian students, who also made gains. The Rand study said that "the gains suggested that desegregation and increased spending, especially for programs designed for minority students, had paid off."

Each district should commit itself to reducing the gap between its own mainstream and underrepresented groups, without diminishing the performance of the mainstream groups. The final section of this chapter, ***Identifying Equity Concerns in Districts and Schools,*** provides suggestions for how a district or school might evaluate its own situation with regard to this goal.

---

[3] National Science Foundation Statewide Systemic Initiative. (1994). *Equity Framework in Mathematics, Science, and Technology Education*. Washington, DC.

[4] Grissmer, D. W. (1994). *Student achievement and the changing American family*. Santa Monica, CA: Rand Corporation.

Cumulative Progress Indicators

New Jersey's *Mathematics Standards* provides the following eleven cumulative progress indicators for Standard 16. They are arranged in four groups, and their implications are discussed in the next four sections of this chapter.

The first two indicators address our commitment to high expectations in mathematics for all students, that all children learn mathematics in accordance with the vision of the *Mathematics Standards*.

By the end of grade 12, all students:

1. **Study a core curriculum containing challenging ideas and tasks, rather than one limited to repetitive, low-level cognitive activities.**

2. **Work at rich, open-ended problems which require them to use mathematics in meaningful ways, and which provide them with exciting and interesting mathematical experiences.**

In order for children to value mathematics, they need to understand the importance of mathematics in their own culture and other cultures, they need to understand that the quantity and quality of their own mathematical achievements will affect their futures, and they need to know that members of their community use mathematics in their own occupations. The following three indicators address these issues:

By the end of grade 12, all students:

3. **Recognize mathematics as integral to the development of all cultures and civilizations, and in particular to that of our own society.**

4. **Understand the important role that mathematics plays in their own success, regardless of career.**

5. **Interact with parents and other members of their communities, including men and women from a variety of cultural backgrounds, who use mathematics in their daily lives and occupations.**

Children need to hear the message that all students can learn mathematics and that their schools are making a commitment to their achieving the high expectations in the New Jersey's *Mathematics Standards* through successful completion of the core curriculum. The following three indicators address these issues:

By the end of grade 12, all students:

6. **Receive services that help them understand the mathematical skills and concepts necessary to assure success in the core curriculum.**

7. **Receive equitable treatment without regard to gender, ethnicity, or predetermined expectations for success.**

8. **Learn mathematics in classes which reflect the diversity of the school's total student population.**

Finally, all students should be provided with encouragement and opportunities to go beyond the expectations of the *Mathematics Standards*. The following three indicators address this issue:

By the end of grade 12, all students:

9. **Are provided with opportunities at all grade levels for further study of mathematics, especially including topics beyond traditional computation, geometry, and algebra.**

10. **Are challenged to maximize their mathematical achievements at all grade levels.**

11. **Experience a full program of meaningful mathematics so that they can pursue post-secondary education.**

High Expectations in Mathematics for All Students

Engaging and Challenging All Students

The first two indicators specify that students should "study a core curriculum containing challenging ideas and tasks, rather than one limited to repetitive, low-level cognitive activities" and that they "should work at problems which require them to use mathematics in meaningful ways." The vision of the *Mathematics Standards* (see pp. 8-9 of this *Framework)* speaks of "students who are excited by and interested in their activities", "students who are learning important mathematical concepts," and "students who are posing and solving meaningful problems."

Students need to be engaged and challenged. To accomplish this, we need to involve them in hands-on activities, to provide them with settings where they can participate in mathematical discovery, to decrease the focus on repetitive tasks, to make available alternate ways of learning concepts, and to offer them activities which they recognize as meaningful.

Above all, we need to challenge them with meaningful problems. Indeed, problem solving should be the central focus of all mathematics instruction. Students benefit from a classroom environment in which they are working together to find solutions for meaningful problems. Levels of engagement, communication, and achievement are all enhanced when students accept these kinds of challenges. Moreover, such an instructional approach also tends to work more effectively than any other with heterogeneously grouped students. Students tend to find ways to contribute to the overall group progress by sharing their own skills and understandings with their classmates.

Traditionally, problem-solving oriented approaches to mathematics instruction have been used with only special populations of students. Remedial teachers frequently relied on such an approach to recapture the students' lost interest or to rekindle their motivation to learn the subject. At the other end of the spectrum, problem-solving also frequently form the basis for an elementary school program for gifted-and talented students. Some of the best available curriculum units in elementary mathematics were written to be used with a gifted population. It was thought that these units were necessary to fully engage bright students and to illustrate for them the power and pervasiveness of mathematics.

But we must now focus on making this curricular focus the focus for all students. For just the same reasons that teachers thought this approach to be useful for special populations, it turns out to be useful for all.

Motivation, engagement, and appreciation for the usefulness and power of mathematics are dispositions that enable all students to be effective learners.

Core Curriculum

As noted on p. 12 of this *Framework* and reflected in Indicators 1 and 6, implicit in the vision of the *Mathematics Standards* is the notion that there should be a core curriculum. What do we mean by a "core curriculum"? We mean that every student will be involved in experiences addressing all of the expectations of each of the other fifteen content standards. We anticipate that over time each district will review the *Mathematics Standards* and, using this *Framework* as a guide, will develop its own core curriculum. All courses of study in the district should then have a common goal of completing this core curriculum, no matter how students are grouped or separated by needs and/or interests.

A core curriculum does not mean that all students will be thrown together into one program. There may be different programs with different goals, but completing the core curriculum should be a goal that is common to all of the programs. Students have different aptitudes, interests, educational and professional plans, and learning styles. Different groups of students may address the core curriculum at different levels of depth, and may complete the core curriculum according to different timetables. Nevertheless, all students should complete all elements of the core curriculum recommended in the *Mathematics Standards*.

For example, it is anticipated that those students who normally go on to take calculus in the 12th grade will complete the core curriculum, and go substantially beyond it, by the end of 10th or 11th grade. Indeed, at the present time, with curricula currently in place, those students are likely to complete most of what would be in the core curriculum, and more, by the 11th grade, with the major exception of the content described in Standards 12 (Probability and Statistics) and 14 (Discrete Mathematics). On the other hand, a substantial percentage of the students in most districts might well be involved with the core curriculum through the end of the 12th grade.

At the elementary school level, each district already has in effect a core curriculum which all students are expected to complete, but it may be focused primarily and even exclusively on arithmetic; however, the *Mathematics Standards* recommends a core curriculum with more substantial expectations than the current curricula. In addition, the recommendation of a core curriculum at the high school level has major implications for the elementary school level, since every student needs to enter the upper grade levels with both the knowledge and the confidence to achieve the expectations of the *Mathematics Standards* during her or his remaining years in school.

The core curriculum recommended in the *Mathematics Standards* is appropriate also for students in vocational education. According to the Secretary's Commission on Achieving Necessary Skills (SCANS), a study of competency in the workplace across the *entire* spectrum of the economy revealed a clear pattern of requirements. Workers need a solid foundation in retrieving, analyzing, and evaluating data, applying technology to specific tasks, and the ability to reason, think creatively, and solve problems.[5] Clearly this is the case for students involved in vocational education programs as well as college preparatory programs, and fulfilling the core curriculum of the *Mathematics Standards* would address the SCANS recommendations.

---

[5] *Learning a Living*, SCANS (April 1992, 5-6).

High Expectations in the Elementary and Middle School — The Issue of Grouping

In the abstract, it seems to make sense to group students according to ability; higher ability students can proceed more rapidly, and lower ability students can receive additional instruction. In practice, however, homogeneous grouping of students (i.e., where students of similar abilities are grouped together), and its logical extension of tracking students into entire programs based on selected abilities, has limited the achievement of a substantial percentage of children. The research shows that once placed in a track, there is little chance of moving to a higher track; that tracking in mathematics is often based on reading scores or poor behavior rather than on mathematical ability; and that a disproportionate percentage of low-income and minority students are placed in low tracks. Students get the message that less is expected of them.

Moreover, the practice of homogeneous grouping and tracking of students is based on the premise that the abilities of students are substantially different. In fact, exceptional children are indeed the exceptions; all students have the ability to succeed in mathematics and to be empowered to use it successfully. "Individual differences in ability are not great enough to warrant differences in curriculum, except in unusual circumstances such as major learning disabilities or extraordinary talent," said leading mathematics educator Zalman Usiskin.[6] The reason some students appear to have high ability is often because they have been better prepared, they are building on a foundation of greater knowledge, and they have greater interest and willingness to work.

Heterogeneous grouping (i.e., where students who appear to have different abilities are grouped together) reinforces the message that all students can succeed and can meet high standards. The research shows that heterogeneous grouping does have the desired effect: all students' self-image and self expectations rise, as does their performance (SCDOE, 1992, 26).[7]

What happens in the first few years of school is crucial. If all children in the elementary grades develop mathematical competency and positive attitudes toward mathematics, then equity problems will be less significant later on. If we want all students to complete the elementary levels with the knowledge and confidence that are needed for success in the upper grades, then heterogeneous grouping must be a key component of our strategic plan.

Heterogeneous grouping by itself, however, will not ensure success. It is a strategy, not a solution. The focus must be on providing all children with opportunities to learn, with encouragement to succeed, and with continued mathematical growth. In some settings, the strategy of heterogeneous groups may be counterproductive — resulting in some children experiencing only the frustration of failure, and others the boredom of stagnation. This may often be the case because teachers have not been prepared to implement this strategy. Training and support for teachers are critical; they must be in place before and during implementation of heterogeneous grouping, so that teachers can respond flexibly to the diverse needs of the students in the classroom. Teachers must be prepared to function as problem-solvers, ready to use a variety of strategies to ensure that all children learn; they must be familiar with these strategies, and understand when they should be used, and when they should not be used. We do our children a disservice if we abandon the old dogma of homogeneous grouping only to adopt a new dogma of heterogeneous grouping; we do our

---

[6] *Individual Differences in the Teaching and Learning of Mathematics*, presentation at the Ninth Annual UCSMP Secondary Conference, November 1993. See also *If Everybody Counts, Why Do So Few Survive?* in *Reaching All Students with Mathematics*, NCTM, 1993, Reston, VA.

[7] South Carolina Department of Education. (1992). *South Carolina Mathematics Framework*. Columbia, SC.

children a greater disservice if we adopt heterogeneous grouping without assisting teachers to implement it properly. Administrators must ensure that this does not happen; they must encourage teachers to learn how to teach children who are grouped heterogeneously, and how to strike an appropriate balance between that and homogeneous grouping. The rationale for any form of grouping must be reflected in the structure of the classroom, in the activities that take place there, and in the instructional strategies used by the teacher. We suggest that:

✓	*SUGGESTIONS*

✓ districts use heterogeneous grouping as a strategy, at least through 6th grade, and possibly in 7th and 8th grades depending on local circumstances.

✓ districts provide opportunities for continuous and rigorous professional development to its teachers to help them develop the variety of instructional strategies needed for effective student learning, with a focus on heterogeneous grouping and how and when it can best be used.

✓ districts use heterogeneous grouping as an opportunity to provide an important advantage for the better prepared and highly motivated students — the opportunity to strengthen their own understanding through sharing it with others.

✓ districts provide assistance to those students who require it, enrichment for all students, and additional opportunities for those who are better prepared and highly motivated.

✓ since students progress at different rates, schools use flexible strategies (including enrichment activities) that ensure that all students have the opportunity to learn when they are ready.

✓ teachers closely monitor student performance and provide assistance to those students who need it. Priority should be placed on preventing students from falling behind through:

    * additional instructional sessions;

    * individual assistance in class;

    * tutoring outside of class;

    * cross-age tutoring in after-school programs;

    * after-school access to technology;

    * activities between school sessions;

    * summer sessions; and

    * enlisting support and assistance from adults in parental or community support roles.

High Expectations in the Secondary School

Each district is expected to develop a core curriculum based on the *Mathematics Standards* which embodies high achievable expectations for all students. In developing its core curriculum, districts should consider the following suggestions:

✓	*SUGGESTIONS*

✓ districts may institute different courses and programs for different groups of students, but all of these should have a common goal — completing the core curriculum.

✓ the core curriculum should not be simply a rearrangement of traditional mathematics topics taught traditionally, which in the past has served to filter out substantial numbers of students, but should focus on making mathematics, including both traditional topics (such as algebra and geometry) and new topics (such as probability and discrete mathematics) relevant, exciting, challenging, and accessible to all students.

✓ all general mathematics, consumer mathematics, and other courses which focus primarily on mastery of lower-level basic skills should be transformed into courses which address the core curriculum as well as basic skills.

✓ districts should maintain support systems and enrichment opportunities that appropriately address the needs of their students.

✓ students should be permitted and enabled to cross over from one sequence of courses to another by demonstrating mastery of the material.

✓ all students, regardless of their backgrounds and abilities, should have the opportunity to study this core curriculum in an environment which allows them to develop to their fullest potential. Such an environment is one where[8]:

* students are encouraged to communicate freely and to take risks in asking mathematical questions and proposing solutions to mathematical problems, and feel safe in doing so;

* teachers recognize that students have the potential to learn mathematics at a high level;

* instructional strategies accommodate the cultural diversity, varied learning styles, and different amounts of time needed by different students;

* placement decisions are made in the interest of elevating students to the most challenging course they can be successful in;

* placement decisions are based on multiple assessment measures and recommendations of classroom teachers;

* classroom assessment includes continuous evaluation of students' understanding and performance using a variety of assessment strategies;

* all students have the opportunity to study all of the core mathematics curriculum;

* students are expected to do complete work by thinking, drawing on mathematical ideas, and using appropriate tools and techniques;

* students are expected to communicate their reasoning and problem-solving strategies and are able to hear and discuss different strategies used by other students;

* students are encouraged to work harder, and are provided with the necessary support if they are having difficulties;

* students with a special interest in mathematics pursue issues with similarly interested peers, while still participating in the common core curriculum;

* students have sufficient time to process questions, formulate their answers, and present them to the class;

---

[8] This list is adapted and extended from a similar list in the Field Review Draft (1992) of the *South Carolina Mathematics Framework,* which in turn based its list on the draft (1991) *Mathematics Framework for California Public Schools*, 51.

* students have a chance to revise and resubmit their work until it meets quality standards;

* students have access to the same quality of technology;

* the dynamic of students teaching students is harnessed through grouping strategies to leverage the teacher's instruction; and

* services are available to help students who have gaps in their skills and understandings.

The Important Role of Mathematics

In order to achieve Indicators 3-5, students need to understand the importance of mathematics in their own culture and in other cultures, they need to understand that their futures will be affected by their mathematics achievement, and that mathematics is indeed used by adults in their communities.

Mathematics in All Cultures

Mathematics plays an integral role in art, music, games, explorations, inventions, and commerce within virtually any culture. People in all societies have devised their own ways of doing mathematics, and an inclusive study of cultures and their various contributions to mathematics is an effective way to demonstrate its relevance to all students[9][10]. We suggest that teachers:

✓	*SUGGESTIONS*

✓ ask groups to research the role of mathematics in various fields of human endeavor, and to report to the entire class on their projects.

✓ design instructional units that help students experience how decisions involving mathematics are made in relation to the needs and practices of various cultures. Such discussions can be used to connect mathematics with other content areas such as history, literature, sociology and art. For example, when designing rugs or quilts (see vignette), students are using the mathematics of geometry and measurement. A broader topic is the use of patterns in various cultures — for example, in art or in clothing. Another topic might be the types of architecture which characterize various times and places. For instance, a study of housing might revolve around the concepts of size, shape, perimeter, and area, and may be used to develop skills of estimation and approximation. Types of housing might include an African round house, a tipi, an urban apartment, and a suburban ranch house. (NCTM, 1993, 54).

---

[9] For information about mathematics and culture, contact the International Study Group on Ethnomathematics, Math-Tech, 9155 N. 70th Street, Milwaukee, WI 53223.

[10] Some helpful sources are *Multicultural Mathematics Materials*, Marina Krause, NCTM, Reston, VA; *Ethnomathematics: A Multicultural View of Mathematical Ideas*, Marcia Ascher, Brooks/Cole Publishing Company, Pacific Grove, CA; and *Africa Counts: Numbers and Patterns in African Culture*, Claudia Zaslavsky, Warren Mill Books.

Mathematics, Folk Art and Literature: Making Connections

In a third grade classroom, students planned and then created a quilt as a culminating experience. As
a class, the children used measurement to divide the quilt into separate squares. Decisions about
symmetry, alignment, design, and effective use of space were addressed by the whole class. Then
each child designed one quilt square which represented an important piece of learning they valued
during the year. Next, students, working in cooperative groups, organized the separate quilt squares
into thematic groupings. Children looked for patterns among the separate quilt squares, proposed
several ways to organize the squares and reached consensus. Earlier, the children read several fiction
and nonfiction texts about quilting as a folk art. The finished quilt was displayed prominently at the
Board of Education for the entire school community to view.

✓ review the counting words in various languages and analyze the different schemes for counting; in
some cultures, for example, grouping is done by twenties, rather than by tens (NCTM, 1993, 54).

✓ use materials that reflect the diversity of cultural backgrounds of the students in the classroom or
school.

✓ include history of mathematics in daily lessons, including examples of male and female
mathematicians and scientists from a variety of cultures.

✓ be alert to the possibility that cultural perspectives may have the effect of discouraging some students
from succeeding in mathematics.

Mathematics in Their Future

Students need to be aware that the mathematics that they learn, the problem-solving that they do, will affect
their futures. One of the problems described in the New Jersey State Department of Education's *Directory of
Test Specifications and Items*[11] asks students to determine a schedule for employees at a fast food place so
that each employee has a reasonable schedule, so that sufficient staff is available at peak times, and so that
labor costs are minimized. Having the problem-solving skills to tackle this kind of problem will differentiate
between those who are eligible for managerial positions and those who be unable to advance beyond
minimum-wage positions. This point is also made by the National Action Council for Minorities in
Engineering's (NACME) "Math Is Power" video public service announcement and print materials[12].

Students need to be aware that mathematics is used by artists and musicians, by scientists who are involved in
space travel, and by designers of skateboards. This point is stressed in the following materials:

- *Mathematics: Making a Living, Making a Life*, a booklet demonstrating how mathematics is all around
  us, and *Mathematics: Making the Connection*, a video which shows viewers how a jazz musician,
  architect, and newspaper publisher connect mathematics to their daily lives and professions; available

---

[11]New Jersey State Department of Education. *Directory of Test Specifications and Items — 1991 Grade 11 High
School Proficiency Test.* Trenton, NJ, 1993.

[12]The National Action Council for Minorities in Engineering (NACME) is dedicated to expanding minority
participation in engineering and the sciences. NACME can be contacted at 3 West 35th Street, New York, NY 10001, by
phone at (212) 279-2626, or via their World Wide Web site http://www.nacme.org.

from the National Council of Teachers of Mathematics (NCTM)[13].

- *SETQuest Career Discovery* video, CD-ROM, and print materials that explore careers that use science and mathematics with candid career profiles of "on-the-job" educational requirements for a variety of careers; available from The Consortium for Mathematics and its Applications (COMAP)[14].

- *101 Careers in Mathematics*, biographical essays of individuals with careers that require a solid background in mathematics, and *She Does Math! Real Life Problems from Women on the Job*; available from the Mathematical Association of America (MAA)[15].

A very important way in which teachers can reinforce this message is to have community members come to the school and share their biographies and their experiences. Visitors should include both those whose professions are obviously mathematical or scientific and those who professions are not. In the first instance, the students will be impressed by their activities, and, in the second instance, they will be surprised at the problem-solving activities in which "ordinary" people are involved.

Overcoming Barriers to Equity

The third group of indicators focus on ensuring that all students are provided the opportunity to succeed in mathematics — that they receive the appropriate services and are treated equitably. In this section we discuss the variety of barriers to achieving equity in our schools and how those barriers can be overcome. These include the following types of barriers, each of which is discussed in a separate section below:

- attitudinal barriers — attitudes and beliefs of students, parents, and educators;

- gender barriers;

- economic, language, and disability barriers; and

- geographical barriers — special problems faced in urban and rural settings.

Overcoming Attitudinal Barriers to Equity

An important set of barriers to equity are the attitudes and beliefs of students, parents, and educators which influence student outcomes in mathematics.

Students' **attitudes toward mathematics** are an important factor in their learning of mathematics; those who enjoy mathematics and have confidence in their mathematical abilities are more likely to succeed. Studies have shown that minority students have positive attitudes toward mathematics in the primary grades. Like other students in the United States, however, they become less positive about mathematics as they proceed

---

[13]The National Council of Teachers of Mathematics (NCTM) catalog of materials can be requested by calling (703) 620-9840 or by e-mail orders@nctm.org.

[14]The Consortium for Mathematics and its Applications (COMAP) catalog of materials can be requested by calling 1-800-772-6627 or by e-mail order@comap.com.

[15]The Mathematical Association of America (MAA) catalog can be requested by calling 1-800-221-1622.

through school; both confidence and enjoyment of mathematics decline as students move from elementary through secondary school (NCTM, 1993, 22)[16]. Similarly, although girls do better in mathematics than boys in the early grades, a major drop in their self-confidence, and a concomitant decline in their performance, occurs in the fifth and sixth grades.

Students' **beliefs about mathematics** are also an important factor. Those for example who believe that all mathematics problems should be solved quickly will curtail their efforts if they encounter problems which take more than a few minutes, or if they find that a problem takes them more time than other students. Similarly, we have to be aware that all students experience both positive and negative emotions as they learn mathematics, and that students will develop negative beliefs about their mathematical abilities if their negative emotions are not balanced with positive emotions about mathematics. Learning mathematics is not always easy, and will at times generate frustration, but we must ensure that our students' experience of frustration is not converted into a sense of failure.

Another important factor is students' **beliefs about the utility of mathematics**. Majority students, in general, rate mathematics higher in utility than do minority students (The Mid-Atlantic Equity Center, 1992, 9)[17]. Males in general perceive mathematics as more useful and valuable to their futures than do females. One significant consequence of these differences in attitudes is that males are therefore more likely to take more mathematics courses and, as a result, have more desire and more opportunity to pursue mathematics-related careers.

Also important is **how students account for their success or failure in mathematics**. As noted earlier, in other countries success or failure in mathematics is usually attributed to hard work or its absence, whereas in the United States success or failure in mathematics is usually attributed to ability. *This is particularly true of female students, who tend to attribute their success to extra effort and their failures to lack of ability; males on the other hand, are more likely to attribute their success to ability and their failures to lack of effort.* Research on confidence in learning mathematics indicates that males tend to be more confident even when females have more reason (based on their achievement) to be confident.

Research indicates that **attitude and achievement interact with each other in subtle and often unpredictable ways**. For example, while students in Japan express a greater dislike for mathematics than students in other countries, they exhibit a very high level of proficiency in mathematics. More common here, however, is that identification as a low achiever, or placement in a lower track, has a negative impact on a student's self-confidence and belief in his or her own ability to learn mathematics.[18]

Finally, **peer pressure** is often a barrier to student achievement in mathematics. Students from underrepresented groups sometimes hold attitudes which are counter-productive and discourage their peers from achieving. Peer pressure to avoid academic excellence can be particularly difficult to combat among minority adolescents because they sometimes link it to majority cultural values or to disloyalty to their group (USDOE, 1993, 13).

---

[16] National Council of Teachers of Mathematics. 1993. *Reaching All Students with Mathematics*. Reston, VA.

[17] Mid-Atlantic Equity Center. (1992). *Opening up the Mathematics and Science Filters*. Washington, DC: The American University.

[18] *Mathematics Framework for California Public Schools*, California Department of Education, 62.

Attitudes and beliefs which discourage achievement are not limited to students; parents, educators, and policy makers also exhibit reduced expectations for some students.

Parents and teachers of high achieving girls sometimes reduce their expectations when girls reach adolescence out of concern that high achievement may jeopardize social approval. One mother refused to allow her seventh grade daughter to enroll in an algebra program for which she had been selected. She explained, "The stress of such a high powered class is likely to make her acne worse. She doesn't need that at her age." In class, teachers call on girls less frequently than boys, and tend to have shorter interactions with them. Well-meaning teachers also sometimes limit gifted girls to protect their popularity. In one eighth grade class, the two gifted boys were sent to the high school for math, while the parents of the two girls, who had similar abilities, were told that their daughters would be better served by remaining in the classroom because "there's a stigma for girls who go to the high school for math."

Parents and teachers of minority students also frequently believe that their children cannot be successful in mathematics and try to protect them by placing them in lower level courses; policy makers try to protect them by arguing against challenging expectations. While it is very difficult for students to overcome inadequate elementary and middle school experiences with mathematics, there is no reason to believe that minority students with positive early experiences with mathematics will not be successful in high school.

Parents who themselves had negative experiences with mathematics tend to transmit their apprehensions to their children and communicate that lower expectations in mathematics are acceptable.

It's a myth that some kids can do math and others just can't. It's a myth that girls are not as good at math as boys. It's a myth that children inherit trouble with math from their parents. We need to encourage *all* children to succeed in mathematics.

We suggest that teachers, schools, and districts:

✓	*SUGGESTIONS*

✓ use instructional strategies (see Chapter 17) that provide positive experiences for students and engender in them enjoyment in mathematics and confidence in their abilities to do mathematics.

✓ convey to students that it is normal to find mathematics frustrating at times and, through examples, that it sometimes takes a considerable amount of time to solve mathematical problems. (Students need to understand the difference between an exercise, which usually involves applying a simple specified procedure, and a problem, part of which involves determining what methods are appropriate.)

✓ maintain and convey high expectations for all children, and reinforce the message that all students can meet those high expectations.

✓ encourage students to strive for excellence in mathematics by providing opportunities for them to participate in math clubs, math teams, and other math activities[19].

✓ reflect on your own attitudes toward students and your expectations for them by answering the

---

[19] See footnotes 52-56 for information about these kinds of activities.

following self-reflective questions[20]:

* How do I interact with girls, minority students, and "low achievers" in class?

* Do my interactions reflect lesser expectations for some groups than for others?

* Do I believe that all students can learn mathematics?

* Do I interact more with the "high achievers" and give less attention to "low achievers?"

* Do I ask more questions and questions requiring higher levels of thinking to the "high achievers?"

* Do I provide sufficient wait time for all students to formulate responses to questions?

* Do I seat "high achievers" more closely to myself than "low achievers?"

* Do I praise "high achievers" more often than "low achievers?"

* Do I provide detailed feedback to "high achievers" and provide less precise feedback to "low achievers?"

* Do I demand more work and effort from "high achievers" and accept less work and work of a lower standard from "low achievers?"

* Do I provide a positive classroom environment in which students are willing to share their questions and their answers without fear of being blamed or shamed?

✓ provide effective professional development for teachers who lack sufficient content knowledge, or who have a limited instructional repertoire.

✓ use positive peer influence to help shape the attitudes and beliefs of students. Peer tutoring, especially between younger students and older peer tutors, can increase students' interest and motivation.

✓ seek actively to dispel parental myths their children must inherit their anxieties and difficulties with mathematics.

✓ communicate with parents and encourage them to encourage their children to learn mathematics, even if their own experiences were not positive.

✓ utilize adult members of the community to help shape students' attitudes about mathematics and help them recognize the usefulness of mathematics in their future careers. Female and minority members of the professional community who use mathematics in their daily jobs and lives can be enlisted to serve as role models for female and minority students and to help others recognize the contributions and possibilities of women and minorities.

✓ obtain information about how other schools and districts are addressing issues of equity[21].

---

[20] Adapted from *Opening Up the Math and Science Filters*, MidAtlantic Equity Center, 1992, 1-7.

[21] A good source is districts involved in the New Jersey Statewide Systemic Initiative (NJ SSI), "Achieving Excellence in Mathematics, Science and Technology Education" funded by the National Science Foundation and the New Jersey Department of Education. The NJ SSI is committed to the advancement of equity, and districts involved in NJ SSI can provide assistance in planning and implementation. For further information, call Roberta Schorr at (908) 445-2342.

✓ review and make use of the literature[22] [23] [24] on equity in mathematics education.

Overcoming Gender Barriers to Equity

An equitable learning environment is one that encourages the mathematics development of male and female students from every cultural background. We suggest that teachers:

| ✓ | *SUGGESTIONS* |

✓ self-assess your individual beliefs and habits in regard to gender-role stereotyping. Ask the following self-assessment questions[25] [26]:

* do I believe females are less capable in mathematics than males?
* do I allow male students to control the discourse?
* do I interact more with male students than female students?
* do I encourage risk-taking and autonomous behavior in female students?
* do I believe it is more important for the boys to "get it?"

Check your responses by inviting a friend to tape your class and then analyzing your interactions on the tape with male and female students.

✓ avoid using the technique of increasing attention to and interaction with boys as a method for controlling the class. There is an apparent benefit to paying more attention to male students or allowing them to call out the answers, since it keeps the class on task and discourages disruptive activity. On the other hand, an important consequence is that it permits many female students to remain passive in their dealings with mathematics and invisible in the mathematics classroom.

---

[22] The Consortium for Educational Equity at Rutgers University, New Brunswick has the nation's most extensive library collection on equity in mathematics and science education. Subject bibliographies are created and updated on a regular basis to highlight the collection and to assist borrowers in reviewing materials they wish to use. Bibliographies on the following topics are particularly relevant: Cooperative Learning, Educational Equity: Training and Technical Assistance, Equity in Science and Mathematics, Futures Unlimited: Career Information, Futures Unlimited in Mathematics and Science (grades 7-12), Guidance and Counseling, Science-Related Storybooks for the Classroom, Science Stuff for Girls and Boys (grades K-6), Sources for Resources (for Librarians and School Library Media Specialists). In addition, subject bibliographies which support the understanding of the major cultural/ethnic groups in New Jersey have been developed for educators. Contact the Consortium at (908) 445-2071 to gain access to its collection.

[23]The Mid-Atlantic Eisenhower Consortium for Mathematics and Science Education, located at Research for Better Schools, Philadelphia, has published a useful resource guide, *Equity Materials in Mathematics, Science, & Technology*, by Marylin A. Hulme. This guide includes print materials, resources for career information, and audiovisual materials for use with students and also in staff development programs. All the materials listed in this guide are included in the collection in the Resource Center at the Rutgers Consortium for Educational Equity, and are available for borrowing. For a copy, please call Research for Better Schools (215) 574-9300.

[24]The Mid-Atlantic Eisenhower Consortium for Mathematics and Science Education maintains a World Wide Web Page dedicated to Equity Issues in Mathematics and Science. The address of this page is http://www.rbs.org/eisenhower/res_equity.html/. From this page you can link to a wide variety of equity sites.

[25] List adapted from *Teaching Mathematics Effectively and Equitably to Females*, Katherine Hanson, ERIC Clearinghouse on Urban Education: New York, NY, 1992, 31.

[26] See also the list referenced in footnote 20 which is adapted from *Opening Up the Math and Science Filters*.

✓ use language and materials that are free from gender-role stereotyping[27].

✓ provide career examples early in life to female students and encourage them to develop as mathematical thinkers. Research shows that girls do not think about advancing in mathematics because they have no idea of how they could use it in life (Hanson, 33).

✓ consider the following recommendations of the Institute for Urban and Minority Education[28]:

* use situations that introduce girls and boys to a variety of mathematical-related career options;
* provide role models of men and women working in mathematics, technology, and the sciences;
* encourage female students as well as male students to participate in extracurricular math and science activities;
* be sensitive to the meanings of words — children do not translate "man" to mean both "man" and "woman";
* encourage female students as well as male students to explore;
* introduce female and male students to action toys and activities such as team sports which increase their spatial visualization skills;
* make mathematics fun and appealing to both male and female students, using word problems that relate to the interests of both and that emphasize non-stereotyped roles;
* devise comfortable ways for students of both genders to play and interact;
* teach mathematics to young children through play; and
* discover early and correct promptly gaps in previous mathematical education so as to encourage both female and male students to continue in mathematics.

Overcoming Economic, Language, and Disability Barriers to Equity

Overcoming economic barriers to equity. More than 20% of the school children in the United States come from families in poverty (USDOE, 1991,1)[29]. In New Jersey, more than 11.5% of school children are below the poverty line[30]; of those who are in families with three or more children, over 20% are below the poverty line[31]. A greater percentage of these children experience failure at every level when compared to children from the middle class. Research points to three characteristics of the instruction these children typically

---

[27] Marylin A. Hulme of the Rutgers Consortium for Educational Equity has developed a series of questions for teachers and curriculum specialists to use when evaluating mathematics books for bias and stereotyping. These "guidelines" are intended to make the users aware of how the texts and illustrations depict girls and boys, women and men, the language used, and the roles that are assigned to both females and males. *The Guidelines for Evaluating Mathematics for Bias* can easily be used in conjunction with an evaluative chart/checklist. For more information, call (908) 445-2071.

[28] List adapted from *Teaching Mathematics Effectively and Equitably to Females*, Katherine Hanson, ERIC Clearinghouse on Urban Education: New York, NY, 1992, 31.

[29] United States Department of Education. (1991). *The Search for Effective Instruction of Children of Poverty.* Washington, DC.

[30] United States Department of Education. Digest of Education Statistics (1994), Table 20: Household Income and Poverty Rates. Based on information from United States Department of Commerce, Bureau of the Census.

[31] New Jersey State Data Center, New Jersey Department of Labor. Table S6: Family Poverty Status in New Jersey. (November 1994). Based on information from United States Department of Commerce, Bureau of the Census.

experience that exacerbate problems with learning: *low expectations for what they can accomplish, misdiagnosis of their learning difficulties, and a failure of the schools to reexamine and restructure programs for these students* (USDOE, 1990, 6)[32]. What steps can we take to ensure equity for disadvantaged students? We suggest that teachers:

```
┌─────────────────────────────┐
│ ✓  │      SUGGESTIONS        │
└─────────────────────────────┘
```

✓ provide instruction that utilizes students' prior knowledge, especially from real-work experience. Research indicates that minority students, for example, perform best in mathematics classes when the content is related to their previous experience (Mid-Atlantic Equity Center, 1992, 1-3). Thus, while recognizing the gaps in the students' formal knowledge, teachers need to build on students' experiential knowledge while at the same time expanding their knowledge base.

✓ provide mathematics instruction that is rich with problems and activities which connect mathematics to the everyday experiences of students. Activity-based programs have been demonstrated to significantly improve minority student performance in mathematics and science process skills (Mid-Atlantic Equity Center, 1992, 1-4). Supplement instruction with field trips to laboratories, college campuses, various worksites, and other similar places where it is apparent that mathematics is relevant and useful to the tasks at hand.

Overcoming language barriers to equity. Students who are not native English speakers are at a disadvantage in English-speaking mathematics classrooms and when taking tests constructed for English-speaking students. We suggest that teachers:

```
┌─────────────────────────────┐
│ ✓  │      SUGGESTIONS        │
└─────────────────────────────┘
```

✓ use tools other than those that require English language proficiency in assessing the students' mathematical understanding and in making decisions about which mathematics courses should be taken by students who are not native English speakers. As their language skills improve, so will their performance in mathematics class.

✓ facilitate both learning of mathematics and proficiency in English[33] by

* designing and implementing activity-based programs in mathematics with built-in linguistic objectives;
* teaching mathematics as a component of bilingual programs;
* having students participate in purposely structured cooperative learning groups which will provide development in oral and written communication skills and enhance the student's academic self-image;
* instructing students in problem-solving strategies which include tools for decoding words and phrases; and
* presenting mathematics content in simplified or "sheltered" English. This has been shown to increase language competencies.

---

[32] United States Department of Education. (1990). *The Search for Effective Instruction of Children of Poverty*. Washington, DC.

[33] Recommendations of the MidAtlantic Equity Center, 1992, I-4.

✓ make use of the literature on ESL instruction[34].

Overcoming disability barriers to equity. Research indicates that students with disabilities often have low academic self-images (The Mid-Atlantic Equity Center, 1992, 1-5). Neither special programs nor mainstreaming have been shown to significantly reduce these negative beliefs about the self. Poor self-image often persists from elementary through secondary school. Students with disabilities can master the curriculum content requirements for a high school diploma (NYDOE, 1994, 91)[35]. Many can attend regular classes when provided with supplemental instruction and services. It is important, therefore, that such students receive instruction, from the elementary years on, in the core curriculum in mathematics recommended by the Standards. Following are some suggestions[36]:

✓	*SUGGESTIONS*

✓ enrich the mathematics program and classrooms by using technology in order to enhance learning experiences of students with disabilities[37].

✓ use a partner or assistant to work with the students with disabilities in the classroom as an additional resource to clarify classroom discussions and activities.

✓ encourage students to express their understanding, both with a partner and with the teacher.

✓ provide a suggested timeline and benchmarks for extended tasks and projects to students who have difficulty with organizational skills.

✓ use alternative testing strategies by modifying testing procedures and formats.

✓ align the mathematics and special education programs by providing teachers with collaborative planning time.

✓ provide professional development opportunities for special education teachers that further enhance their own mathematical backgrounds.

✓ provide special education teachers and students with video and audio tapes of classroom activities and discussions for further review.

Overcoming Geographical Barriers to Equity

Overcoming barriers to equity in urban schools. Students in urban schools present a special challenge for mathematics educators. Among the issues are:

---

[34] Some helpful sources are *Children and ESL: Integrating Perspectives* (TESOL, Washington, DC, 1986) and *When They All Don't Speak English: Integrating the ESL Student into the Regular Classroom*. (NCTE: Urbana, IL, 1989).

[35] New York Department of Education. (1994). *Curriculum, Instruction, and Assessment Framework for Mathematics, Science, and Technology*. New York, NY.

[36] List adapted from *Curriculum, Instruction, and Assessment Framework for Mathematics, Science, and Technology*, New York Department of Education (NYDOE), 1994, 91-92.

[37] Suggested resources are: *Directory of Resources of Technology for Special Education* and the May/June 1992 issue of *Technology and Learning*.

More time on task: Many urban students are behind, and getting farther behind every year. Thus one key element of an equitable curriculum is providing students with the classroom time required to catch up.

Engaging students: Additional instructional time alone is not sufficient. It must also be used well — just doing more of the same will not spark students' interest or inspire achievement. We need to get beyond basic skills and present students with tasks, challenges and perspectives that are varied, interesting, and appropriate for employment and citizenship in the 21st century.

Contextual learning: Because urban students often have a very different experience base, standard classroom approaches that have been developed for students with middle-class backgrounds may seem foreign or contrived. We need to embed mathematical principles and learning within a range of projects and activities which students can identify as authentic.

Encouraging positive interactions: To overcome the negative peer pressure which devalues achievement in mathematics, we need to encourage students to have more positive and productive interactions in a mathematical context.

<div align="center">

✓	*SUGGESTIONS*

</div>

✓ provide opportunities for additional time on mathematics though additional instructional sessions, tutoring by teachers and students outside of class, tutoring by adults in the community, after-school access to technology, and summer sessions.

✓ select and design learning activities and projects which incorporate the use of mathematics in familiar contexts of interest to students. These could include locally important employment markets, the natural environment, educational puzzles and games, and sports or entertainment. Also appropriate are:

* team-taught lessons or units with science teachers;
* reports and projects jointly assigned and assessed with English teachers;
* integrated lessons or projects with vocational teachers;
* field trips to science museums and work sites;
* use of technology to support both individual learning and group projects;
* team-taught lessons with bilingual and ESL teachers, who sometimes are not aware of potential opportunities to enrich their lessons with mathematical perspectives; and
* curricula specifically designed to incorporate hands-on mathematics laboratory activities such as *Applied Mathematics*[38].

✓ accommodate students with varying levels of proficiency in mathematics and monitor progress daily; the following practices[39] will help meet the needs of individual students:

* start from where students are;
* do not needlessly review;

---

[38] *Applied Mathematics* is a set of 36 modular learning materials prepared to help high school students and others develop and refine their job-related math skills. It was developed by a consortium of 41 states, in cooperation with the Center for Occupational Research and Development (CORD) of Waco, Texas.

[39] Zalman Usiskin (Director, University of Chicago School Mathematics Project), *If Everybody Counts, Why Do So Few Survive?* in *Reaching All Students with Mathematics*, NCTM, 1993, Reston, VA.

* do not undermine students' self-confidence by placing them in courses for which they are unprepared;
* allow students of different ages to do the same mathematics together;
* provide remediation immediately and powerfully;
* use technology; and
* incorporate applications and real problem solving into the curriculum.

✓ determine the different learning style preferences of students, and design activities to accommodate a wide variety of learning styles.

✓ use cooperative learning techniques to encourage students to interact positively and productively with each other.

✓ use a variety of instructional styles and learning modes to capture and keep the attention of the students.

✓ provide professional development to teachers about learning styles and instructional strategies and help them to implement their new knowledge in their own classrooms.

✓ inform students about opportunities in higher education.

✓ review Chapters 17, 18, and 19 for further information about instructional strategies, assessment, and technology.

Overcoming barriers to equity in rural schools. Because of their relatively small size and less adequate resources, many rural school districts cannot afford to have as broad a curriculum or as many specialized teachers as do wealthier districts. Moreover, they often offer a narrower range of courses and require individual teachers to cover more subjects than their larger counterparts. Rural students often are shortchanged when it comes to more advanced courses. The Children's Defense Fund (Sherman, 1992)[40] has reported, for example that (1) calculus was offered by approximately 33% of rural schools in the early 1980s, 50% of urban schools, and 67% of suburban schools, and (2) advanced placement classes — which offer talented students an important head start on earning college credit — were available in only 20% of the nation's rural schools in the early 1980s compared to nearly 50% of the suburban schools.

With regard to achievement, average rural achievement scores in most subjects are reported to be slightly below those in metropolitan areas and far below those in suburban areas. The Children's Defense Fund report cites a National Assessment of Educational Progress (NAEP) study conducted in 1981-1982 that provided a picture of students' mathematical skills based on the population size of the community where they attended school. Consistently students in the smallest communities and largest cities performed slightly below average in math. Students in medium-sized cities and suburbs performed somewhat better than average. These results suggest that communities at both extremes of population size face special problems in education.

In a more recent analysis of the assessment of student performance in rural schools[41], the following data is

---

[40] Sherman, A. (1992). *Falling by the Wayside, Children in Rural America.* Washington, DC: Children's Defense Fund.

[41] Stern, J.D., ed. (1994). *The Condition of Education in Rural Schools*. Washington, DC: US Department of Education, Office of Educational Research and Improvement.

reported: On the National Assessment of Educational Progress mathematics assessments in 1978 and 1982, the mean proficiency scores for rural students were below the national average. By 1986 and again in 1990, however, rural mean scores essentially matched the national average. The study also reported data on the National Education Longitudinal Study of 1988, indicating that rural 8th graders scored at about the national average on measures in mathematics, but that they scored significantly lower than their suburban counterparts.

<div align="center">

✓	*SUGGESTIONS*

</div>

The Children's Defense Fund recommended that states and school districts take a variety of steps to improve rural students' access to a broad range of programs and courses, including the following four points:

✓ all school districts should eliminate tracking and ensure that all students are taught a rigorous core curriculum.

✓ school districts should aggressively explore distance learning technologies that bring interactive classes to rural schools via satellite and interactive video; federal and state governments should promote distance learning, for example by expanding the Federal STAR schools program.

✓ states or consortia of schools should fund regional alternative schools or specialized magnet schools to increase the range of programs available to students.

✓ rural districts should not become distracted by issues such as consolidation of school districts with small populations. Consolidation is neither a magic answer, nor always a disaster. Communities must focus on the real need — good teachers in good facilities with good support.

Challenging All Students to Maximize Their Achievement

All students should be challenged to reach their maximum potential. For many students, the core curriculum recommended here will indeed be challenging. But if we do not provide this challenge, we will be doing our students a great disservice — leaving them unprepared for the technological, communication, and information age of the 21st century.

For other students, this core curriculum itself will not be a challenge. We have to make sure that we provide these students with appropriate mathematical challenges. We have to make sure that the raised expectations for all students do not result in lowered expectations for our high achieving students. A core curriculum does not exclude a program which challenges students beyond the expectations set in the Standards. Indeed, the *New Jersey Mathematics Standards* calls for all schools to provide opportunities to their students to learn more mathematics than is contained in the core curriculum.

Students who learn quickly, who have a high level of interest in mathematics, who are industrious and who are bored with repetition, are often under-challenged, and therefore, may not achieve their full potential. Most top students in the United States are offered a less rigorous curriculum, read fewer demanding books, complete less homework, and enter the work force or post-secondary education less well prepared than top

students in many industrialized countries (USDOE, 1993, 5).[42]

Poor preparation in elementary and secondary school translates into student performance far below their potential. Only one-half of America's high-ability high school seniors from the class of 1980 (the top 25 percent as indicated by achievement tests) were estimated to have received a bachelor's degree by 1987, and only one in eight had entered a graduate program in any field by that date. In addition, U.S. students are not aspiring to, or are not qualifying for, our graduate programs in mathematics. In 1990, 57 percent of doctorates granted in the United States in mathematics went to students from other countries (USDOE, 1993, 11).

Most elementary and secondary school programs for students termed "gifted and talented" are often modest in scope. "The vast majority of talented students spend most of the school day in a regular classroom where little is done to adapt the curriculum to their special needs." The exceptional programs — specialized schools, magnet schools, and intensive summer programs — serve only a fraction of the secondary students who might benefit. Moreover, dual enrollment (where secondary school students also enroll in college) is uncommon (USDOE, 1993, 21-22).

Effective programs do, however, exist around the country; programs such as residential schools, summer activities, and enriched curricula are often aimed at developing analytical thinking skills in students, and often offer innovative approaches to scheduling and other organizational aspects of the mathematics program. In the past, these approaches generally "have not been implemented in regular education because educators did not realize their potential for improving all of American education. Now, however, many educators believe that the knowledge gained from these and other outstanding programs can be used to upgrade all of education."[43] (USDOE, 1993, 23).

Accordingly, the USDOE makes the following recommendations:

* expand effective education programs and incorporate more advanced material into the regular school program;
* provide all students with the opportunities to solve problems, analyze materials and situations, and learn from real-life experiences;
* identify students who need individual or special opportunities, using test data only as appropriate;
* serve especially talented students in many places: the regular classroom, special class, the community, at a university or a museum, in front of a computer, or anywhere the opportunity meets the need; and
* create flexible schools that enable all students, including the most able, to be grouped and regrouped according to their needs and interests (USDOE, 1993, 24).

Assessment and Learning

---

[42] United States Department of Education. (1993). *National Excellence: The Case for Developing America's Talent.* Washington, DC.

[43] The Accelerated Schools Project at Stanford University is a process based on whole school change which has shown remarkable results. When at-risk students are provided with the rich and varied approaches usually reserved for the gifted, their learning is accelerated. For further information, contact Dr. Henry M. Levin at (415) 723-0840 or at the Accelerated Schools Project, Stanford University, Stanford, California 94305.

A statewide assessment which assesses student understanding of the *Mathematics Standards* will be a major step in ensuring that all students indeed receive and learn the core curriculum. The New Jersey Department of Education is developing a fourth-grade statewide assessment aligned with the *Mathematics Standards*, called the Elementary School Proficiency Assessment (ESPA), and over the next few years will adapt the Eleventh-Grade High School Proficiency Test (HSPT) and the Eighth-Grade Early Warning Test (EWT) so that will continue to evolve to reflect the *Mathematics Standards*. The expectation is that these statewide assessments will reinforce the message of high achievable standards for all students and will support the vision of mathematics education reflected in the *Mathematics Standards*.

At the local level, we must move away from the notion that the major purpose of assessment is to filter out students, and move toward the notion that the major purpose of assessment is to improve learning. In order for assessments to serve this purpose, they must enable each student to demonstrate what he or she understands and is able to do. This is what equity implies in the context of assessment. This cannot be accomplished by any single instrument, and certainly not by one whose grading is only in terms of correct and incorrect. Assessments which are timed favor those who work best under those conditions, and assessments which are interactive favor those for whom interaction is an important component of learning. If the focus of assessment is improving learning, and not simply ordering students against a linear standard or preparing grades for a report card, then multiple options become available to the teacher.

Regular use of a variety of assessments, such as those discussed in Chapter 18, can provide the teacher and each student with specific information about his or her progress, so that efforts can be initiated, with both individual students and with entire classes, to address promptly any problems that students are having with the mathematical topics under discussion.

In discussing criteria for choosing an equitable set of assessments, one should consider how the assessments[44]:

* support the vision of New Jersey's *Mathematics Standards*;
* enable students with diversity in experience and mathematical sophistication to respond to the assessments in ways that demonstrate what the students know and can do;
* individually and collectively provide a composite picture of each students' understanding and skills;
* communicate effectively to the student the mathematics problems being posed (using appropriate and multiple representations, including verbal descriptions, graphs, and other visuals);
* support the learning of students who are bilingual or are developing their use of the English language;
* encourage self-assessment and reflection leading to self-improvement, and motivate students to take responsibility for their learning;
* occur under conditions (i.e., space, tools, and time) that enable each student to exhibit best work; and
* seem reasonable for all students to complete in terms of outside school requirements, including access to libraries, technology, and other resources, affordability, and family and time constraints and responsibilities.

Community Involvement

---

[44] Adapted from the *Assessment Standards for School Mathematics*, National Council of Teachers of Mathematics (1993, 86-87).

Support from the community is essential for achieving equity and excellence. We must communicate to parents our message that all children must and can succeed in mathematics, and encourage them to communicate that message to their children. On the other hand, the community at large is a resource that can be tapped for services in extending students' mathematical experience beyond the school day and beyond the school curriculum. How then do we involve community members and parents? We suggest that teachers, schools, and districts:

✓	*SUGGESTIONS*

✓ convey to parents the message that all children must and can succeed in mathematics[45], and encourage them to communicate that message to their children.

✓ convey to parents that even though they may have had negative experiences with mathematics when they were in school, their children need to be encouraged to succeed in mathematics.

✓ enlist parents, retired persons, and local business people to serve as mentors, tutors, translators, and encouragers.

✓ enlist guests from local business and industry to share their personal and professional biographies in the fields of mathematics and science.

✓ make arrangements for students to have adequate study facilities (in schools and in the community) and access to technology during after-school hours.

✓ arrange after-school study groups and encourage parents to exchange phone numbers so that students can review classwork and discuss homework.

✓ establish a homework hotline[46] [47].

✓ sponsor activities for parents and students each April during Math, Science, and Technology Month[48] (and at other times of the year) which involve parents actively in mathematics and which inform them about the kinds of mathematical activities that are taking place in the school, and how they reflect national and state recommendations.

✓ provide opportunities for ongoing mathematics education for parents and other adults. Programs such as Family Math[49] can be initiated to increase parents' awareness of the need for mathematics and its role

---

[45] The New Jersey Mathematics Coalition has produced a guide for parents, *Mathematics to Prepare our Children for the 21st Century: A Guide for New Jersey Parents*. This document can serve as support for your message, and as an outline for a group discussion. Call (908) 445-2894 to purchase single or multiple copies of the revised Parents' Guide.

[46] The Richard C. Crockett Middle School (Hamilton Township, Mercer County) has had a homework hotline since 1990. Call (609) 890-3800 for information.

[47] The Extra Help Homework Hotline is a live call-in program for Newark students, which airs each Tuesday on Channel 3 (Cablevision) from 3:30 to 5:30 p.m. (with taped repeat on Wednesday from 8 to 10 p.m.). For information call Kenneth Herskovits, Central High School, at (201) 733-8656 or, in the evenings, at (212) 733-8656.

[48] For additional information about Math, Science, and Technology month contact: The New Jersey Mathematics Coalition, P.O. Box 10867, New Brunswick, NJ 08906 or call (908) 445-2894.

[49] Family Math is an innovative parental involvement program which provides parents and children in grades K-8 with opportunities to build understanding of mathematical concepts using inexpensive hands-on materials such as beans, toothpicks, and coins. The teaching emphasis is on doing mathematics; time is not spent on worksheets or in a lecture format. Children and adults come together once a week for six weeks to work cooperatively, learn to reason and think

in shaping the future successes of their children. Family Math offers activities for parents and their children which heighten children's interest and encourage parental support for mathematics.

✓ reach out to parents who appear nonsupportive and who do not participate by conducting activities where parents normally congregate, such as churches or community rooms in housing projects, and by offering a wide variety of opportunities for involvement which require a low level of commitment, such as establishing friendly home to school communications.

✓ encourage parents to engage their children in extra-curricular mathematics projects in the home[50]

EQUITY 2000[51], a project of the College Board, has as its goal to close the gap in the college-going and success rates between minority and non-minority students, and advantaged and disadvantaged students by proposing academic excellence for all students. This is accomplished through:

* creation of district-wide policy changes to end tracking and raise standards for all students, beginning with the requirement that all students complete algebra by the ninth grade and geometry by the tenth grade, and including reform of the curriculum to reflect standards set by the National Council of Teachers of Mathematics and other discipline-based organizations;

* establishment of ongoing professional development for teachers, counselors, and principals to increase their professional knowledge and skills and to raise their expectations for students;

* improvement in schools' involvement with students' parents and families to create a consistent climate for learning as well as to empower parents to be advocates for their children's education;

* development of a "safety net" for students through academic enrichment programs that provide extra academic support;

* formation of school-community partnerships that include links with colleges and universities, the business community, and community-based organizations; and

* use of student course enrollment and achievement data broken down by ethnic group and gender to monitor progress toward reform goals.

---

logically, and talk about the ways they are solving problems. Teachers act as facilitators, encouraging cooperation, motivating students in future careers and everyday life. All Family Math activities underscore the NCTM Standards and complement the school mathematics curriculum. Developed by EQUALS at Lawrence Hall of Science, University of California, Berkeley, Family Math was introduced to New Jersey schools by the Rutgers University Consortium for Educational Equity in 1985. Three-day workshops are offered by the Consortium for teachers and parents who want to conduct Family Math courses in their school. Other parent involvement programs include Family Science and Family Tools & Technology. For further information call: (908) 445-2071.

[50]Partners for Reform in Science and Math (PRISM) videos and outreach sheets show parents how to become involved in their children's mathematics and science education. PRISM is a collaboration between the National Urban League and Thirteen/WNET. To order materials call the Annenberg/CPB Math and Science Collection at 1-800-965-7373.

[51] For further information about EQUITY 2000, call (212) 713-8268.

Extracurricular activities such as math clubs[52] [53], math teams[54] [55], and other math activities[56] can also be used to encourage students to strive for excellence in mathematics.

Identifying Equity Concerns in Districts and Schools

In order to address the issues raised in this chapter, each district, each school, and each individual educator needs to reflect on the issues in conjunction with a realistic appraisal of their situation. Most of the suggestions in this chapter are addressed to teachers; this section, however, is addressed to school and district administrators.

Identifying Equity Concerns in Districts

In order to assure that we are providing an equitable learning environment for all students, we must review all district policies and practices which have an effect on equity. Each district should review the following questions, and consider the consequences, intended or unintended, of its policies and practices in each of these areas:

Administrative Policies and Practices

* What are district policies on equity issues in general, and mathematics education in particular, including such areas as employment, school and classroom practices, student treatment, etc.?
* Has the district discussed and adopted an explicit statement on equity?
* What are district policies on tracking and grouping students in mathematics?
* What are district referral and classification practices for special education?
* What are district practices and expectations regarding various groups of children — gifted, basic

---

[52] A Math Club in your school provides an opportunity for students to pursue their interests in mathematics beyond the curriculum. Even some elementary schools offer after-school activities for interested students. One way to start is to offer a challenging problem to students in your grade or post it in all the math classes. Students may be encouraged to submit solutions and the solutions can be presented and discussed, with prizes for correct solutions, at the first meeting of the Math Club! For information about math clubs and the over 50 math contests that are available each year to stimulate your "mathletes", contact David Marain, Sparta High School, 70 West Mountain Avenue, Sparta, NJ 07871 or email dmarain@ix.netcom.com or call (201) 791-3118 (PM).

[53] MATHCOUNTS is a nationwide program that promotes math excellence among junior high school students and helps them and their parents become aware of career opportunities in math. Funded by the National Society of Professional Engineers and business and industry, MATHCOUNTS also sponsors a contest for "mathletes". For information, call (703) 684-2828.

[54] Enter your high school in the New Jersey High School Math Contest and encourage your students to participate. Sponsored by the Association of Mathematics Teachers of New Jersey, the contest is held each November. For information, call Mary E. Froustet at 908/686-2767.

[55] Enter your middle school in **Solve It**, a Middle Grades Mathematics League. For information, write to the League Director, William B. Moody, Solve It, University of Delaware, Dover, DE 19716-2901 or call (302) 831-1658.

[56] Students in grades 8-12 can participate in the Gelfand Outreach Program in Mathematics at Rutgers University, and work on monthly problem sets which are reviewed by Rutgers faculty and graduate students. For information, call Harriet Schweitzer at (908) 445-0669.

---

skills, compensatory education, language-minority, etc. children?

* What are the very highest expectations of the school district, for those students who are most successful in mathematics, science, and technology? To what extent are such high expectations encouraged widely, and to what extent might opportunities to achieve them be artificially or unnecessarily limited?

* How do individual school's student populations reflect the racial/ethnic composition of the district as a whole?

* What happens to students after they complete school in the district?

* Are funds specifically allocated to advance equity concerns?

* Do teaching assignments in mathematics and other teaching and administrative areas reflect the racial/ethnic diversity of the larger community and provide role models for all students?

* What kinds of professional development activities are available to teachers, administrators, and guidance counselors to sensitize them toward the integration of equity and diversity in mathematics, science, and technology education?

* What kinds of professional development activities are available to teachers which reflect the mathematics and science standards?

* What kinds of professional development activities are provided to teachers regarding instructional/learning styles, expectations, teacher/student interaction?

* Are professional development activities available to guidance counselors which focus on expectations, equity, and career development activities to encourage students to consider careers in mathematics and science?

Curriculum, Instruction, and Assessment

* Are curriculum materials for mathematics and other subject areas free of bias? Do they represent all groups and encourage the participation of all students?

* Are curriculum materials and instructional practices aligned with the recommendations of the *New Jersey Mathematics Standards*? Are equity issues addressed in implementation?

* Are a variety of teaching strategies in mathematics used?

* To what degree are cooperative learning groups in mathematics used to encourage all students to be actively engaged?

* What kinds of alternative assessment strategies are being utilized to assess student achievement in mathematics, science, and technology education?

* What are the requirements in mathematics, science, and technology for students? Do the requirements differ for different populations of students?

* What is the level of participation of underrepresented students in advanced and honors mathematics courses? What are the percentages for the traditionally-achieving students?

* How are students selected to participate in advanced and honors mathematics and science courses? What criteria are used to make this selection?

* Are guidance counselors involved in conveying to students the importance of mathematics and science education? In what specific ways do they reach out to underrepresented groups of students to encourage them to pursue courses and careers in mathematics and science?

* How are students encouraged to see mathematics and science as integral to the development of all

cultures and civilizations?

* How is the relevance of mathematics to all careers demonstrated?

Community Outreach

* Have parents been involved in the district's mathematics and science reform efforts?

* Does the district offer opportunities for parents to learn about the importance of mathematics and science education, and to enable them to assist their children in learning these subjects?

* What kinds of outreach strategies have been targeted to parents to educate them about the kinds of mathematics, science, and technology courses and programs that are available to students in the district?

* In what specific ways have local business, industry, and community organizations been involved in district mathematics and science reform efforts?

Identifying Equity Concerns in Schools

Teachers and supervisors do not have much control over the areas enumerated above, especially policy areas where the responsibility belongs to the district. But those of us who are teachers and supervisors do have a lot of control over what happens in our classrooms and in our school buildings.

In order to identify equity concerns in our schools, a first step might be to take a good hard look at what is happening in the school. We should start by collecting data to ascertain how many students from each group are enrolled in the various courses offered by the school.

Such data, disaggregated by relevant groups, might include:

* enrollment data for high school mathematics and science classes;

* numbers of students in various tracks at various grade levels, including gifted and talented programs and special education; and

* achievement data including grades and test scores in mathematics and science.

For instance, you might want to review enrollments in 12th grade mathematics courses; you should go back a year or two in collecting data and use a table like the one below (with additional rows and columns as appropriate) which presents information by gender and ethnicity.

Such tables will provide information to answer questions like the following:

* How many students are not taking any math courses in their Senior year?

* To what extent are various groups underrepresented in advanced math courses?

* Are some groups underrepresented among students who take math in their senior year?

* Are some groups overrepresented among students who enroll in senior year math courses but fail to complete them satisfactorily? (To respond to this question, you would need two tables, one recording numbers of those who register and the other recording numbers of those who complete the various courses.)

* What is the selection process for admission to advanced math classes? Does it allow too few students in? Can students elect to take these courses or do they have to be selected? Can students

take multiple advanced courses or must they choose between mathematics and another discipline?
* What are the grades of students from different groups?
* How many girls and boys move "up a level" (e.g., from average to above average) in math and science courses each year? How many move "down a level" (e.g., from honors to above average)?

Number of Students	African American		Asian		Hispanic		White	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
AP-Calculus								
Calculus (non AP)								
Pre-calculus								
Consumer Math								
Basic Skills Math								
General Math								
Discrete Math								
Prob./Stat.								
No math course								
TOTAL STUDENTS								

In other areas, the data to review would be suggested by some of the questions in the previous section on district responsibility. For instance are some groups more likely than others to be classified as learning disabled? Are factors unrelated to educational need encouraging these differential assignments? Are "special education" children getting the levels of mathematics they are capable of?

Once problems are identified, the next step should be to develop a plan for corrective action which will include a review of policies and practices which may have had the effect of discouraging the achievement of some groups. Suggestions for overcoming the barriers to equity in our schools are provided in the preceding section of this chapter.

References

Association for Women in Mathematics. *Careers that Count*. Wellesley, MA, 1991.

California Department of Education. *Mathematics Framework for California Public Schools*. E. O'Malley, ed. Sacramento, CA, 1992.

Campbell, P. and Storo, J. *Whose Responsibility is it? Making Coeducation Work in Math and Science*. US Department of Education. Office of Educational Research and Improvement, 1994.

Center for Occupation Research and Development. *Applied Mathematics*. Waco, TX, 1993.

Consortium for Educational Equity. *Guidelines for Evaluating Mathematics Books for Bias*. Marylin A. Hulme, ed. New Brunswick, NJ, 1994.

Gamoran, A. *Is Ability Grouping Equitable?* Educational Leadership, 1992.

Grissmer, D.W. *Student Achievement and the Changing American Family*. Santa Monica, CA: Rand Corporation, 1994.

Hanson, K. *Teaching Mathematics Effectively and Equitably to Females*. New York, NY: ERIC Clearinghouse on Urban Education, 1992.

Hirsch, C., Ed. *A Core Curriculum*. Reston, VA: National Council Teachers of Mathematics, 1992.

Hulme, M.A. *Equity Materials in Mathematics, Science and Technology: A Resource Guide*. Philadelphia, PA. Mid-Atlantic Eisenhower Consortium for Mathematics and Science Education, 1994.

Mathematical Sciences Education Board. *Everybody Counts*. Washington, DC, National Academy Press, 1989

Mathematical Sciences Education Board. *Making Points for Mathematics Education Reform.* Washington, DC, The Math Connection.

Mid-Atlantic Equity Center. *Opening up the Mathematics and Science Filters*. Washington, DC: The American University, 1992.

National Council of Teachers of English. *When They All Don't Speak English. Integrating the ESL student into the regular classroom*. Urbana, IL, 1989

National Council of Teachers of Mathematics. *Assessment Standards for School Mathematics*. Reston, VA, 1994.

National Council of Teachers of Mathematics. *Curriculum and Evaluation Standards for School Mathematics*. Reston, VA, 1989.

National Council of Teachers of Mathematics. *Multicultural Mathematics*. Reston, VA, Marina Krause, 1983.

National Council of Teachers of Mathematics. *Reaching all Students with Mathematics*. Reston, VA, 1993.

National Science Foundation Statewide Systemic Initiative. *Equity Framework in*

Mathematics, Science and Technology Education. Washington, DC, 1994.

New Jersey Mathematics Coalition. *Mathematics to Prepare Our Children for the 21st Century*. New Brunswick, NJ, 1994.

New York Department of Education. *Curriculum, Instruction and Assessment Framework for Mathematics, Science and Technology*. New York, NY, 1994.

Sherman, A. *Falling by the Wayside, Children in Rural America*. Washington, DC: Children's Defense Fund, 1992.

South Carolina Department of Education. *South Carolina Mathematics Framework*. Columbia, SC, 1992.

Stern, J.D.,Ed. *The Condition of Education in Rural Schools*. Washington, DC: US Department of Education, Office of Educational Research and Improvement, 1994.

Teachers of English to Speakers of other Languages. *Children and ESL: Integrating Perspectives*. Washington, DC, 1986.

United States Department of Education. *National Excellence: The Case for Developing America's talent*. Washington, DC, 1993.

United States Department of Education. *The Search for Effective Instruction of Children of Poverty*. Washington, DC, 1991.

United States Department of Labor. *Learning a Living: A SCANS Report for America 2000*. Washington, DC, 1992.

University of California, Los Angeles Center for Research on Evaluation, Standards and Student Testing. *Assessment Questions: Equity Answers*. Los Angeles, CA, 1993.

Usiskin, Z., *If Everybody Counts, Why Do So Few Survive?*, in *Reaching All Students with Mathematics*, NCTM, Reston, VA, 1993.

Vandergrift, J.A., and A.L. Greene, *Rethinking Parental Involvement. Educational Leadership*. 50 (1), 57-59, 1992.

General References

Century, J.R. *Making Sense of the Literature on Equity in Education. Draft one.* Newton, MA: Educational Development Center, 1994.

National Science Foundation. *Diversity in the Scientific and Technological Workforce: An Action Plan*. Directorate for Education and Human Resources, 1994.

Sanders, J. *Lifting the Barriers: 600 Strategies that Really Work to Increase Girls' Participation in Science, Mathematics and Computers*. New York, NY: City University of New York Graduate Center, 1994.

Southwest Educational Laboratory. *Equity in the Reform of Mathematics and Science Education.* Austin, TX, 1994.

United States Department of Education. *Promising Practices in Mathematics and Science Education*. Washington, DC: Office of Educational Research and Improvement, 1994.

On-Line Resources

http://dimacs.rutgers.edu/nj_math_coalition/framework.html/
The *Framework* will be available at this site during Spring 1997. In time, we hope to post additional resources relating to this standard, such as grade-specific activities submitted by New Jersey teachers, and to provide a forum to discuss the *Mathematics Standards*.

http://www.rbs.org/eisenhower/res_equity.html/
The Mid-Atlantic Eisenhower Consortium for Mathematics and Science Education maintains a Web page on Equity Issues in Mathematics and Science.

INSTRUCTIONAL ADAPTATIONS FOR STUDENTS WITH DIVERSE NEEDS

When it comes to young people, believe that all things are possible. Expect the best from young people; they're capable of it. Our job is to find the gift in each young person, see every young person as pure potential.

DR. MICHAEL CARRERA

INSTRUCTIONAL ADAPTATIONS FOR STUDENTS WITH DIVERSE NEEDS

In his book "Lessons for Lifeguards" (1996), health educator Michael A. Carrera offers practical advice for those who work with children and youth. His words are meant to incite, inspire, and excite those who work with children and youth to take action, be involved, be committed, and care about young people. This chapter is grounded in the belief that all students can learn and can be successful. Each student must be viewed as an individual with great gifts, talents, and assets that will enable him/her to achieve the rigorous demands set forth by the *Core Curriculum Content Standards*.

The theory and strategies described in this chapter address instructional issues for three types of identified students:
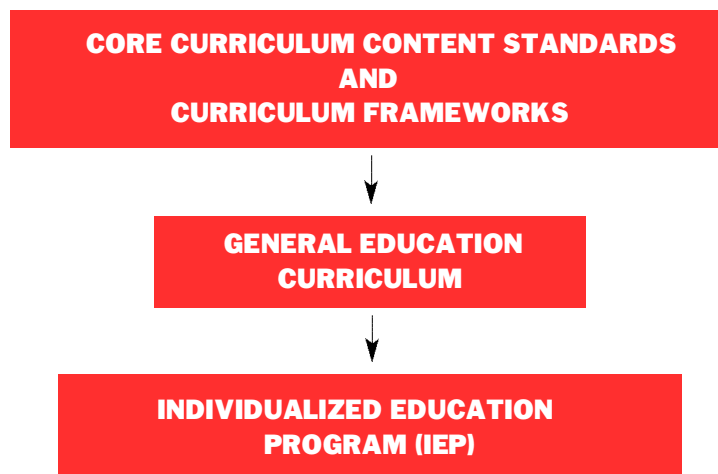
- Students with Disabilities

- Limited English Proficient Students

- Exceptionally Able Students

The chapter is divided into three sections. Each section addresses specific requirements and strategies for that particular group of students. The activities included in each section have been taken directly from *Chapter 8: Sample Learning Activities* in this *Framework*. They have been modified to illustrate general instructional modifications that can be used for any student, not just those students "classified" as being eligible for specialized services. These adaptations reflect sound teaching principles as well as current teaching and learning research. Teachers should use this chapter as a template to adapt other learning activities found in the *Framework*.

This chapter aims to support a collaborative teaching environment that provides all students with educational experiences that enable them to maximize their potential. To this end, teachers, students, parents, healthcare providers, and counselors must work together to ensure that these students participate in instructional activities that support the achievement of the *Standards*. For this to happen, team members must develop effective communication skills and must work together to identify student needs and devise ways to meet them.

INSTRUCTIONAL ADAPTATIONS FOR STUDENTS WITH DISABILITIES

The *New Jersey Core Curriculum Content Standards* and related *Frameworks* are the focus of curriculum and instruction for all pupils, including students with disabilities. In order to provide students with meaningful access to curriculum and instruction based on the *Standards*, adaptations may be necessary. Adaptations are not intended to compromise the *Standards*. Instead, adaptations provide students with disabilities the opportunity to maximize their strengths and compensate for their learning differences.

CORE CURRICULUM CONTENT STANDARDS AND CURRICULUM FRAMEWORKS

↓

GENERAL EDUCATION CURRICULUM

↓

INDIVIDUALIZED EDUCATION PROGRAM (IEP)

Because students with disabilities are expected to participate in the general education curriculum, the Individualized Education Program (IEP) must reflect the *Standards* as well as the local school district's general education curriculum.

ADAPTATION: A FEDERAL REQUIREMENT

The Individuals with Disabilities Act, Amendments 1997 and Section 504 of the Rehabilitation Act of 1973 guarantee students with disabilities the right to general education program adaptations, as specified in their Individualized Education Programs (IEPs) or 504 plans. These federal requirements are intended to result in adaptations that provide access to the general education program and general education curriculum.

Students with disabilities demonstrate a broad range of learning, cognitive, communication, physical, sensory, and social/emotional differences that may necessitate adaptations to the general education program. Each pupil manifests his learning abilities, learning style, and learning preferences in a unique way. Consequently, the type of adaptations needed and the program in which the adaptations will be implemented are determined individually within the Individualized Education Program (IEP) or 504 planning processes.

513

INDIVIDUALIZED EDUCATION PROGRAM OR 504 PLAN

GENERAL EDUCATION PROGRAM ADAPTATIONS

INSTRUCTION   ASSESSMENT
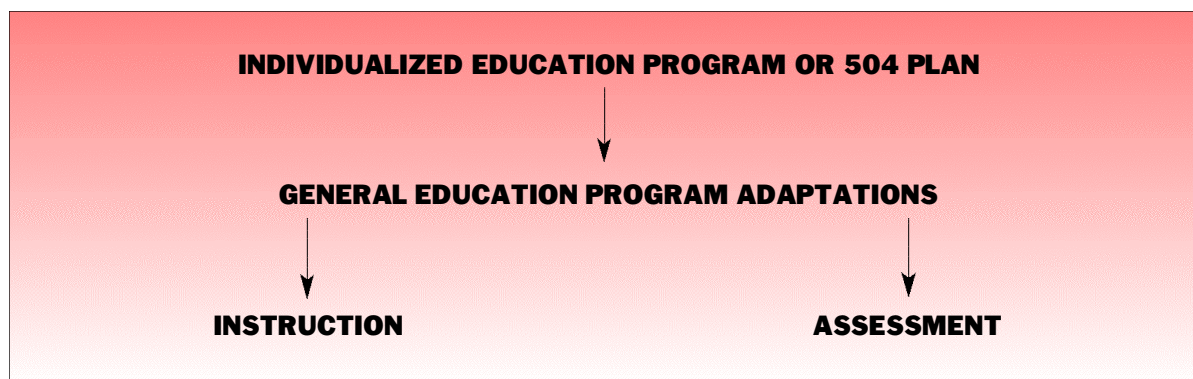
For the purpose of the *Comprehensive Health Education and Physical Education Framework,* sample learning adaptations are defined as adjustments or modifications to the general education program enabling students with disabilities to:

- Participate in and benefit from learning activities and experiences based on the *Standards.*

- Demonstrate understanding and application of the *Standards.*

CATEGORIES OF ADAPTATIONS

With the adoption of the *New Jersey Core Curriculum Content Standards* on May 1, 1996, the New Jersey State Board of Education recognized comprehensive health education and physical education as essential components of the curriculum for all students. The goal of comprehensive health and physical education programs is to develop students who are *health-literate* and *physically educated.* Students with disabilities must also work towards that goal. It is well-documented that children with disabilities are at higher risk for health-damaging behaviors. Students with disabilities frequently have related difficulties in the areas of social and communicative competence, (Elias, et al., 1997) poor information processing abilities, and limited problem-solving and decision-making skills. They are more likely to show difficulty reading social cues, demonstrate impulsivity and an inability to delay gratification, and may have increased difficulty managing frustration and high-intensity emotions. These same students may possess low self-esteem and self-efficacy supported by "feeling different" or being rejected by peers. (Elias, et al.) These social, cognitive, sensory, and physical deficits increase the likelihood that a student with disabilities will participate in behaviors that contribute to intentional or unintentional injury; use alcohol, tobacco and other drugs; participate in risky sexual behaviors; lead a sedentary lifestyle; or maintain unhealthy dietary patterns. While it is critically important that students with disabilities receive instruction in comprehensive health and physical education to ensure their ability to practice health-enhancing behaviors, the nature of that instruction may vary according to the needs of the student.

The sample learning activities contained in this *Framework* emphasize hands-on and activity-based learning experiences. The activities embody best practice instruction beneficial for all students, including students with disabilities; however, to make the activities more meaningful for students with disabilities, adaptations to certain aspects of the activities may be necessary. Adaptations may take a variety of forms. Some adaptations structure students' learning in a more explicit, systematic way than some non-disabled students may require. Other adaptations provide alternative means for students to acquire or demonstrate their knowledge while they are developing health and physical education proficiency at their own rate and maximizing their style of learning.

The adaptations in this chapter were developed to complement and make accessible the sample learning activities in the *Framework*. Additional adaptations, not in this document, may be needed for some students with disabilities to provide further instruction in foundation skills which support the processes described in the *Framework*. In addition, *Chapter 10: Technology* presents background information on assistive technology for students with special needs.

The categories listed below are intended to guide the process of selecting adaptations for an individual pupil with disabilities. Adaptations include but are not limited to the following:

INSTRUCTIONAL PRESENTATION	CLASSROOM ORGANIZATION
Instructional Preparation	Instructional Groups
Instructional Prompts	Instructional Supports
Instructional Applications	Environmental Conditions
Instructional Monitoring	Adaptive Equipment

STUDENT RESPONSE	SAFETY CONSIDERATIONS
Response Format	Rules and Procedures
Response Procedures	Equipment, Materials, and Facilities

STUDENT MOTIVATION
Interest
Confidence
Independence
Enjoyment

DESCRIPTIONS OF ADAPTATIONS

Descriptions, including the rationale, specific functions, and an example for each category follow. Sample activities provided at the end of this chapter have been selected to illustrate a range of possible adaptations that might be used across the *Standards* and cumulative progress indicators. These examples were developed from selected activities in *Chapter Eight* of this *Framework* (please refer to the page number at the top right of each adaptation for the location of the original sample learning activity). While these strategies are known to be beneficial for all students, they are an essential component of the instructional program for a student with disabilities.

INSTRUCTIONAL PRESENTATION

Rationale
Students with disabilities may require instructional presentations that enable them to acquire, comprehend, recall, and apply health and physical education content to ensure that all students become health-literate and physically educated individuals. In addition, instructional presentation adaptations can enhance a student's attention and ability to focus on instruction.

Purpose
The primary purpose of these adaptations is to provide special education students participating in health education and physical education classes with teacher-initiated and teacher-directed interventions that:

- Prepare students for learning and engage students in the learning process **(instructional preparation)**

- Structure and organize information **(instructional prompts)**

- Foster understanding of new concepts and processes **(instructional application)**

- Promote student self-reflection and self-management regarding task demands, goal attainment, and performance accuracy **(instructional monitoring).**

INSTRUCTIONALPREPARATION

Purpose

- Heighten student interest and understanding
- Establish purpose/goals of lesson
- Activate prior knowledge
- Build background knowledge of content or strategy
- Focus attention and thinking
- Introduce key concepts and information
- Promote self-efficacy

Examples

- Relating to personal experiences
- Previewing information/materials
- Pinpointing for physical activities
- Using advance organizers
- Brainstorming/webbing
- Modeling
- Using questioning techniques
- Employing KWL strategies
- Predicting
- Pre-teaching vocabulary (meaning or pronunciation)
- Pre-teaching or reviewing
- Using visual demonstrations, illustrations, and models
- Using mini-lessons

INSTRUCTIONAL PROMPTS

Purpose

- Organize information
- Build whole-part relationships
- Cue associations, connections, and/or sequences of physical activities
- Highlight and clarify essential concepts
- Generate categorizations/comparisons
- Generate classifications
- Activate recall
- Summarize

Examples

- Use graphic organizers
- Use semantic organizers
- Employ segmenting techniques and/or task analysis

517

INSTRUCTIONAL APPLICATION

Purpose	Examples
■ Simplify abstract concepts	■ Implement hands-on activities
■ Provide concrete examples	■ Use dramatization
■ Extend ideas-elaborate understanding	■ Employ props
■ Build connections/associations	■ Create illustrations
■ Relate to everyday experiences	■ Provide music or movement
■ Promote generalization	■ Draw or paint
■ Engage multiple modalities	■ Create graphics or charts
	■ Take field trips
	■ Invite guest speakers
	■ Interview/survey
	■ Discuss personally relevant activities
	■ Provide for real-life applications
	■ Use games/simulations
	■ Structure dialog
	■ Shape/approximate physical activities
	■ Employ peer/cross-age teaching

INSTRUCTIONAL MONITORING

Purpose	Examples
■ Provide periodic (continuous) check for understanding	■ Use self-monitoring checklist/task analysis
■ Redirect attention	■ Set timelines for assignments
■ Direct on-task behavior	■ Use planning agendas
■ Promote participation	■ Allow student "think alouds"
■ Check progress	■ Require journal entries
■ Assist in goal setting	■ Establish portfolios
■ Establish timelines	■ Videotape physical activities
■ Clarify assignments, directions, instructions	■ Dialog
■ Provide reinforcement and corrective feedback	■ Develop action plans
■ Promote strategy use and generalization	■ Use peer reviews/mentors
■ Manage student behavior and interactions	■ Keep a vocabulary journal
■ Develop self-questioning and self-regulation	■ Employ questioning techniques
	■ Initiate student contracts
	■ Use rubrics and task cards
	■ Use a reward system

CLASSROOM ORGANIZATION

Rationale

Students with disabilities may require specific adaptations to classroom organization in order for them to be actively involved in health and physical education activities.

Purpose

The primary purpose of classroom organization adaptations is to maximize student attention, participation, independence, mobility, safety, and comfort. These adaptations promote peer and adult communication and provide accessibility to information, materials, and equipment. When considering **instructional support** for students with physical, neurological, and/or sensory disabilities (particularly as they participate in movement and fitness activities) it is essential that the physical education teacher collaborate with the school nurse, parents, and if appropriate, the occupational therapist, physical therapist, or health aide to determine effective adaptations. Working as a collaborative team, these individuals can assist the physical education teacher to plan an instructional program that reflects the student's current health status and health needs. Additionally, it is important that the skills being addressed in a therapeutic setting (e.g., specific stretching exercises directed by the physical therapist) be reinforced in and generalized to the student's participation in the health and physical education program.

When considering these adaptations, classroom organization can be divided into the following categories: **instructional groups, instructional support, environmental conditions,** and **adaptive equipment and materials.** These adaptations are important to facilitate the student's participation in the health and physical education instructional program but are absolutely essential to the activities supporting *Standard 2.5: Movement and Standard 2.6: Fitness.*

INSTRUCTIONAL GROUPS	INSTRUCTIONAL SUPPORT (from another person)	
Examples	**Adaptations**	**Individuals**
■ Cooperative learning groups	■ Assist physically	■ Peers/cross-age teachers
■ Peer partners	■ Gesture or signal	■ School nurse
■ Buddy system	■ Clarify	■ Mentors
■ Teams	■ Interpret	■ Speech therapist
■ Cross-age tutors	■ Reinforce	■ Health aide
■ Multi-age grouping	■ Highlight	■ Physical therapist
■ Competitive groups	■ Organize	■ Occupational therapist
	■ Focus	■ Speech therapist
	■ Prompt or cue	

ENVIRONMENTAL CONDITIONS	ADAPTIVE EQUIPMENT/MATERIALS
Examples	**Examples**
■ Room/field/gym/playground arrangement	■ Speech synthesizer
■ Work/play space	■ Personal computers/Internet access
■ Material accessibility	■ Communication board
■ Lighting	■ Close captioned video/TV
■ Noise level	■ Audio tapes
■ Learning stations/lab stations	■ Braille
■ Labeling equipment and stations	■ Enlarged print
■ Seating arrangements or assignments	■ Low vision equipment (clocks)
■ Portable units	■ Talking watch/calculator
■ Music	■ Lap board
■ Visual/tactile/auditory/kinesthetic focus	■ FM system
■ Self space guides (spots, carpet squares)	■ Specialized PE equipment (e.g., Velcro mitt with fleece ball, ball with bell, ramps, adjustable height equipment)
■ Immersion	■ Puppets/models
■ Weather (rain, cold, ice, heat)	

STUDENT RESPONSE

Rationale

Students with disabilities may require specific adaptations in order to demonstrate acquisition, recall, understanding, and application of health education and physical education content, skills, and related processes.

Purpose

The primary purpose of adaptations to student performance responses is to provide students with disabilities a means of demonstrating progress toward and achievement of the *Standards.*

RESPONSE FORMAT	RESPONSE PROCEDURES
■ Complete information organizers ■ Interviews, discussions, debates ■ Illustrations - posters, collage, mural ■ Models ■ Observation/data charts ■ Diagrams ■ Puzzles ■ Reenactments ■ Debates ■ Journal entries ■ Portfolio entry ■ Bulletin board displays ■ Role play ■ Video and audio tapes ■ PC/multimedia ■ Dictation ■ Songs, raps, poems, choral reading ■ Authentic products (e.g., brochures, menus, schedules, diet plans, fitness plans, letters, surveys, ads) ■ Peer review guides/task cards ■ Self assessment guides ■ Experiments	■ Provide extended time ■ Use practice exercises ■ Provide an interpreter ■ Use a preferred response mode ■ Case studies ■ Give shorter assignments/more frequently ■ Use specialized equipment ■ Employ individual, paired, or small group projects or activities ■ Allow take-home tests ■ Score by approximation ■ Credit range of improvement

STUDENT MOTIVATION

Rationale
Some students with disabilities may be reluctant to engage or persist in health education or physical education activities. The student's reluctance may be due to difficulties with aspects of learning processes. In addition, the student may have experienced repeated failure or embarrassment when participating in physical education activities. Educators may make the assumption that all students enjoy participating in physical activity. For some students with disabilities, whether physical, sensory, neurological, cognitive, or emotional, this may not be true.

Purpose
Because of these difficulties, motivational strategies are important to assist students with disabilities to become successfully involved in a variety of health education and physical education experiences so they develop proficiency, confidence, and enjoyment. This, in turn, will support the adoption of leisure time options that support wellness and generalize beyond the school setting.

PURPOSE	STRATEGY
■ Create interest, persistence, confidence, enjoyment, and independence in activities ■ Understand relevance and importance of health and fitness issues as they relate to personal vulnerability ■ Promote health-enhancing behaviors	■ Personally meaningful and relevant activities ■ Role models/mentors ■ Student involvement in goal setting and assessment activities ■ Linking across disciplines ■ Activity choice ■ Hands on, multi-modal activities ■ Doable tasks ■ Learning styles considerations ■ Choice to work alone or with others, when appropriate ■ Accurate and current information ■ Teachable moment ■ Peer input

SAFETY CONSIDERATIONS

Rationale

The comprehensive health and physical education sample learning activities included in this *Framework* are hands-on experiences that occur in the classroom, gymnasium, or outdoors. Students with disabilities may require adaptations in order to ensure safe participation for themselves and others.

Purpose

The primary purpose of safety adaptations is to provide understanding of and adherence to safety rules and procedures and to enhance learning for all through the safe use of equipment and supplies.

SAFETY RULES AND PROCEDURES	SAFE USE OF SPACE AND EQUIPMENT
Examples ■ Understand safety and health rules and procedures ■ Follow all rules ■ Use material/equipment appropriately ■ Share materials ■ Adhere to time allocation ■ Set-up and clean-up ■ Consider the weather/climate ■ Warm-up and cool-down procedures ■ Conduct activities with supervision and an appropriate student/teacher ratio ■ Limit group sizes for highly impulsive, distractible, active students	**Examples** ■ Role play ■ Employ cross age teaching/mentors ■ Model and demonstrate ■ Label materials and equipment ■ Distribute supplies and equipment ■ Assign responsibilities ■ Create a checklist of directions and procedures ■ Post a timeline chart ■ Use self-space markers ■ Establish activity boundaries ■ Use adjustable, sturdy, and developmentally-appropriate equipment ■ Consider the condition of the physical space ■ Position oneself to observe all students ■ Use signaling devices (e.g., whistles, megaphones, flags, cow bells, flashing lights)

SAMPLE ADAPTATION #1

Standard: 2.1-10   **Page Number: 129**

Grade Level: 7- 8

Activity Title: Bounce Back From Depression

INSTRUCTIONAL PRESENTATION

Instructional Prompt: *Information Organizer—Data Collection Sheet*
                             Concept Activity—Picture

An Information Organizer provides a format for presenting information that helps students draw conclusions, identify cause and effect relationships, categorize ideas, sequence events, show relationships, and organize thoughts.

A Concept Activity is a concrete presentation of abstract concepts. Using visual aids such as pictures or concrete materials, a concept activity helps to build connections and associations between new ideas and everyday experiences.

- Pre-teach a definition of ***depression*** then have the class brainstorm common words or phrases associated with depression (e.g., down in the dumps, blue, gloomy, sad, bummed out).

- Arrange desks in a semi-circle so all students can see the bouncing raisins demonstration.

- While observing the demonstration, students complete items 1-4 on the data collection sheet (sample follows).

- As volunteers share responses, the teacher records them using an overhead projector.

- Show a transparency of flowers bouncing back (sample follows) to reinforce the concept.

- Divide the class into small groups to review case studies and suggest strategies and resources to help with the problem. Refer students to item #4 on the data collection sheet.

- Reconvene to share case study responses.

Bounce Back From Depression

INSTRUCTIONAL GROUPS	INSTRUCTIONAL MATERIALS/EQUIPMENT
■ Whole class for demonstration ■ Small groups (with teacher-assigned roles) for case study analysis	■ Overhead projector ■ Teacher-prepared transparency, data collection sheet, and case studies ■ Large glass, raisins, seltzer
STUDENT RESPONSE	**ENVIRONMENTAL CONDITIONS**
■ Complete data collection sheet ■ Shared responses from data collection and case studies	■ Semi-circle arrangement for demonstration ■ Small group workspace
STUDENT MANAGEMENT	**MOTIVATION**
■ Use of overhead projector ■ Use of data collection sheet to focus and maintain attention during demonstration ■ Teacher-assigned group roles to maximize each child's success	■ Observation of demonstration ■ Talking and working with others in cooperative groups

SAMPLE DATA COLLECTION SHEET

PART A:

THE BOUNCING RAISINS DEMONSTRATION

Watch what happens to raisins dropped in seltzer.

1. Sketch the glass filled with seltzer water and raisins. Draw what you see.

2. Notice some raisins have "bounced back" to the top of the glass.

3. Label these raisins with the letter "A".

4. Label raisins on the bottom of the glass with the letter "B".

5. What mood would best describe the floating raisins?

PART B:

SHORT PERIODS OF DEPRESSION AND FEELING SAD ARE NORMAL.

List five things that have helped you "bounce back" when you feel sad.

    1.

    2.

    3.

    4.

    5.

Have a nice day!

Flowers Bouncing Back

SAMPLE ADAPTATION #2

Standard: **2.1-18**   **Page Number: 159**

Grade Level: **9-12**

Activity Title: **Agencies That Protect Your Health**

INSTRUCTIONAL PRESENTATION

Instructional Prompt: *Interview Guide*

An Interview Guide is used for the purpose of gathering information and focuses the student's attention on the main points to be covered. It provides a structured format for organizing the information obtained.

- Distribute copies of the "Blue Pages of Government Listings" from your local phone book.

- Working in groups, students highlight those agencies that help to protect and promote health.

- Each group provides the name, address, and phone number of one agency it highlighted. Record the information on chart paper. The process continues until all highlighted agencies are recorded.

- Students and teacher review and discuss the list to determine if each agency does, in fact, work to promote health.

- Each student selects an agency to contact via telephone for the purpose of gathering information (see sample form). Review appropriate phone etiquette. Explain that not all agencies will be anxious to answer questions. If someone is rude to them, tell students to say "I am sorry you cannot help me. Is there someone else who can?"

- Each student reports back on his/her agency.

- Extension activities might include having the class compile and distribute a directory of agencies that were contacted and/or inviting guest speakers from selected agencies.

Agencies That Protect Your Health

INSTRUCTIONAL GROUPS	INSTRUCTIONAL MATERIALS AND EQUIPMENT
■ Small groups for highlighting "Blue Pages" ■ Individual agency interview ■ Whole-class reporting	■ Copies of the "Blue Pages" ■ Highlighters ■ Flip chart ■ Interview guide
STUDENT RESPONSE	**ENVIRONMENTAL CONDITIONS**
■ Small-group selection of agencies ■ Individual reports of interviews	■ Comfortable work area for groups and individual reporting
MOTIVATION	**STUDENT MANAGEMENT**
■ Use of "Blue Pages" ■ Direct contact with agencies	■ Group-work rules and procedures ■ Appropriate telephone etiquette when contacting agencies

INSTRUCTIONAL SUPPORT
■ Teacher-provided "Blue Pages" ■ Teacher-provided Interview Guide ■ Possible guest speaker

SAMPLE PHONE INTERVIEW GUIDE

Agencies That Protect Your Health

Name of Agency _____

Address _____

Phone Number _____

Script:

Hello, my name is _____.

I am a student at _____High School.

My health class is studying public health agencies.

Can you tell me what your agency does to help people?

Thank you very much. Good bye.

SAMPLE ADAPTATION #3

Standard: 2.3 -15   **Page Number: 282**

Grade Level: 9 -12

Activity Title: **Signs and Symptoms of ATOD Abuse**

INSTRUCTIONAL PRESENTATION

Instructional Preparation: *Brainstorming: Round Robin*

Instructional Application: *Product: Business Cards*

Brainstorming is a group process used to activate a student's prior knowledge and build associations to a specific topic. Ideas generated are not evaluated or criticized during the brainstorming activity. Round robin (or carousel) brainstorming allows small groups to move from one topic/question to another, adding new ideas. It provides more structure than typical brainstorming because a broad topic/question can be broken down into specific areas and addressed separately by each group.

A Product is an application activity that requires students to demonstrate understanding by using learned information in a practical way.

- Divide the class into three groups and give each group a different color magic marker.

- Groups circulate among flip charts, each of which has a specific question heading (samples follow).

- Each group generates and records on flip charts as many responses as possible in 5 to 7 minutes.

- Teacher leads whole-class discussion of responses.

- Using a teacher-prepared T-chart, discuss "Signs of Possible Substance Use and Abuse" and "Ways to Help a Person Who Is Chemically Dependent".

- Students prepare business cards addressing various substances and helping agencies.

531

Signs and Symptoms of ATOD Abuse

INSTRUCTIONAL GROUPS	**INSTRUCTIONAL MATERIALS AND EQUIPMENT**
■ Three groups for round robin ■ Whole-class discussions ■ Individual for preparing business cards	■ Flip charts and markers ■ Thinking questions ■ Teacher made T-charts ■ Card stock squares for business cards ■ Computer and appropriate software, if available
STUDENT RESPONSE	**ENVIRONMENTAL**
■ Round robin flip chart responses ■ T-chart worksheets ■ Business cards	■ Space for groups to move among flip charts ■ Semi-circle for discussion of chart
MOTIVATION	**INSTRUCTIONAL SUPPORT**
■ Round robin activity ■ Creating business cards	■ Print shop for providing card stock and printing business cards ■ Teacher-prepared T-charts and round robin flip charts ■ Teacher led discussion

QUESTIONS FOR FLIP CHART STATIONS

When do teenagers experience pressures to use alcohol, tobacco, and other drugs?

■

At what age does pressure begin to use alcohol, tobacco, and other drugs?

■

What kinds of social settings contribute to the pressure to use

alcohol, tobacco, and other drugs?

■

SAMPLE T-CHART

SIGNS OF POSSIBLE SUBSTANCE USE AND ABUSE

- Sleeps in class
- Smells like alcohol all the time
- Absent or late a lot after partying
- Drinks when depressed
- Smokes cigarettes all the time
- Drinks alcohol before driving
- Can't stop drinking or smoking even though she's pregnant
- Spends his/her entire paycheck on drugs

WAYS TO HELP INDIVIDUALS WHO ARE CHEMICALLY DEPENDENT

- Send to the school substance awareness coordinator
- Invite them to do something else
- Rehab
- Keep busy at things they like to do
- Don't invite them to parties where drugs/alcohol are present
- Take them to get medical help

533

SAMPLE BUSINESS CARD

> "Substance Use is a Bad Business"

(Front)

> ## "In the Business of Helping"
>
> **Alcoholics Anonymous**
> 1-800-555-5555
>
> **Narcotics Anonymous**
> 1-800-555-5551
>
> **National Council for Addictions and Drug Dependencies**
> 1-800-555-5552

(Back)

SAMPLE ADAPTATION #4

Standard   2.4 -10   **Page Number: 336**

Grade Level: 7- 8

Activity Title: Meeting Human Needs

INSTRUCTIONAL PRESENTATION

Instructional Preparation: *Simulation: Pyramid Ring Toy*
                                   Concept Activity: Puzzle

Instructional Application: *Application Activity: Poster*

A Simulation is a process of examining a concept or problem not easily examined directly. Simulations are useful for providing a concrete explanation of an abstract concept through a unique experience or comparison.

A Concept Activity presents abstract concepts in a more concrete manner. Using materials like pictures, graphs, and puzzles, a concept activity helps to clarify and organize the learner's thinking.

An Application Activity requires students to demonstrate understanding by using learned information in a practical way.

- Brainstorm simple vocabulary for describing each of the five need areas, e.g., "What are Physical Needs?"

- Discuss the structural importance of the pyramid.

- Use a toddler's ring-stacking game to demonstrate how the stack cannot be correctly completed without each underlying ring properly placed. Label rings to correspond to Maslow's Hierarchy.

- Give each student an interlocking puzzle of Maslow's Hierarchy pyramid and have them interlock the pieces, reinforcing the fact that the lower-level needs must be in place before interlocking a higher-need puzzle piece (see attachment).

- Divide the class into five groups—one for each need level.

- Students discuss and create lists of ways parents satisfy their children's needs at each level, using a worksheet (see attachment).

- Each group creates one assigned section of a large class poster, using pictures to represent how parents satisfy that particular need and/or listing ways.

- Groups convene to create a group poster from their individual parts, building the class poster from "Physical Needs" through "Self Actualization."
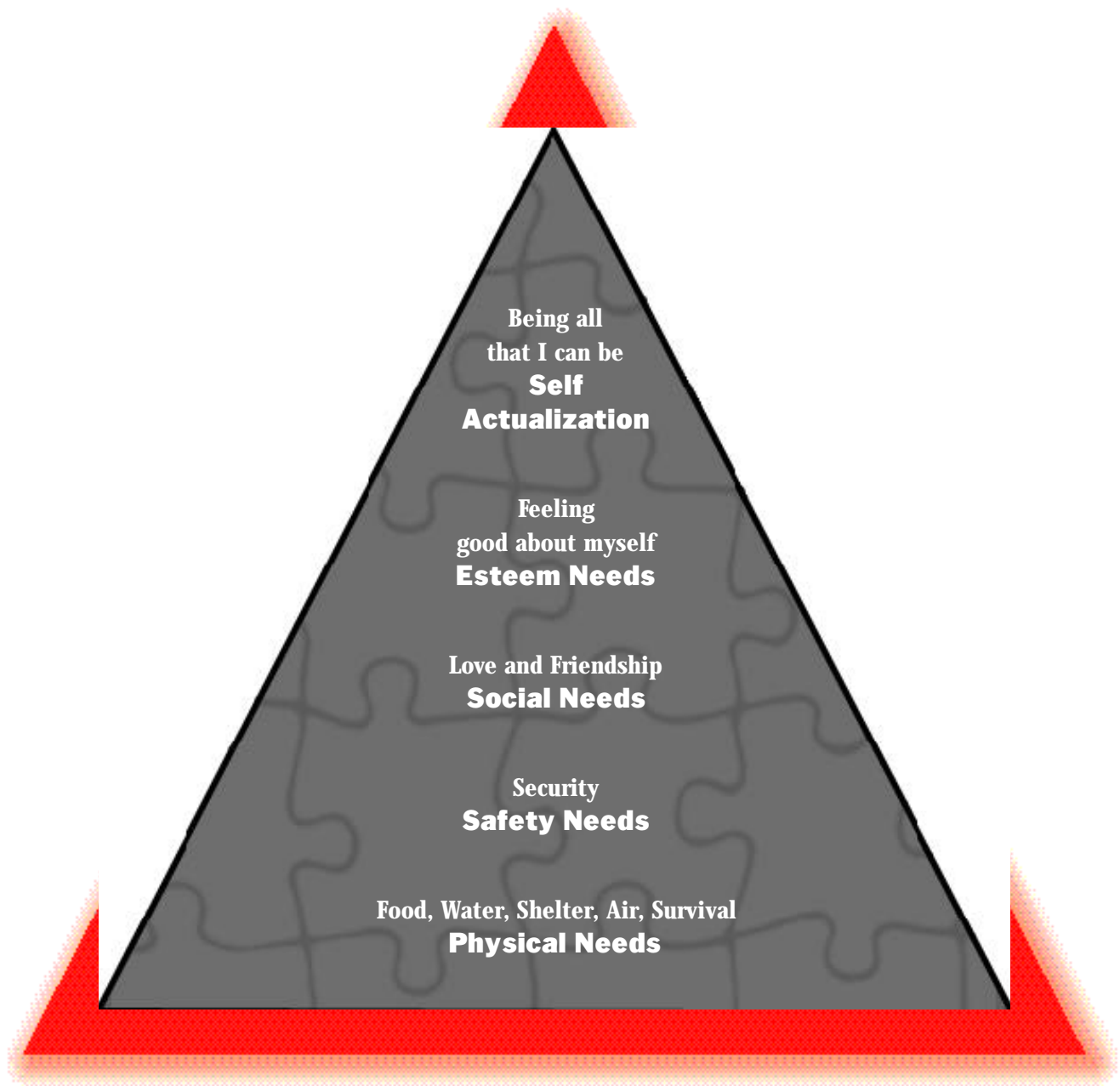
535

Meeting Human Needs

INSTRUCTIONAL GROUPS	INSTRUCTIONAL MATERIALS/EQUIPMENT
- Whole class for brainstorming activity - Small groups for identifying how parents satisfy needs - Whole class for creating large poster	- Toddler's ring-stack game - Individual Maslow's Hierarchy pyramid puzzle - Individual worksheets - Large poster paper
STUDENT RESPONSE	**ENVIRONMENTAL CONDITIONS**
- Complete group section of pyramid poster - Contribute to whole class poster	- Appropriate space for group work - Large area (walls or floor) for creating class poster
MOTIVATION	**STUDENT MANAGEMENT**
- Use of simulation activity with toddler's toy - Student puzzles	- Teacher assigns group member roles and monitors performance - Class product (poster)

INSTRUCTIONAL SUPPORT
- Teacher-led brainstorming   - Follow-up questioning and clarification on incorrect responses   - Teacher-created materials

Maslow's Pyramid Chart

Being all
that I can be
■
■
Feeling good
about myself
■
■
Love and Friendship
■
■
Security
■
■
Food, Water, Shelter, Air, Survival

Maslow's Puzzle

Being all
that I can be
Self
Actualization

Feeling
good about myself
Esteem Needs

Love and Friendship
Social Needs

Security
Safety Needs

Food, Water, Shelter, Air, Survival
Physical Needs

SAMPLE ADAPTATION #5

Standard 2.4-6   **Page Number: 316**

Grade level: 5-6

Activity Title: Stages of Growth

INSTRUCTIONAL PRESENTATION

Instructional Preparation: *Brainstorming, Webbing*

Instructional Prompt: *Timeline: Stages of Growth Chart*

Brainstorming is a group process used to activate a student's prior knowledge and build associations to a specific topic. Ideas generated are not evaluated or criticized during the brainstorming activity. Student responses are recorded in list form.

Webbing is an activity that frequently follows the brainstorming process. During this procedure, a semantic map or web is developed based on categories derived from the brainstorming word list. (See Appendix B for several examples.)

Timeline Charts allow the student to sequence occurrences and developmental stages and associate them with significant events or characteristics.

- Ask: "How long does it take to grow up?" Emphasize that everyone has an opinion about when he or she is grown-up but that all individuals pass through various stages of growth.

- Brainstorm the stages a person experiences as he/she grows older.

- Using a web, organize brainstormed information into categories approximating those on the Stages of Growth chart (see original learning activity for sample).

- Distribute and discuss the Stages of Growth chart, comparing it to the web.

- Divide the class into small groups. Students complete the chart using resources provided by the teacher.

- Each group shares responses.

- Question and clarify responses, reinforcing the fact that everyone develops at his/her own pace. The beginning and ending of each stage will vary among individuals.

■ Extension activities might include the following:

❥ Role playing an event or change at each stage

❥ Preparing a drawing, collecting pictures, or making a collage showing people at each stage of development

❥ Interviewing a senior citizen regarding his/her memories of each stage

Stages of Growth

INSTRUCTIONAL GROUPS	INSTRUCTIONAL MATERIALS AND EQUIPMENT
■ Whole-class brainstorming and reporting ■ Small groups for research and completion of chart	■ Resources: health text, pamphlets, journals, encyclopedias, books on tape, Internet sites ■ Teacher-made "Stages of Growth Chart" ■ Graphic organizer/web
STUDENT RESPONSE	**ENVIRONMENTAL CONDITIONS**
■ Brainstorming ■ Webbing ■ Completion of chart ■ Group presentation	■ Space for group work ■ Stations for research ■ Word processor, computer, or tape recorder station for students who have difficulty writing
INSTRUCTIONAL SUPPORT	**STUDENT MANAGEMENT**
■ Teacher-led brainstorming ■ Teacher-created materials ■ Senior citizen representation	■ Timer for group work at each station ■ Teacher-assigned group roles: taskmaster, recorder, presenter, and timer

Sample Web: Stages of Growth

Senior Citizen

Newborn

Adult

Toddler

STAGES OF GROWTH

Infant

Child

Young Adult

Teenager
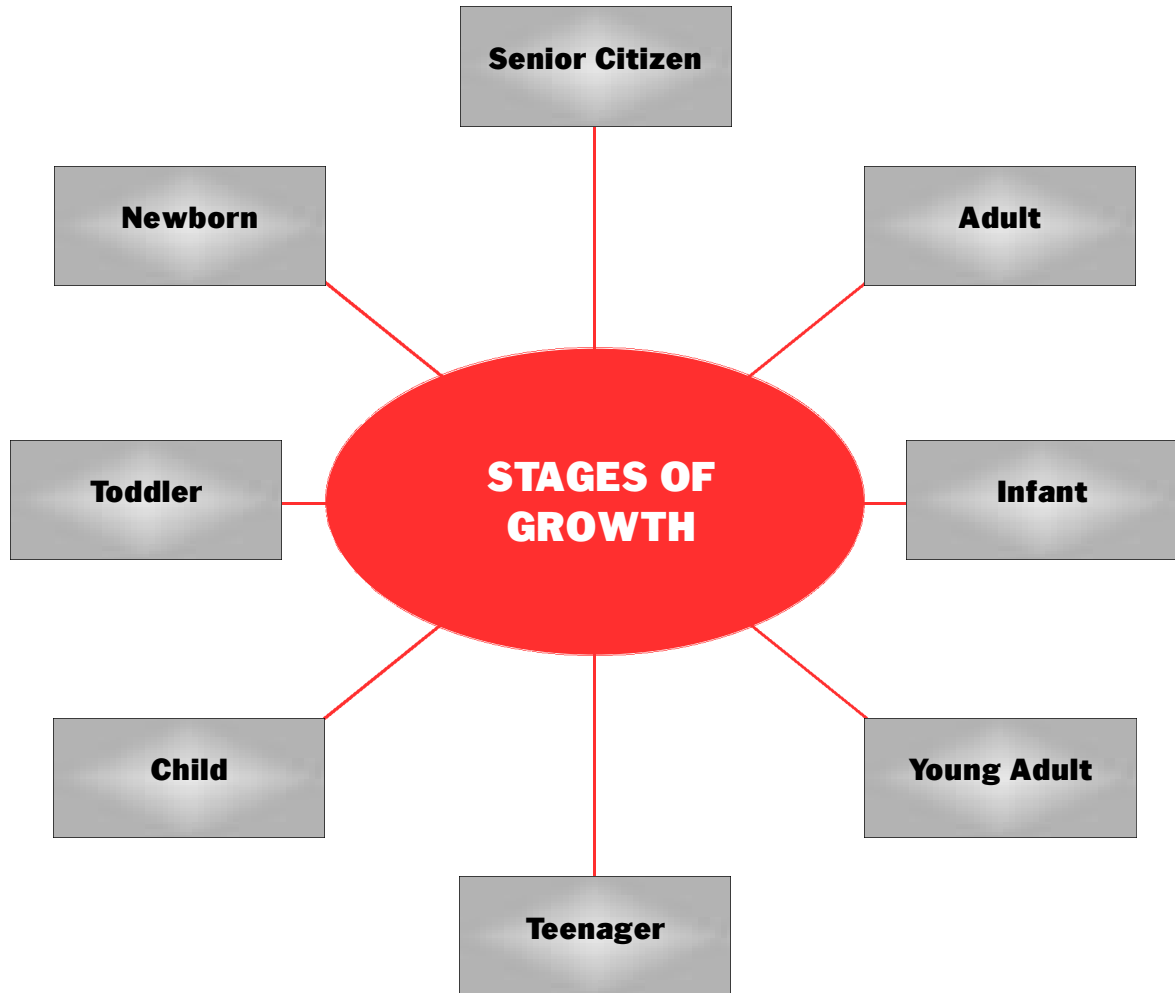
SAMPLE ADAPTATION #6

Standard 2.5-1   **Page Number: 411**

Grade Level: K-2

Activity Title: Hide and Seek Moves

INSTRUCTIONAL PRESENTATION

Instructional Preparation: *Modeling/Demonstration*

Instructional Prompt: *Peer Pairing*
Spatial Cues: Directional Arrows, Poly Spot Markers

Modeling and Demonstration heighten student interest and understanding by illustrating and clarifying a concept or activity.

Movement Cues increase spatial awareness and help students focus on the appropriate use of space.

- Teacher shows students enlarged samples of motor skill cards and models or demonstrates the motor skill (e.g., walking, running, hopping, galloping).

- Teacher assigns "peer pairs" based on ability to read/understand activity cards and motor activity skill level.

- Pairs remove one movement card from under a poly spot and proceed to the poly directional arrows (see attached diagram).

- When the music begins, pairs perform motor activity following the direction of the arrows until the music stops.

- When the music stops, each pair proceeds to a new poly spot, deposits their used card, and selects a new activity card from under that poly spot.

- Activity continues until pairs have practiced a set number of the motor activities.

- Teacher reviews large activity cards and has the whole group perform the activity, following the poly directional arrows, until all activity cards are reviewed.

Hide and Seek Moves

INSTRUCTIONAL GROUPS	INSTRUCTIONAL MATERIALS AND EQUIPMENT
■ Whole class for presentation, demonstration, and review ■ Peer pairs for separate activities	■ Teacher-provided poly spot markers and directional arrows ■ Teacher-made activity cards (small for under spots, large for demonstration and review ■ CD player/tape recorder with various kinds of music
STUDENT RESPONSE	**ENVIRONMENTAL CONDITIONS**
■ Mimic teacher-demonstrated activity ■ Perform activity with whole class ■ Perform activities with peers	■ Structured, defined, restricted space for all activities (whether indoors or outdoors)
STUDENT MANAGEMENT	**MOTIVATION**
■ Peer pairs act as coaches to each other ■ Clearly defined space	■ Talking and working in pairs ■ Fast-moving activity ■ Use of music
INSTRUCTIONAL SUPPORT	**SAFETY RULES AND PROCEDURES**
■ School nurse regarding health restrictions for any child	■ Review rules and procedures for safe locomotor activities ■ Monitor activity flow and pace

543

Hide and Seek Moves
Space Diagram
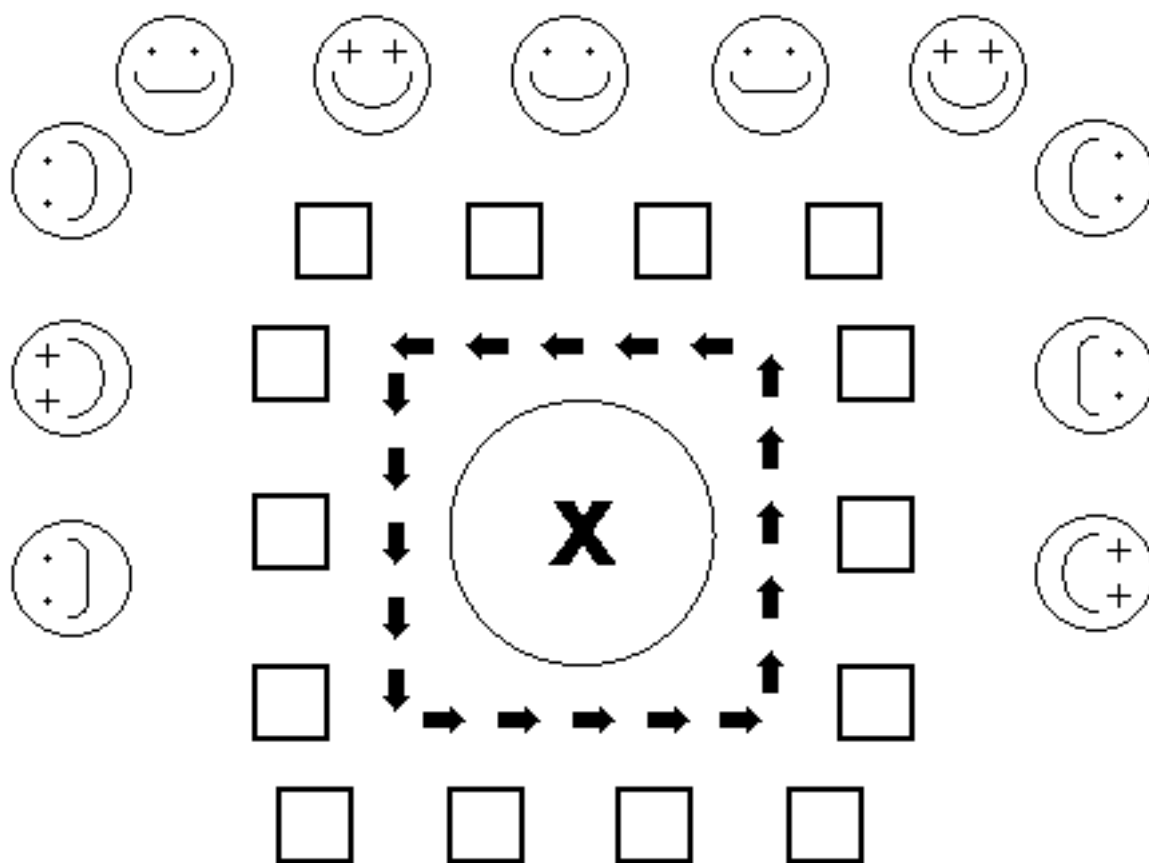
□ poly spots

Ⓧ teacher

☺ child

➤ poly directional arrows

SAMPLE ADAPTATION #7

Standard: 2.5-2   **Page Number: 421**

Grade Level: 3 - 4

Activity Title: Ready Reaction

INSTRUCTIONAL PRESENTATION

Instructional Preparation: *Concept Activity: Mirror Demonstration*

Instructional Application: *Prop: Hoop*

A Concept Activity is a concrete presentation of abstract concepts. Using aids such as pictures or concrete materials, a concept activity helps to build connections and associations between new ideas and everyday experiences.

A Prop is a concrete material that helps to support or sustain a student's independent performance of an activity.

- Teacher demonstrates concept of "mirroring" using a full-length mirror.

- Students individually mirror teacher's motor movement. Each student works in his/her own motor square designated by four poly spot markers (or outlined with tape that can be adjusted later in the activity).

- Teacher signals halt or stop by signing stop or by one loud clap.

- Teacher assigns partner pairs based on motor activity skill levels and distributes one hoop to each pair. Motor squares are doubled in size to accommodate partner pairs.

- Pairs are connected by the hoop. Students face each other, each holding the hoop with both hands.

- Teacher repeats the motor activities.

- Partners respond in mirror fashion.

Ready Reaction

INSTRUCTIONAL GROUPS	INSTRUCTIONAL MATERIALS AND EQUIPMENT
■ Whole class for demonstration ■ Pairs for hula hoop mirror activity	■ Teacher-provided hoops and poly spot markers
STUDENT RESPONSE	**ENVIRONMENTAL CONDITIONS**
■ Mimic teacher-demonstrated activity ■ Perform activity with partner	■ Structured, defined space for working individually or with partners
STUDENT MANAGEMENT	**MOTIVATION**
■ Pairs support and assist each other ■ Clearly defined personal and partner space	■ Working in pairs ■ Use of hoops

SAFETY RULES AND PROCEDURES
■ Review safety rules and procedures; post in activity area ■ Monitor activity flow, pace, and space

ADAPTING LEARNING ACTIVITIES FOR STUDENTS WITH LIMITED ENGLISH PROFICIENCY

Imagine that you are being sent to Japan to study physical education and sports. You do not speak the language and you have never been to Japan before. Part of your assignment while visiting Japan is to take several physical education and health courses at a major Japanese university. The professors only speak Japanese in their classes, and you are expected to act just like any other native student. You have no time to learn the language before the trip. When you arrive in Japan, what will you do first? Will you choose to learn the language first and then study physical education? Will you try to take college classes at the same time as learning Japanese? As an adult, you have several options to consider. For the most part, students whose families have relocated to New Jersey from other parts of the world do not have such options.

A basic assumption of this section is that students who have come to New Jersey schools speaking a language other than English have the arduous task of advancing academically in content area classes at the same time they endeavor to acquire English language proficiency. Some students who arrive in our schools at advanced ages have not attended school at all or have attended school only minimally. Others may come with excellent skills in their native language and will be able to transfer that knowledge as they learn English. All students face the challenge of adjusting to the demands of a learning environment that is probably very different from their last educational experience. Most students are highly motivated to be successful in school, but the sheer magnitude of the task overwhelms them. Since it is not reasonable for their education to be on hold while their English skills develop, content area teachers assist these students in concept development while bilingual and ESL teachers support the acquisition of English language skills. Careful planning and collaboration among all educators responsible for the educational programming for the student can facilitate their achievement and success.

WHO ARE STUDENTS WITH LIMITED ENGLISH PROFICIENCY (LEP)?

Providing students who are linguistically and culturally diverse with an appropriate education is a national concern. Students whose native language is not English and have difficulty speaking, reading, writing, and understanding the English language so as to deny them the opportunity to learn successfully in classrooms where the language of instruction is English qualify as LEP students. It is generally agreed that identifying the primary language and assessing relative English and native language proficiency is important. These students vary greatly in readiness for school and need to be identified, assessed, and provided appropriate placement in a program designed to meet their particular needs.

Rationale and Purpose
Research supports the notion that children from different cultures or different class levels in our society will differ meaningfully in how they learn. Sometimes a teacher is faced with a number of limit-

ed English proficient students in his/her classroom and must figure out how best to address the students' individual needs. The purpose of adapting content lessons for LEP students is to lower the language barrier and make the English used in such lessons as comprehensible as possible. Two factors affect the comprehensibility of language:

- The degree to which the language used is contextualized through visible situations

- The level of text familiarity to the student's background knowledge and experience

Thus, to be successfully communicative, lessons must be designed to build upon the student's background knowledge with an emphasis on nonlinguistic cues so that LEP students can comprehend the material and the teacher's messages. Of the five language skills—listening, speaking, reading, writing and viewing—reading is one of the most difficult skills to teach and therefore to learn. A student's level of literacy in his/her first language will affect the level of literacy in the second language. One of the key premises of bilingual instruction is that while a student is learning a new language, teachers need to ensure that cognitive development and literacy continue to develop without interruption.

GENERAL PRINCIPLES

The beginning LEP student may understand little English and will respond by guessing from context what is expected or by imitating other students. At this stage, the teacher needs to provide many visual cues (e.g., pictures, videos, demonstrations). With increasing exposure to English, the student will begin to understand simple language but may not be ready to produce language. Teachers should demonstrate and model thinking behaviors for LEP students. For example, the teacher says, "open your book" as students listen and observe the teacher opening the book. This is commonly referred to as the silent period in second language development. During the silent period the teacher should not force speaking but focus on making speech comprehensible to the student by using simple language and visual aids.

As the student begins to produce language, he/she will imitate words and phrases used by the teacher and other students. At this stage, the student will make many errors; however, the teacher should provide positive reinforcement and encouragement, building the student's self-confidence and correcting errors sensitively and judiciously. The teacher should continue to involve the student in many classroom activities and ask him/her to respond to questions nonverbally or with simple one-word or short-phrase responses. Evaluation of the student's progress should focus on measuring understanding rather than production. As the student begins to use language creatively (spontaneously using previously learned language in a new way), he/she may continue to make numerous grammatical mistakes and have trouble understanding and producing complex structures of academic language, even though he/she may appear or sound fluent in a social setting. The general aim should continue to be to lower the language barrier by making classroom communication simple and clear. A student's capacity to become fluent in English will be greatly enhanced by engaging in activities that connect to one's own life in meaningful ways.

SUPPORTING CONTENT AND LANGUAGE ACQUISITION

Four overarching strategies have been shown to be most effective in supporting the learning and achievement of limited English proficient students in content area classes.

1. Integrate activities into thematic units.

Students often learn best through the repetition of words, ideas, and actions. When important concepts in one content area are reinforced across several other content areas, students bene-fit from seeing and hearing the same information. Students are able to use the same vocabu-lary, thus increasing their confidence and competence. Practicing the desired skills in several classes empowers students to become proficient in the use of the knowledge and skills. This strategy requires a collaborative team approach that includes the bilingual and ESL teacher. All teachers can reinforce the language skills needed by the student to prepare for and complete content area activities.

2. Tap the student's prior knowledge and experience, which may be different from other students in the class.

Prior knowledge can never be taken for granted. This is especially true for immigrant students and other limited English proficient students. Students who have not lived in New Jersey all their lives (or even those who have lived in different parts of the state) may have a very dif-ferent experiential background to draw from. The entire class can be culturally enriched by tap-ping into the variety of perceptions and experiences of the students (e.g., a student from Peru may classify an elephant, an ostrich and a llama as farm animals). Many of these students will have little or no grasp of certain concepts considered typically American (e.g., historical fig-ures, artists, foods). References to television shows, holiday practices, or geographic locations may mean nothing to these students. Teachers should examine their content lessons for cultur-al assumptions that might impede the student's learning. If the cultural reference is unneces-sary, it should be removed. If the reference is necessary to the lesson, the bilingual and/or the ESL teacher can be enlisted to teach some of the content a week before the intended lesson so the student will be more prepared. A peer tutor can be enlisted to explain the concept as it relates to the lesson, or the teacher can choose to fully explain the cultural reference to the entire class during the course of the lesson.

3. Teach learning strategies and scaffold complex tasks.

Teachers at all levels are encouraged to model thinking and study skills. Some learners develop these kinds of strategies on their own to help organize ideas and thoughts. Graphic organizers are one example of a tool that students can use to visually organize relationships and concepts. Teaching students to think metacognitively (to reflect on what and how they are thinking) is an important part of this process. Students need to be able to reflect on what they know and what they need to know in order to move forward. Limited English proficient students need to be challenged by complex concepts. They will be better able to grasp those concepts if the information is scaffolded or supported by previously taught knowledge and skills. Many of these students develop their own organizational strategies; asking them to share their ideas with the rest of the class enhances their self-esteem, encourages the use of language skills in a differ-ent context, and provides the entire class with a new idea to support learning.

4. Organize students into a variety of learning groups.

English is most efficiently learned when it is used to conduct meaningful, natural communication. Students need ample opportunities to talk, use new vocabulary, and share ideas with their peers. Cooperative learning groups, sharing pairs, and teams foster this type of interaction. Listening to English-speaking peers is an important part of language acquisition. Students who have not yet attained intermediate proficiency in English can shadow the work of English-speaking students. Those with greater ability can actively participate in small-group discussion, with assistance as needed for accepted usage and form. Occasionally, students from the same cultural background can be grouped together for some aspect of classroom instruction; however, LEP students benefit socially, emotionally, and cognitively from working with English-speaking peers.

TEACHING TIPS

- Learn the background of your LEP students and collaborate with the bilingual and ESL teacher to plan activities that are culturally and linguistically appropriate.
- Group students flexibly. Be alert for English-speaking students who can provide support to the LEP student.
- Give clear, simple directions. Ask students to retell, in their own words, what you are asking them to do.
- Use pictures to support more complicated tasks. Break the tasks into smaller chunks.
- Team-teach with the bilingual and ESL teacher whenever possible.
- Provide bilingual resources in the classroom (e.g., dictionaries, picture books).
- Use multicultural resources in instruction (e.g., music, dance, games).
- Use "Sheltered English": simple sentences; one tense; one concept per sentence; eliminate any unnecessary language or ideas; substitute common words for unfamiliar words; convert passive voice to active voice.
- Maintain a picture dictionary or file.
- Teach vocabulary before content.
- Label objects in the gym or classroom.
- Tape instructions and vocabulary so the student can hear the directions several times.
- Use realia (actual objects) so the vocabulary becomes real and tangible.
- Develop and maintain consistent classroom procedures and routines.
- Provide concrete examples whenever possible.
- Relate content and activities to the students' every day experiences.
- Check for understanding by structuring the questions to the students' language level.
- Use visual reviews (e.g., charts, graphics).
- Use a variety of learning activities to address different learning styles.

Adapted from: Haynes & O'Loughlin (1997). *Instructional and assessment considerations for ESL students.*

FREQUENTLY ASKED QUESTIONS

Instructing Limited English Proficient Students
in
Comprehensive Health Education and Physical Education

1. **I'm a health education or physical education teacher. Will the ESL teacher come into my classroom or gym to assist with students with limited English proficiency?** The health and physical education teacher, the bilingual education teacher, and the ESL teacher should work together to identify background language skills (e.g., vocabulary, rules) necessary for a particular lesson or unit. The bilingual and/or ESL teacher can provide the student with focused instruction in those areas. In some school districts, the bilingual and/or the ESL teacher may be available to provide intermittent in-class support, especially if the number of LEP students in a particular class is large.

2. **Who determines what content is taught to these students?**
   Limited English proficient students are not exempted from achieving the *Core Curriculum Content Standards in Comprehensive Health Education and Physical Education.* These students must participate in an educational program designed to enable them to acquire the requisite health and physical education knowledge and skills. The content specialist (e.g., health teacher, physical education teacher) determines the course content based on the *Standards* and the school district's curriculum.

3. **Sometimes physical education classes are large (30-40+ students). How can these adaptations be managed in such classes?**
   Limited English proficient students will benefit from small-group activities. Using peer mentors to assist LEP students and to model appropriate skills and behaviors may also help.

4. **What additional training/information does the physical education teacher need to provide learning experiences for these students?**
   Every teacher is not expected to be fluent in all the languages represented in New Jersey's public schools. In some very large districts, teachers may have responsibility for students from several diverse backgrounds. The teacher can be sensitive to cultural differences that may impact participation in classroom activities. For example, the notion of changing one's clothes in a public room, showering, and playing sports during a school day may be completely alien to some students. Teachers cannot assume that all students understand the rules of sports or the subtleties of strategic play. In some cases, even the names of sports may be confusing (e.g. "soccer" vs. "football"). Additionally, teachers need to be sensitive to those students who have immigrated from war-torn countries where youngsters never play in fields for fear of land mines.

5. **What additional training/information does the health teacher need to provide learning experiences for these students?**
   Culture is an important contributor to one's definition of health. Social and emotional health are inextricably linked to spiritual health, particularly when discussing issues such as death and dying, sexuality, and marriage. Health teachers need to understand the cultural and spiritual backgrounds and beliefs of their limited English proficient students in order to best assist students to make sound decisions about health issues.

6. **What can I do to ensure that these students are afforded every opportunity to learn?** Work with the bilingual and ESL teacher to develop a short explanation of the course expectations. Review the expectations with the students and their families before the start of instruction. Parent-school communication will enhance the instructional program and student success. In addition, pair the students with a native English speaker to help the newcomer ease into the school and classroom routine.

7. **Should limited English proficient students be pulled from health and physical education for ESL instruction?**
    Pulling students from one class in order to make time for another class is not beneficial. LEP students are held to the same challenging academic standards as other students and therefore need to participate fully in the curriculum. One possible alternative to this situation might be for the health and physical education teacher to team-teach with the bilingual and/or ESL teacher. Interdisciplinary thematic units, where health concepts are taught in science or social studies classes are another option. Scheduling options need to be explored in creative ways.

8. **Where can I find resources in languages other than English?**
    Many commercial publishers create text materials in other languages. Library media specialists, world language teachers, ESL teachers, and bilingual teachers can assist in the search for appropriate materials. Contact leaders in the immigrant community for more information. Other resources can be located on the Internet (e.g., the Clearinghouse for Bilingual Education at http://www.ncbe.gwu.edu). Other sources, such as the Ministry of Education of Mexico, actually send free textbooks to the United States in order to assist the education of their students living here.

9. **What is "sheltered English" instruction?**
    When an activity can be illustrated visually or by manipulating articles (e.g. dribbling a basketball) students can comprehend the concept without words being spoken. LEP students frequently have difficulty understanding language that is spoken rapidly or full of idiomatic expressions (e.g., "Way to go!"—meaning someone performed well, not that he/she knows the directions to a place). Whenever a concept or skill can be illustrated, the language barrier is lessened and LEP students benefit. Physical education, by its very nature, lends itself to this type of instruction.

SAMPLE LEARNING ADAPTATIONS

Four sample activities, extracted from Chapter 8 of this *Framework*, have been selected to illustrate adaptations for LEP students. The adaptations reflect the four over-arching strategies mentioned earlier in this section and provide teachers with ideas to restructure or redesign their own classroom strategies to enhance learning for LEP students. The sample activity appears in its original form, followed by a list of ideas to modify the activity to benefit LEP students.

Standard 2.5:

All students will learn and apply movement concepts and skills that foster participation in physical activities throughout life.

COMBINING MOVEMENT SKILLS

Indicator 2.5-4: *Combine movement skills to participate in physical activities, such as games, sports, and lifetime recreational pursuits.*

GRADE LEVEL CLUSTER: K-2

B. RIBBON DANCE

For this activity, you need a large, open play area, music tapes or CDs, and one multicolored paper streamer or plastic ribbon per child. Show pictures or video of a rhythmic gymnast using hoops, balls, and ribbons. Distribute the colored streamers and instruct students to find personal space. Students draw a circle in the air with their ribbon. Encourage students to use both hands to draw the circles. Allow students a few minutes to get accustomed to the feel of the ribbon. Have them make circles over their heads, behind their backs, and at varying levels. Allow students to incorporate a locomotor movement as they continue to draw with the ribbon. On signal, students throw their ribbons high up into the air and let them fall to the ground. After sufficient practice circling, moving, and tossing, students perform an original ribbon dance to a short piece of music.

Variation: Divide the class into several small groups (e.g., by color of ribbon), and have each group perform to a segment of music. After each group has performed, combine the entire class into one celebration dance.

Variation: Use rhythm instruments rather than music. Students beat a drum, tambourine, or wood blocks to set the pace for the ribbon dance. Each type of instrument indicates a change in pattern (e.g., tambourine or chime means travel at a high level, the drum signifies circle or travel at a low level or very slowly). Allow students to serve as both dancers and musicians.

Variation: Challenge students to create movement patterns that simulate ocean waves, a lasso, a bouncing ball, or a tornado. Have students describe the qualities of each.

Variation: Instead of ribbons, use hoops, hand or foot rhythm tappers, or soft balls.

SUGGESTED ADAPTATIONS FOR LEP STUDENTS

RIBBON DANCE   **GRADE K-2**

■ Create and use illustration/word cards and videos to focus the vocabulary used in the lesson.

    Directions (left, right, up, down, sideways)
    Levels (low, medium, high)
    Speeds (fast, slow, stop, go)
    Shapes (circle, square)
    Pathways (air, floor, ground, zigzag, straight)
    Colors
    Movement forms (run, walk, skip, hop)

■ Organize class into pairs or small groups for the activity.

■ Model the desired outcome and have students model the desired actions.

■ Use music from various cultures to promote student interest.

Standard 2.6:

All students will learn and apply health-related fitness concepts.

FITNESS AND WELLNESS

Indicator 2.6-6: *Describe the components of health-related fitness and how each contributes to wellness.*

GRADE LEVEL CLUSTER: 7-8

A. 48 REASONS

Divide the class into small groups to brainstorm reasons why individuals should exercise. After a designated time period, reconvene the class and create a master list. Students classify the responses into categories (e.g., psychological benefits, physical benefits) and discuss each.

Variation: Each group brainstorms reasons to exercise and then ranks its responses from most important to least important. Groups defend their choices and develop a class rank of reasons.

Variation: Write the name of each health-related fitness component on a sheet of chart paper. Each time a group names a reason to exercise, discuss where it should be placed. Some reasons may fit in more than one category. Students defend the placements.

SUGGESTED ADAPTATIONS FOR LEP STUDENTS

- Organize the class into balanced groups to encourage active discussion.
- Develop language cards and illustrations for the student responses. LEP students can work with an English-speaking partner to create these cards.
- Use magazines from various countries for the project.
- Review vocabulary using word cards, illustrations, videos, and modeling. Encourage students to research definitions of some of the words (e.g., "fitness", "fitness components").
- Assist students to develop and maintain a vocabulary journal.
- Invite the ESL teacher to circulate and assist groups with brainstorming and ranking activities.
- Use an advanced LEP student, now in high school, to facilitate group discussions.
- Have students brainstorm possible responses with the ESL teacher in preparation for the group activity.
- Students create posters or illustrations to support the lesson.
- Journal writing or sentence completion can be used to check understanding.

Standard 2.4:

All students will learn the biological, social, cultural, and psychological aspects of human sexuality and family life.

RESOURCES

Indicator 2.4-21: *Identify resources that provide information, assistance, and care in addressing sexual and reproductive health and legal issues.*

GRADE LEVEL CLUSTER: 9-12

Teacher Tip: The following activity encourages students to discuss common adolescent sexual health concerns. For younger or less mature classes, you may need to begin this activity using an anonymous question box. As students become more comfortable talking about these issues, eliminate the anonymous question box.

A. COMMON CONCERNS

Brainstorm concerns, worries, or questions males or females might have about the sexual parts of their bodies. List the questions on newsprint entitled "Male Concerns" and "Female Concerns" and leave posted in the room. Divide the class into groups. Each group develops a list of resources for each listed concern. Students use resource directories, contact local healthcare organizations, or use the Internet to locate health and social service agencies that provide reproductive and sexual healthcare and information.

Variation: Create several scenarios that represent the following situation: A friend shares a sexual concern with you (e.g., she thinks she's pregnant; he has an unusual discharge; she found a lump in her breast; he thinks he might be gay). Create a role-play that illustrates how to address the friend's concerns. Develop a list of school resources for students who need help.

SUGGESTED ADAPTATIONS FOR LEP STUDENTS

- Be sensitive to cultural traditions, norms, or practices that might inhibit student participation in this activity.
- Provide reference materials in both English and the student's native language
- Work with the ESL teacher to develop a resource and vocabulary list for the activity.
- Have the ESL teacher practice the brainstorming part of the activity with the student prior to the lesson.
- Include a general discussion of cultural and societal norms as part of this activity.
- Adhere to class ground rules for discussion.
- Involve healthcare providers and community agencies that represent the cultural backgrounds of the students.
- Keep parents informed of classroom activities.

D. BE A HEALTH SERVICES DETECTIVE

Ask students where they might go to obtain information about a sexual health problem. List the answers on the board (e.g., call directory assistance for a local hot line or help line, call the help line number, look in the phone book for an agency or individual). After students have identified several agencies that provide reproductive and sexual health services, ask the following questions:

- What qualities would you want in a person or agency that provides sexual and reproductive health services?

- What would prompt you to choose one service over another?

- What do the services cost?

- How would you go about finding out more information?

Assign each student an agency or resource to contact for more information. Student research should focus on costs and insurance; parental permission or notification; types and kinds of services; hours; location; transportation availability; and HIV, STD, and pregnancy testing. Students compile the information to create a resource directory for teens.

Variation: Students investigate health services and information provided by various state and federal agencies (e.g., state health department, CDC, medical schools, universities).

Variation: Students develop a list of advocacy groups and nonprofit organizations that support research, information, and treatment for individuals (e.g., American Cancer Society, March of Dimes). To learn more about the nonprofit agency or organization, students participate in a community service project for their selected agency.

Variation: Students research laws regarding health and reproductive care for minors and develop a pamphlet, poster, Web page, or fact sheet. Students should focus on the similarities and differences of these laws in neighboring states.

Variation: Invite a panel of healthcare providers to discuss reproductive and sexual health issues. Be sure to include physicians (OB-GYN and urologist), a nurse practitioner or midwife, a family counselor, a sexuality counselor, and a health educator.

Variation: Invite a human resources specialist from a large company to discuss its reproductive health benefits and policies.

Variation: Invite representatives from various health insurance companies to discuss reproductive and sexual health benefits and limitations. The speaker should address confidentiality, referrals for specialized services, and the costs of specialized programs dealing with infertility as well as the availability of coverage for oral contraceptives, hormone replacement therapy, and drugs for impotence.

SUGGESTED ADAPTATIONS FOR LEP STUDENTS

BE A HEALTH SERVICES DETECTIVE   **GRADES 9-12**

- Allow the LEP student to work with an English-speaking student on the project.

- Provide the student with sample resource materials in both English and the student's native language (e.g., health pamphlets in Spanish/English).

- Involve representatives from community agencies that assist immigrants with healthcare needs.

- Have the ESL teacher discuss the activity with the student in advance in order to increase the student's comfort level.

- Provide the student with a community mentor from the same culture for the project.

- Relate the activity to the student's previous experiences with healthcare for nonsexual issues and concerns (e.g., immunizations, physicals).

- Be sensitive to cultural and religious norms and beliefs regarding family planning, gender roles, and open discussion about sexual issues.

- Adhere to classroom ground rules.

INSTRUCTIONAL ADAPTATIONS FOR THE EXCEPTIONALLY ABLE STUDENT

The *Core Curriculum Content Standards* require that school districts provide appropriate challenges for all students, including the exceptionally able (gifted) student. Existing regulations (N.J.A.C. 6: 8-4.5) require school districts to identify pupils with gifted and talented abilities and provide them with an educational program and services. Local boards of education should have policies and procedures for early and ongoing identification of the exceptionally able student. District policies should include an annual review of student progress to support enhanced instructional programming.

Because student needs and instructional programs vary widely from district to district, comprehensive health and physical education teachers need to be prepared to identify and accommodate the exceptionally able student to support the achievement of the *Standards.* These students may be overlooked in regular classroom instruction. As a result, some exceptionally able students view formalized education as boring and uninspiring. Exceptionally able or gifted students are likely to:

- Demonstrate a high degree of intellectual, creative, artistic, or physical ability

- Possess exceptional communication and leadership skills

- Excel in specific fields

- Function above grade level

Exceptionally able students may demonstrate the ability to grasp concepts rapidly and/or intuitively. Many of these students are intensely curious about principles and how things work and are able to produce products that express insight, creativity, and/or excellence. Exceptionally able students may generate theories and hypotheses and pursue methods of inquiry beyond the expectations of students of their age or grade level. Students gifted in the physical domain may demonstrate motor skills well beyond their developmental level.

Most people still associate the term "gifted" with people who achieve high scores on I.Q. tests. However, neuroscience has expanded and clarified the definition of intelligence to include other dimensions. As now described in the literature, giftedness reflects a multifaceted, multicultural, and multidimensional perspective defined by aptitude, traits, and behaviors rather than changeless test performance. Teachers need to be aware of indicators that signal special abilities and aptitude and design instructional programs that challenge and motivate exceptionally able students.

STRATEGIES FOR THE EXCEPTIONALLY ABLE LEARNER

Health and physical education teachers commonly "differentiate the curriculum". The very nature of physical education requires that program adaptations be made to accommodate the wide range of student developmental levels and abilities. Differentiating the curriculum requires the teacher to make appropriate adjustments to content and adjust teaching strategies to meet student needs. Teachers need to modify expectations of student mastery based on the student's developmental starting point and adjust the instructional scope and sequence to meet the emerging needs, growth patterns, and developmental changes of students. Gifted students are more likely to develop skills, acquire valuable knowledge, experience success and struggle, and feel challenged in a classroom setting that fosters student experiences designed to meet the learning needs of all students.

Comprehensive health and physical education teachers can adapt program content and methodology in a number of ways. Listed below are some of the more frequently used adaptive strategies for the exceptionally able student. These include:

- Interdisciplinary and problem-based assignments

- Advanced, accelerated, or compacted content

- Abstract and advanced higher level thinking

- Allowance for individual student interests

- Assignments geared to development in areas of affect, creativity, cognition, and research skills

- Complex, in-depth assignments

- Diverse enrichment that broadens learning

- Variety in types of resources

- Community involvement

- Internship, mentorship, and apprenticeship

Program modifications usually fall into one of three categories: **acceleration, enrichment,** or **grouping.** Students who are **accelerated** move through the instructional program at a more rapid pace, usually by skipping a grade, substituting non-school activities for credit, or by completing content requirements in less than the prescribed time allotment (e.g., college courses for credit in lieu of district requirements, AP coursework, early admission to college). Flexible pacing may allow students to participate based on their ability to be challenged as well as their ability to handle the work assignments. Content acceleration allows a student to participate at a higher grade level.

Flexible pacing and **content acceleration** may not always be appropriate in health and physical education without significant modifications to the instructional program. For example, the factual content of family life education may be easy for a 10-year old gifted student to grasp; however, the

negotiation and assertiveness skills, sexual situations, and social context may not be developmentally appropriate or relevant for a 10-year old. In the same context, placing that same cognitively talented 10-year old student in a high school physical education class presents numerous developmental and safety issues unless the student has exceptional ability in the area of study (e.g., gymnastics, dance, swimming). In such cases, the instructional program must be modified to reflect the needs of the student.

Program requirements can be accomplished via **compacting** (also known as **telescoping**) which allows a student to cover the curriculum in a shorter period of time. Previously mastered content is pre-evaluated and eliminated from coursework. Multi-age classrooms allow a student to accelerate through self-pacing. Some students may benefit from early entrance to school. Eligibility for early entrance should be evaluated in terms of the child's degree of advancement in relation to peers, the number of areas of advancement, and the student's self-concept not just the child's chronological age.

Enrichment is another way to meet the differentiated needs of exceptionally able students. Well-articulated assignments that require cognitive processing, in-depth content, well-defined skills, and alternate modes of communication can be effective and stimulating. Enrichment programs often include alternate learning activities. Alternate assignments provide students with opportunities to engage in new learning and avoid the boredom of repetitive practice. Physical education teachers use this strategy when providing a number of progressive skill stations, enabling students to move through a series of skills more quickly and at a higher level.

Students can be encouraged to pursue independent study, self-directed research projects carefully monitored by the teacher. Research can be conducted using materials from a more advanced level or from college libraries, businesses, laboratories, and community agencies. Every student should be challenged to think intuitively, using higher order thinking skills such as analysis, synthesis, and evaluation. In health classes, the 10-year old exceptionally able student might explore the psychosocial aspects of puberty and early adolescence in more depth than his/her 10-year old classmates. The student might assist a college professor conducting research in this area or spend time shadowing a pediatrician. Mentors provide students with access to expertise beyond the scope of the instructor and without the limitations of school resources. Additionally, students may enrich their educational experience by studying abroad or in another state or community.

Grouping students of like-ability together in homogeneous arrangements (e.g., special classes, clustering in the same classroom) allows for more appropriate, rapid, and advanced instruction without isolating the exceptionally able student. Research indicates that gifted students are more likely to socialize "normally" when they are with students who share their interests and learning style. Flexible grouping in the regular classroom enables the exceptionally able student to develop advanced skills and provides the student with time for advanced work and independent study.

Students may be grouped in self-contained classes with other exceptionally able students, enabling them to be challenged in every content area, to be stimulated by their intellectual peers, and to have guidance from teachers with experience in sequential, integrated curriculum for the exceptionally able. Students in these classes may participate in seminars, take field trips to research centers, and develop intensive projects with real world applications. Pull out programs combine regular class integration and homogeneous grouping on a part-time, regular basis. In order for a student to feel

empowered by a pull-out program (rather than over-burdened by duplicative instruction) careful coordination, collaboration, and communication among all content area instructors is essential. Within the regular classroom students can be clustered, permitting homogeneous and heterogeneous grouping according to student interests and achievement. Honors and enrichment classes enable students to explore more in-depth content and skills and foster the use of higher order thinking skills and creativity. Elective and/or honors level health and physical education classes offer students opportunities to expand knowledge and develop skills at a higher level than normally required.

IMPLICATIONS FOR COMPREHENSIVE
HEALTH AND PHYSICAL EDUCATION

Gardner's Theory of Multiple Intelligences proposes that each person has capacities in seven different areas. The seven intelligences function together in ways that are unique to each individual. Most people are highly developed in some intelligences, modestly developed in others, and underdeveloped in a few intelligences. Keeping this in mind, teachers of comprehensive health and physical education play an important role in the identification of students with inclinations towards specific intelligences. The simplest and perhaps most accurate method of assessing a student's abilities and inclinations is simple observation. (Armstrong, 1994) Teachers of health and physical education record anecdotal notes or checklists of student behavior, skills, and content knowledge that are useful to school teams charged with evaluating exceptionally able students and planning an instructional course for them. Health and physical educators are keenly aware of developmental changes that impact a student's progress in both motor skill acquisition and social development.

Educators and school administrators must clearly delineate the distinction between athletics and physical education. Interscholastic athletic programs provide students with valuable skills and knowledge. However, physical education is an instructional program for all students, designed to meet mutually-agreed upon *Standards.* The *Comprehensive Health Education and Physical Education Standards* establish the requisite skills and knowledge to enable all students to seek a healthy lifestyle. Problems arise when a physical education program evolves into a quasi-athletic program or a loosely structured recreation program, rather than an instructional program. "Contemporary physical educators are moving away from the one-model-fits-all pattern of restrictive physical education toward programs that are adjusted, adapted, and designed specifically to match the abilities, interests, and needs of individual children." (Buschner, 1994, p.19) Advanced level courses (e.g., sports injury prevention, technology and healthcare), out-of-school opportunities (e.g., internships, community service projects), and individualized instruction support comprehensive health and physical education as a challenging, academic core subject.

Clearly, health educators and physical educators have an important role in the identification of exceptionally able students. Program modifications for these students, including alternative forms of assessment, are essential to the acquisition of life-enhancing skills and knowledge. Many of the sample learning activities found in *Chapter 8* of this *Framework* provide adaptations (listed as **Variations**) that can be used as enrichment or alternative activities for exceptionally able students. The sample activities and variations provide teachers with ideas to restructure or redesign their own classroom strategies to enhance learning for the gifted student.

Summary

There are two kinds of attitudes and perceptions that impact learning. For the exceptionally able student, the learning climate is extremely important. The learning climate may include internal and external factors that influence the student's ability to participate and learn. Exceptionally able students need a sense of order and a sense of acceptance in order to be successful learners. For many exceptional students, being accepted by one's peers is a struggle. The teacher needs to foster the student's sense of acceptance by involving the student in activities and allowing him/her opportunities to participate as both leaders and as followers. Exceptionally able students should have access to resources in the classroom that offer challenges, are of high interest, and provide opportunities for more in-depth reading or research. The teacher needs to resist the temptation to structure the learning environment in a manner comfortable for him/her but not necessarily for the students. Exceptionally able students can play an active role in classroom organization and structure. Meeting the needs of the exceptionally able student in the health and physical education classroom poses different problems but none that can't be overcome. Teachers, sensitive to the needs of students, must design programs that will cognitively, socially, and physically challenge these students.

Following are additional suggestions to enhance instruction for exceptionally able students.

TEACHING TIPS: EXCEPTIONALLY ABLE LEARNERS

✔ Observe student behavior and social interaction and keep anecdotal notes.

✔ Observe student skill development and keep anecdotal notes or visual recording.

✔ Tune in to student vocabulary, language use, and communication skills.

✔ Know how students spend their free time, in school and outside school. Talk with parents, coaches, counselors, and administrators to plan an appropriate program.

✔ Examine school records for evidence of trends, interests, and scores.

✔ Talk with your colleagues and compare notes.

✔ Try new strategies to generate interest and note student reactions. Remember, if a student participates in an activity 5-6 days per week outside school, they might want to try something else!

✔ Vary your teaching style.

✔ Collaborate with colleagues to plan more challenging activities for those students with special abilities.

✔ Talk with your students' parents/guardians.

✔ Talk with your students about their interests, activities, and self-perceived strengths and weaknesses. Don't always ask the talented athlete to demonstrate skills—some students may not wish to "perform" on command.

✔ Issue challenges to all students. Allow students to design challenges.

✔ Provide feedback. More advanced students require more specific feedback.

✔ Teach to multiple intelligences.

✔ Allow students to design and expand assignments to meet their interests and needs.

✔ A student may want to explore a particular activity not normally offered as part of class. Discuss possible options.

✔ If you do not have expertise in the student's sport or activity (e.g., skating, diving, gymnastics, shooting) don't try to "fake it". Ask the student for a resource (book, video) or visit the student at practice to get a better understanding of the rigors and demands of the sport.

✔ Don't underestimate the demands of out-of-school activity. Some very talented dancers, swimmers, or gymnasts spend as much time training as they do in school.

✔ Don't make unnecessary demands of a gifted athlete the day of a major competition (e.g., don't ask your fastest distance runner to run for time during physical education class the day of the state meet).

✔ Work with a gifted student's coach or instructor to provide physical education experiences that support and compliment their training (e.g., weight training, individualized fitness plan).

✔ Allow students to evaluate your teaching style and course offerings. Use student input to design meaningful experiences for all students.

10

TECHNOLOGY

In our vision of communities of understanding, digital technologies are used to interweave school, homes, workplaces, libraries, museums, and social services to reintegrate education into the fabric of the community. Learning is no longer encapsulated by time, place, and age but has become a pervasive activity and attitude that continues throughout life and is supported by all segments of society.

DEDE, 1998

TECHNOLOGY

To meet the demands of the 21st century, students need to acquire a whole new set of skills. Students need to be able to use a variety of tools to search and organize information, to generate new data, to analyze and interpret meaning, and eventually transform this into something new. What role does technology play in this "information transformation"? How does the use of technology impact instruction in health and physical education? This chapter focuses on some of the technological advances that currently impact instruction in health and physical education.

TECHNOLOGY: MORE THAN COMPUTERS

New technology-based models of teaching and learning have the power to dramatically improve educational outcomes. Unfortunately, the cost of technology, its rapid evolution, and the special knowledge and skills required for its use pose significant barriers to its implementation (Dede, 1998). Implementing technology-based models of teaching must begin with the development of a district-wide technology plan created by a committee of teachers and school administrators, parents and students, and business and community leaders. Without substantial and extended professional development in the innovative models of technology-based instruction, many educators do not use the devices to their full potential. Additionally, school districts must consider the maintenance and upgrading of technological devices as part of the overall plan.

The Internet already connects schools with one another, with homes, businesses, libraries, museums, and community resources. It allows teachers to draw on the resources of other teachers and to tap a wide range of technical and business experts. For teachers of health and physical education, the Internet opens doors to current health data. It allows a physical education teacher to choose a pre-designed step aerobic routine for today's class. Students can research the latest advances in the treatment of Alzheimer's Disease, investigate product safety claims, and plan a fitness day with thousands of students from around the world.

Technology is more than computers. Technology helps teachers and students solve problems. Project-based learning enables students to investigate a problem of personal interest and allows the student to track his/her own progress. Using **problem-solving software** students design flow charts and algorithms, create data-bases, and incorporate the information into project designs and reports. Using technology, students exchange electronic documents (e.g., up to the-minute reports from CDC), transmit audio and digital video, and shop on-line. In addition, emerging advances in **simulation technology** and **computational power** will allow students to participate in situational learning via **immersive virtual reality**. Advances in virtual reality devices (e.g., special glasses, hand-held wands) enhance the life-like effects of the environment and allow learners to collaboratively interact with the simulation (Dede, 1998). Far more advanced that the driving simulators still used in a number of school districts, these devices will enable students to experience and react to real-life situations (e.g., driving under the influence).

Health and physical education teachers regularly incorporate visual technology into classroom instruction. **Video cassettes and laser disks** can be used to:

- Introduce new concepts, review prior knowledge, or trigger discussion (e.g. an open-ended vignette on violence)

- Demonstrate model performances (e.g., tennis serve in fast and slow motion)

- Demonstrate game/sport strategies (e.g., diagramming plays)

- Analyze movement skills (e.g., frame-to-frame analysis of a runner)

- Provide stimulus for mental imagery (e.g., visualizing the perfect golf swing)

- Administering tests and quizzes (e.g., identifying critical errors in a golf swing)

- Create a medium for student projects

Camcorders and digital cameras allow students to see themselves in action. Students can compare their performance to model performances. In addition, students can use the devices to create their own video projects. These cameras can be used to:

- Provide skill feedback and self analysis (e.g. critiquing a role play of refusal skills)

- Analyze and compare the use of movement principles and concepts (e.g. comparing the speed of approach and body position in long jump)

- Support student projects (e.g., creating a musical ad for a health product)

- Assess learning (e.g., comparing skill development from the beginning to the end of the year)

- Monitor student behavior and activity (e.g., recording activity of one group while working with another)

Health and physical education teachers can use **computers** for a variety of purposes. Teachers and students can use software to produce health and physical education newsletters, create calendars and puzzles, and develop signs, posters, and illustrations for the classroom or gymnasium. Using specialized software, students can participate in a cardiovascular risk assessment, analyze their nutritional intake, or determine their fitness level. In addition, students can design an individualized weight/strength program, analyze their body composition, or create a simulated health history. Electronic portfolios can help students compile evidence of learning over time. In addition, teachers and students can use Internet sites and listservs for updated information, research, and teaching ideas. A list of Websites can be found in Appendix A.

Computer-assisted instruction (CAI) allows students to proceed at a rate that is appropriate and meaningful to them. There are several kinds of CAI software available for use in health and physical education programs. They include the following:

- Drill and practice (e.g., learning the names of muscles or rules of a sport)

- Tutorials (e.g. learning the parts of the heart and taking one's pulse)

- Programmed instruction (e.g., learning the key elements of a tennis serve and volley, one step at a time)

- Educational games (e.g., learning the rules of football while playing a simulated game)

- Simulations (e.g., determining the effects of alcohol consumption at a party) (Mohnsen, 1995)

Health and physical education teachers frequently use technological devices as a matter of course in the instructional setting. Such devices might include:

- **Digital Blood Pressure Machines**
  Provides visual representation of the student's pulse and blood pressure

- **Body Composition Analysis**
  Informs student of his/her percent of body fat

- **Automatic Skinfold Calipers**
  Uses a built-in computer to calculate and display the percent of body fat

- **Heart Monitor**
  Records pulse rate during exercise

- **Timing Devices**
  Stores times and numbers, provides split times, lap times, and places
  Transfers information to computer for print-out (Mohnsen, 1995)

- **Handheld Recording Devices**
  Includes pen-based and handheld computing devices used to collect information
  in an outdoor setting
  Includes electronic clipboards and message pads (Dorman, 1998)

Finally, technological advances have led to exercise devices that work specific muscle groups. Research has enabled the creation of safe and efficient exercise equipment designed to maximize workout time with minimal chance for misuse or injury. This equipment makes it easier for teachers and students to focus on fitness strengths and weaknesses. Innovative fitness technology equipment can be found at most large fitness centers or college training centers. Generally, this equipment is very expensive. For this reason, many students do not have unlimited access to the most modern exercise equipment available on the market today. In some schools, such equipment is only made

available to students who participate in interscholastic athletic programs. Having this equipment available as part of the regular health and physical education program significantly amplifies student interest and enhances the instructional program.

ASSISTIVE TECHNOLOGY FOR STUDENTS

WITH SPECIAL NEEDS

Technology can be a great equalizer for children with disabilities. For students with impaired vision, hearing, or mobility the benefits are obvious. The benefits can be just as powerful for students with limited cognition or perception. Technological tools enable teachers to provide new and more effective learning experiences while individualizing instruction to meet a broader range of student needs. Here are some examples of the ways assistive technology can enhance health and physical education learning experiences for children with disabilities.

- Improvements in sensor controls enable subtle motor movements to control mobility devices such as wheelchairs. This allows the student increased independent movement in the school and enables participation in a wider range of activities, especially in the physical education setting.

- For a person who is blind, text can be read electronically by a digitized voice synthesizer.

- Amplification devices can filter extraneous background noise (e.g., on the playground, gym) for the hearing impaired.

- Word processing editing, spelling, and grammar checks assist students to perform in regular classroom environments.

- Larger computer screens (e.g., 20 inch), cameras with zoom lenses, and enhancement software can enlarge video images.

- Braille can be translated to and from text, making communication between users and non-users possible.

- Telecommunications Devices for the Deaf (TDDs) and Teletypewriters (TTYs) act much like electronic mail.

- Vibrating pagers, motion detectors, and visual indicators (e.g., lights for telephone rings) can signal students for certain activities.

- Larger control buttons on keyboards and remote devices promote independence.

- Voice recognition devices enable a high-level quadriplegic complete control of computer software.

- Touch screen monitors, adaptive switches (e.g. joysticks), and a trackball can be used to activate a computer, thus enabling a child to take part in a sport simulation (Behrmann, 1998).

Chapter 9 of this *Framework* proposed sample adaptations for students with diverse learning needs. Many of the tools mentioned in this chapter can be used to enhance and support the instructional

methodologies described throughout this document. The possibilities are endless with advances in technology. These technological adaptations enable each student to fulfill his/her potential, actively engaged in the school community.

SUMMARY

At the present time, many health and physical education teachers may not have access to the technological devices discussed in this chapter. However, the use of technology is important for students in all disciplines. Students need to see how technology is used within a real-world context. Technology can be used to enhance and support instruction for all students, creating student interest and providing students with valuable skills. As students and teachers prepare for the new millennium, technology and the community it creates grow as vital parts of educational reform. Health and physical education teachers need to increase their efforts to become technologically fluent and to incorporate various technological devices into their instructional program.

PART C: SCIENCE INSTRUCTIONAL ADAPTATIONS FOR EXCEPTIONALLY ABLE STUDENTS

INTRODUCTION

When implementing the *Core Curriculum Content Standards*, schools must provide all students with appropriate challenges so that raised expectations do not result in lowered expectations for the exceptionally able. Gifted students remain in regular classrooms for the better part of the day and are pulled out for enrichment for a designated amount of time. As a result, teachers face the challenge of accommodating the gifted student in the regular classroom.

Gifted learners are oftentimes overlooked in classroom instruction. Consequently, some students find school boring and uninspiring due to knowing many of the concepts being introduced in the regular classroom. The exceptionally able or gifted students are those who

- demonstrate a high degree of intellectual, creative, and/or artistic ability
- possess exceptional leadership skills
- excel in specific fields
- function above grade level
- need accommodations or special instruction to achieve at levels commensurate with a challenge to his or her abilities
- have the ability to grasp concepts rapidly and/or intuitively
- have an intense curiosity about principles and how things work
- have the ability to generate theories and hypotheses and purse methods of inquiry
- produce products that express insight, creativity and/or excellence

In the past, the term "gifted" described people with high scores on I.Q. tests. Today, new concepts connected to creative thinking models and multiple intelligences have expanded the definition of intelligence to include other dimensions. Giftedness reflects a multifaceted, multicultural, and multidimensional perspective and is defined by aptitude, traits, and behaviors rather than changeless test performance. These students are found in all cultural groups and across all economic levels. Increased understanding of culturally determined and environmentally affected behaviors will enable teachers and administrators to interpret performance indicators of creative potential.

The process of identification is ongoing because students are continuously entering and exiting school districts. Fluidity should be maintained as students' needs change each year. Identification and placement in a gifted program should be initiated in kindergarten and reviewed annually through grade 12. Identification practices should be in place at the time of school enrollment. Selection of a pool of nominees and final selection of participants should be determined by a committee of at least three to five individuals in order to maintain a fair and democratic process.

STRATEGIES FOR THE EXCEPTIONALLY ABLE LEARNER

"Differentiating the curriculum" refers to appropriate adjustments to content, teaching strategies, expectations of student mastery, and scope and sequence. In a differentiated classroom, students work at different paces. Gifted students are more likely to develop study and production skills, experience success and struggle, and feel challenged in a classroom setting that encourages learners to master information more quickly.

Adaptation strategies include the following:

- interdisciplinary and problem-based assignments with planned scope and sequence
- advance, accelerated, or compacted content
- abstract and advanced higher-level thinking
- allowance for individual student interests
- assignments geared to development in areas of affect, creativity, cognition, and research skills
- complex, in-depth assignments
- diverse enrichment that broadens learning
- variety in types of resources
- community involvement
- cultural diversity
- internship, mentorship, and other forms of apprenticeship

Adaptation categories include *acceleration, enrichment,* and *grouping.* The recommendations on the following pages identify a variety of adaptive efforts within these categories.

Acceleration

Acceleration *involves grade skipping or changing the rate of presentation of the general curriculum to enable the students to complete the program in less time than usual. Prescribed seat-time is not necessary for achievement of the standards. Acceleration can occur in any subject area. Middle school students should be able to take high school courses; high school students should be able to take college courses with appropriate credit accrued. Some provision must be made for continued acceleration or high-level enrichment. Unless the student has a pre-identified problem, social or emotional development should not inhibit acceleration.*

Examples of accelerated types of programs are described below.

Flexible pacing. Assignment to classes is on the basis of ability to be challenged as well as ability to handle the work; assignment should not be age discriminatory.

Content acceleration. Superior performance in some areas may be addressed with placement in a higher grade level for the areas warranting it.

Early entrance to school. Eligibility should be evaluated in terms of (1) degree of advancement in relation to peers; (2) number of areas of advanced achievement; and (3) student's self-concept. The percentage of students attending one to three years of preschool has increased dramatically and should be considered.

Multiage classes. Two or more grade levels are combined in multiage classes. Students can accelerate through self-pacing.

Compacting. Compacting, also known as telescoping, refers to a form of acceleration in which part of the curriculum is covered in a shorter-than-usual period of time. Previously mastered content materials are determined through pre-evaluation and elimination.

College course work. Qualified students take college courses for college credits while completing high school requirements (concurrent enrollment). College courses may be taken in the summer.

Early college work. Once the standards for high school courses are met, early admission to college is an option. Students may leave high school early and enter college.

Advanced placement. The advanced placement program (APP), administered by the College Entrance Examination Board, enables high school students to obtain both high school and college credit for demanding course work offered as part of the school curriculum.

Enrichment

Enrichment *is another way to meet the differentiated needs of exceptionally able students. Well-articulated assignments that require cognitive processing, in-depth content, and alternate modes of communication can be effective and stimulating.*

The following are some examples to consider when differentiating classroom instruction to meet the needs of academically talented students:

Alternate learning activities/units. Opportunities to pursue alternate activities permit students to engage in new learning and avoid the boredom of repeating instruction or unnecessary practice in skills already mastered.

Independent study. Students conduct planned, self-directed research projects carefully monitored by the teacher. Prerequisites include instruction in field-based and library research skills, the scientific method, and other authentic types of inquiry.

Advanced thinking processes. Provide assignments in all curriculum areas emphasizing higher-level thinking skills such as synthesis, analysis, and evaluation.

369

Guest speakers. Guest speakers provide information on topics beyond the teacher's expertise. University, faculty, parents, business and industry leaders, or other teachers in specific areas may be used as resources.

Mentors/internships. Allow students to interact with adult experts in the field of mutual interest. Mentors act as role models. Student's areas of interest, as part of career awareness, should be considered.

Alternate resources: Use materials from a higher grade level. Access to business, university, and community resources (such as laboratories, libraries, and computer facilities) are appropriate.

Exchange programs. Students attend schools in a different community or country to enrich educational experiences.

Grouping

Grouping *students of like ability together in homogeneous arrangements such as special classes or* **clustering** *in the same classroom allows for more appropriate, rapid, and advanced instruction without isolating the exceptionally able student. Research indicates that gifted students are more likely to socialize "normally" when they are with students who share their interests and learning styles. When cooperative learning has been used in the regular classroom, gifted students sometimes become tutors for other students, and, therefore, learn less academic content. Flexible grouping is recommended in the regular classroom to give gifted students an opportunity for development of advanced skills, including skills of expression and production. Grouping flexibly allows exceptionally able students time for advanced work and a chance for independent study.*

Students may be grouped using the following scheduling arrangements or project emphases:

Self-contained classes. Enable exceptional students to be challenged in every area throughout the day and week, to be stimulated by their intellectual peers, and to have guidance from teachers with experience in sequential, integrated curriculum for the exceptionally able.

Pullout programs. Combine regular class integration and homogeneous grouping on a part-time, regular basis. Pullout programs require careful coordination and communication between the teachers of both classes.

Cluster grouping in the regular classroom. Cluster grouping permits homogeneous and heterogeneous grouping according to interests and achievement.

Cluster scheduling. Arrange schedules so that exceptionally able students can take their required core courses together to enhance rapid pacing, less drill, and greater depth and breadth.

Honors and enrichment classes. Provide opportunities for practicing higher-level thinking skills, creativity, and exploration of in-depth course content.

Seminars. Seminars are aimed at research, interdisciplinary studies, visual and performing arts, academic subjects, or other areas of interest. These seminars provide interaction with specialists who can give guidance in specific areas. Gifted specialists can be powerful resources to assist in teacher in-service programs.

Resource centers. Districts should establish a resource center that is available to all students. It may be a good idea to reserve designated time to utilize these facilities for exceptionally able students from a broader geographical area (e.g., interdistrict or countywide).

REFERENCES

Association for Supervision and Curriculum Development. (1994). *Challenging the gifted in the regular classroom: Facilitator's guide.* Alexandria, VA: ASCD.

Reis, S. M., Burns, D. E., and Renzulli, J.S. (1992). *Curriculum compacting: The complete guide to modifying the regular curriculum for high ability students.* Mansfield Center, CT: Creative Learning Press.
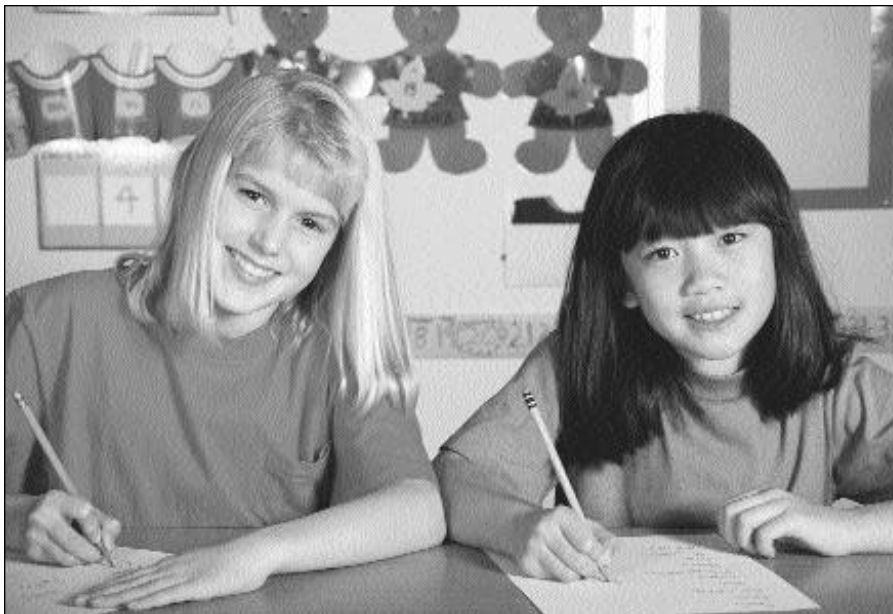
INSTRUCTIONAL ADAPTATIONS FOR STUDENTS WITH DIVERSE NEEDS

Part A: Social Studies Instructional Adaptations for Students with Disabilities

Part B: Social Studies Instructional Adaptations for Students with Limited English Proficiency

Part C: Social Studies Instructional Adaptations for Exceptionally Able (Gifted) Students

PART A: SOCIAL STUDIES INSTRUCTIONAL ADAPTATIONS FOR STUDENTS WITH DISABILITIES

INTRODUCTION

The New Jersey Core Curriculum Content Standards and related curriculum frameworks are the focus of curriculum and instruction for all pupils. This population includes students with disabilities. In order to provide pupils with disabilities meaningful access to curriculum and instruction based on the content standards, adaptations may be required. Adaptations are not intended to alter or compromise the content standards. Instead, adaptations are intended to provide students with disabilities the opportunity to maximize their strengths and compensate for their learning differences.

Consistent with the expectation that students with disabilities participate in the general education curriculum, is the requirement that the Individualized Education Programs (IEPs) of students with disabilities reflect the core content standards and the local school district's general education curriculum (see Figure 1).
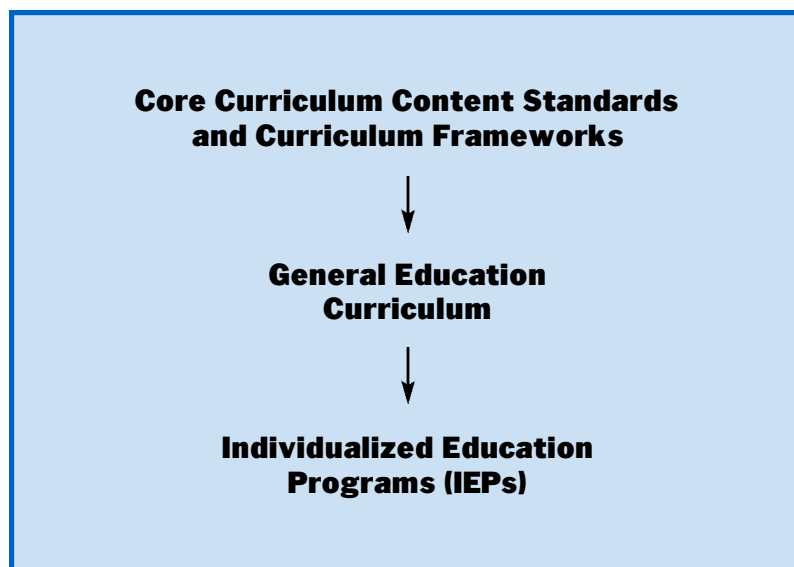
Core Curriculum Content Standards and Curriculum Frameworks

↓

General Education Curriculum

↓

Individualized Education Programs (IEPs)

Figure 1

ADAPTATION: A FEDERAL REQUIREMENT

The Individuals with Disabilities Act Amendments of 1997 and Section 504 of the Rehabilitation Act of 1973 guarantee students with disabilities the right to general education program adaptations, as specified in their Individualized Education Programs (IEPs) or 504 plans. These federal requirements are intended to result in adaptations that provide these pupils access to the general education program and general education curriculum.

Students with disabilities demonstrate a broad range of learning, cognitive, communication, physical, sensory, and social/emotional differences that may necessitate adaptations to the general education program. Each pupil manifests his or her learning abilities, learning style, and learning preferences in a unique way. Consequently, the type of adaptations needed and the program in which the adaptations will be implemented are determined individually within the Individualized Education Program (IEP) or 504 planning processes (see Figure 2).
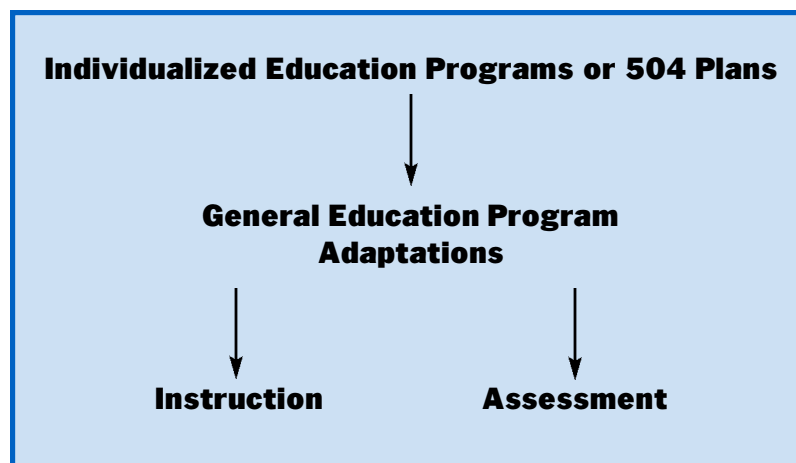
Individualized Education Programs or 504 Plans

General Education Program Adaptations

Instruction   Assessment

Figure 2

Within the context of the New Jersey Social Studies Curriculum Framework activities, adaptation is defined as:

Any adjustment or modification to the general education program enabling students with disabilities to:

■ Participate in and benefit from learning activities and experiences based on the core curriculum content standards; and

■ Demonstrate understanding and application of the content standards.

CATEGORIES OF ADAPTATIONS TO THE
LEARNING ACTIVITIES IN THE
NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK

The standards and indicators for social studies are critically important for students with disabilities, as they are to all students. Students with disabilities need to learn history, civics, economics and geography to understand the foundations of our country and other countries so they may be able to participate as responsible citizens in our society. The New Jersey Social Studies Curriculum Framework encompasses a broad range of knowledge and proficiencies. The framework emphasizes both the acquisition of essential content information as well as the development of thinking skills, social skills and political participation skills. While it is important that students with disabilities learn the general education curriculum for social studies, adaptations to instruction may be needed in order for students to participate effectively in activities and to acquire and demonstrate essential knowledge and skills.

The activities contained in this framework illustrate examples of instructional practice aligned with the standards that are beneficial to all students, including students with disabilities. However, to make these activities meaningful for students with disabilities, adaptations to certain aspects of these activities may be necessary. These adaptations may take a variety of forms. Some adaptations structure students' learning in a more explicit, systematic way than some nondisabled students may require. Other adaptations provide alternative means for students to acquire or demonstrate their knowledge while they are developing related language arts literacy proficiencies (e.g., listening to text on tape, using software to read text aloud or to dictate responses, using a graphic organizer to structure thinking and writing).

Note: The adaptations included in this appendix were developed to complement and make accessible the activities developed in the New Jersey Social Studies Curriculum Framework. Additional adaptations, not included in this appendix, may be needed for some students with disabilities to provide further instruction in foundation skills that underlie the processes described in this framework.

The categories listed below are intended to guide the process of selecting adaptations to the Social Studies Framework activities for an individual pupil with disabilities. Adaptations include, but are not limited to, the following:

Student Motivation

Teacher Involvement
Student Involvement

Instructional Presentation

Instructional Preparation
Instructional Prompts
Instructional Application

Instructional Monitoring

Teacher Management
Student Self-Management

Classroom Organization

Instructional Groups
Instructional Support
Environmental Conditions
Instructional Materials/Adaptive Equipment

Student Response

Response Format
Response Procedures

DESCRIPTIONS OF ADAPTATIONS TO
THE LEARNING ACTIVITIES IN THE
NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK

Descriptions—including the rationale, specific functions, and examples for each category of adaptation—are provided below. Following these descriptions are sample adaptations to selected activities contained in the Social Studies Framework. These adaptations were selected to illustrate a range of possible adaptations that could be used across social studies processes and indicators.

Note: The adaptations listed below are based on effective instructional practices for all students. While these strategies can be beneficial to all students, they may be an essential component of the instructional program for a student with disabilities.

STUDENT MOTIVATION

Rationale: Some students with disabilities may be reluctant to engage or persist in social studies activities. This reluctance may be due to difficulties in coping with task demands and discouragement from unsuccessful learning experiences despite students' initial efforts and desires to learn. Because of these difficulties, motivational strategies are important to help students with disabilities become successfully involved in a variety of social studies activities to develop proficiency, confidence, and enjoyment in learning.

Purpose:

- Create interest
- Persistence
- Confidence
- Enjoyment
- Independence

Strategy:

- Personally meaningful activity
- Activity choice
- Hands-on, multimodal activities
- Doable tasks
- Learning styles
- Response options
- Involvement in goal setting and assessment activities
- Choice to work with others or alone
- Personal recognition
- Celebrations

INSTRUCTIONAL PRESENTATION

Rationale: Students with disabilities may require adaptations to instructional presentations that will enable them to acquire, comprehend, recall, and apply social studies content and related processes. In addition, instructional presentation adaptations can enhance a student's attention and ability to focus on instruction.

Purpose: The primary purpose of these adaptations is to provide special education students with teacher-initiated and teacher-directed interventions that prepare students for learning and engage students in the learning process (Instructional Preparation); structure and organize information to aid comprehension and recall (Instructional Prompts); and foster understanding of new concepts and processes (Instructional Application) addressed in the Social Studies Framework activities.

Instructional Preparation

Purpose:

- Heighten students' interest and understanding
- Establish purpose and goals of lesson
- Activate prior knowledge
- Build background knowledge of content or strategy
- Focus attention and thinking
- Introduce key concepts and information

Examples:

- Relating to personal experiences
- Previewing information/materials
- Advance organizers
- Brainstorming and webbing
- Questioning techniques
- K-W-L strategies
- Predicting
- Preteaching vocabulary
- Preteaching or reviewing a strategy
- Visual demonstrations, illustrations, models
- Mini-lessons
- Think-alouds
- Using examples and non-examples

Instructional Prompts

Purpose:

- Organize information
- Build whole-part relationships
- Cue associations and connections
- Highlight and clarify essential concepts
- Generate classifications and comparisons
- Activate recall
- Summarize

Examples:

- Graphic organizers (e.g., Venn diagrams, sequence chains, timelines, cause-and-effect maps, mind maps, semantic maps, feature analysis charts)
- Chapter or lecture outlines
- Study or research guides
- Mnemonics
- Analogies
- Visual imagery/pictures
- Color coding, highlighting, or underlining
- Segmenting techniques—task analysis, chunking
- Word banks and vocabulary logs
- Note-taking guides
- Framed paragraphs/essays
- Information displayed on overhead or board
- Cue cards
- Music
- Manipulatives
- Movement cues
- Pictures

Instructional Application

Purpose:

- Simplify abstract concepts
- Provide concrete examples
- Extend ideas and elaborate understanding
- Build connections and associations
- Relate to everyday experiences
- Promote generalization
- Engage multiple modalities

Examples:

- Hands-on activities
- Constructions
- Dramatization
- Props
- Illustrations
- Music or movement
- Draw or paint
- Graphics and charts
- Journals
- Field trips; guest speakers
- Interviews/surveys
- Real-life applications (conduct campaign and elections; participate in "congressional debates")
- Games and puzzles
- Simulations
- Creative writing

INSTRUCTIONAL MONITORING

Rationale: Frequent monitoring of the performance and progress of students with disabilities is essential to ensure that students are in fact understanding and benefiting from learning activities. Monitoring provides teachers with a means of obtaining information about students and their ability to participate effectively in learning activities. It also provides a means for teachers to determine when and how to adjust learning activities and instructional supports to promote student development. Equally important is student self-monitoring, self-evaluation, and self-management to promote student self-reflection and self-direction regarding tasks demands, goal attainment, and performance accuracy.

Purpose:

- Provide periodic (continuous) check for understanding
- Redirect attention
- Direct on-task behavior
- Promote participation
- Check progress
- Assist in goal setting
- Establish timelines
- Clarify assignments, directions, instructions
- Provide reinforcement and corrective feedback
- Promote strategy use and generalization
- Manage student behavior and interactions
- Develop self-questioning and self-regulation

Examples:

- Goal setting
- Assignment books, "To Do" lists
- Timelines for assignments
- Think-alouds, self-talk
- Self-questioning techniques
- Journal entries
- Anecdotal recording or graphing progress towards goals (teacher and self recording)
- Rubrics and checklists
- Portfolios
- Conferences
- Peer reviews and coaching
- Student contracts
- Reward systems

CLASSROOM ORGANIZATION

Rationale: Students with disabilities may require specific adaptations to classroom organization in order for them to actively engage in the concepts and processes addressed through the Social Studies Framework activities.

Purpose: The primary purpose of these classroom organization adaptations is to maximize student attention, participation, independence, mobility, and comfort; to promote peer and adult communication and interaction; and to provide accessibility to information, materials, and equipment.

Instructional Groups

Examples:

- Cooperative learning groups
- Peer partners
- Buddy systems
- Teams
- Group roles (timekeeper, recorder, encourager, materials messenger, illustrator)
- Role/group work checklist for self-reflection and accountability

Instructional Support
(from another individual)

Examples:

- Assist physically
- Clarify
- Prompt—cue
- Gesture—signal
- Interpret
- Reinforce
- Highlight
- Organize
- Focus

Environmental Conditions

Examples:

- Classical background music to enhance concentration
- Variety of workspace arrangements (individual, small and large group)
- Privacy workspaces—carrels
- Conferencing area
- Learning centers
- Wall posters to enhance memory and self-reliance (e.g., directions, steps)
- Organizational tools—labeled bins or cabinets for materials, assignments, or supplies
- Seating arrangements—minimize distractions, provide positive student models
- Physical accessibility to all areas, materials, and equipment

Instructional Materials/ Adaptive Equipment

Examples:

- Highlighters
- Overhead projector
- Slates for choral responding
- Materials for range of readability levels
- Books on tape
- Tape recorder for lectures and oral responses
- Simplified written directions
- Adjusted formats (spacing, item arrangement)
- Personal computers and Internet access
- PC software (e.g., Dragon Naturally Speaking—writing; Ultimate Reader—reads text on Internet aloud; Inspirations—mapping/outlining)
- Franklin speller
- Speech synthesizer
- Communication board
- Close-captioned video-TV/decoder
- Braille
- Enlarged print
- Low-vision equipment (e.g., clock)
- Lap board

STUDENT RESPONSE

Rationale: Students with disabilities may require specific adaptations in order to demonstrate acquisition, recall, understanding, and application of social studies processes in a variety of situations with varied materials while they are developing proficiencies in these areas.

Purpose: The primary purpose of student performance responses is to provide students with disabilities a means of demonstrating progress toward the lesson objectives related to the Social Studies Framework activities.

Response Formats

Examples:

- Dictation to peer/adult/tape/PC
- PC/multimedia for composition/response
- Video/audiotapes
- Braille writer
- Sign to interpreter
- Information/graphic organizers
- Illustrations—posters, collage, mural
- Diagrams (e.g., Venn, plot)
- Constructions—relief maps, models, dioramas, mobiles
- Performing arts—dance, dramatization, song, puppet show
- Creative and abbreviated writing—advertisements, travel brochures, obituary, rap, poem, storybook or storyboard, flip book, cartoons
- Create test questions
- Journal entries
- Portfolio entries
- Gallery walk
- Debate
- Presentation/oral report
- Teach a lesson

Response Procedures

Examples:

- Extended time
- Practice exercises
- Interpreter
- Use of preferred response mode (e.g., written, dictated, oral)

NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

THE STRUCTURES OF GOVERNMENT

Core Curriculum Content Standard: 6.1

Indicator: 11

Page Number: 58

Grade Level: 5-8

Category of Adaptation:

Instructional Presentation–Instructional Preparation

Games are fun methods of previewing or reinforcing learning. Active learning formats involving movement and/or manipulatives are highly motivating and engage students in exploration, discussion, and repeated practice

Category of Adaptation:

Instructional Presentation–Instructional Prompts

Guiding questions focus students' thinking on key concepts to facilitate responding.

Category of Adaptation:

Instructional Monitoring–Student Self-Management

A self-assessment rating scale involves students in evaluating their own behavior and/or the behavior of their group in completing a task. This type of activity heightens students' awareness of their own actions and the effect of their actions on others

1. Assess students' prior knowledge of terms (e.g., three branches of government, bicameral legislature, balance of powers, majority rule, minority, tyranny) by engaging them in a concentration game to match the terms with definitions (see illustration).

2. Define and illustrate major forms of government (e.g., monarchy, aristocracy, dictatorship, democracy). Allow students choice to illustrate terms in a number of ways, including one-page drawings, cartoons, comic strips, and magazine cutouts.

3. Develop a T-chart for students to record similarities and differences between the student-created laws and the basic principles formulated in 1787.

4. Provide guiding questions to prompt discussion of how the six principles of the preamble apply to the quality of the laws students developed in their simulation (see illustration).

Additional Adaptations

Student Motivation - Teacher Involvement & Student Involvement

■ Show an episode of "Gilligan's Island" to demonstrate the dynamics of people shipwrecked and stranded on a desert island.

Instructional Monitoring–Teacher Management and Student Self-Management

■ Preview definitions for the concentration game with students who require assistance.
■ Determine student groupings for different activities.
■ Have students assess their own performance and the performance of their group following the simulation using the "Group and Individual Rating Scale" (see illustration).

Classroom Organization–Instructional Groups

- Form pairs for the concentration game, varying ability and personality.
- Use heterogeneous groups for simulation activity; include roles of leader, recorder, and time-keeper.
- Arrange students in pairs for definitions of major forms of government; have students work individually to create illustrations.
- Complete "Guiding Questions" worksheet (see illustration) and "Group and Individual Rating Scale" in the cooperative learning groups used in the simulation activity.

Classroom Organization–Instructional Support

- Invite the principal, vice principal, or a police officer to talk to the class about the importance of rules and laws on their respective levels of government.

Classroom Organization–Environmental Conditions

- Large tables or work areas for the concentration games, dictionary work, illustrations, and cooperative group work

Classroom Organization–Instructional MaterialsAdaptive Equipment

- Set of 20 flash cards for the concentration game for each pair
- Dictionaries for definitions
- Paper, ruler, colored pencils, markers, and other drawing materials for creating illustrations
- "Guiding Questions" worksheet to structure preamble evaluation

Student Response–Response Format & Response Procedures

- Create "forms of government" illustrations.
- Discuss and complete T-chart of similarities and differences.
- Complete "Guiding Questions" worksheet and "Group and Individual Rating Scale" in cooperative learning groups.

Flash Card Examples for Concentration Game

Executive Branch	One branch of the government; decides how to enforce laws; works with the President to run the government
Legislative Branch	One branch of the government; made up of the two houses of Congress (House of Representatives and Senate); writes the laws
Judicial Branch	One branch of the government; the Supreme Court decides if laws are constitutional or unconstitutional; other courts interpret the law
Bicameral Legislature	Congress composed of two houses
President	May veto bills of Congress and may appoint judges to the Supreme Court
Congress	May disapprove presidential treaties and appointments; may impeach President; may propose amendments or new laws to overrule judicial decisions; may impeach federal judges
Supreme Court	May declare laws made by Congress unconstitutional, may declare executive actions unconstitutional
Majority Rule	A political arrangement in which the greater number of group members hold the power to make decisions for all
Minority	A smaller group within a whole group
Tyranny	Total power of a person or group over others, especially when exercised unjustly or cruelly

Note: 20 cards: 10 with terms + 10 with definitions

Guiding Questions to Evaluate Student Laws Using the Six Principles of the Preamble

1. **"We the people":** Did all of us agree to the laws that we devised? Explain.

2. **"To form a more perfect union":** Were we interested in creating laws for the good of the entire island and its government? Explain.

3. **"Establish justice":** Are our laws written to maintain justice? Explain.

4. **"Insure domestic tranquility":** Will our laws bring about peace and harmony for all people? Explain.

5. **"Secure the blessings of liberty":** Do these laws provide freedom for everyone on the island? Explain.

6. **"To ourselves and our posterity":** Will these laws last and benefit our children? Explain.
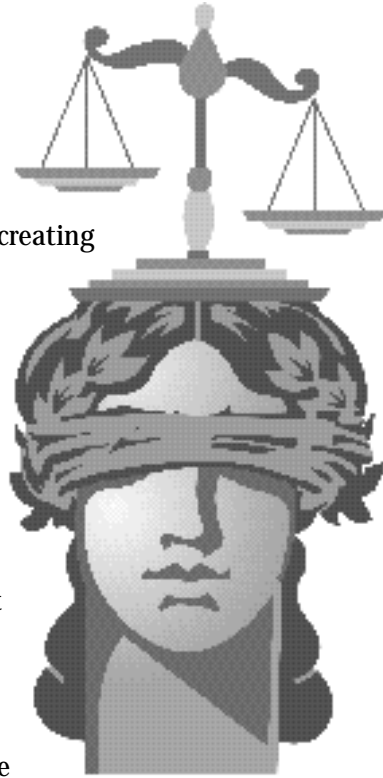
Group and Individual Rating Scale
for the Law-Making Process

On a scale of 1 (**not well**) to 5 (**great!**), rate how well you and your group **worked together** to create laws for your island.

Rating

1. All the members of the group cooperated. _____

2. All the members had a say in the laws. _____

3. All members agreed on the final five laws. _____

4. One or two members made all the decisions. _____

5. I contributed equally to the group decisions. _____

Answer the following in complete sentences

1. Which form of government (monarchy, aristocracy, dictatorship, or democracy) did your group resemble the most? Explain.

2. What could your group have done differently to work more effectively?

NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

SIGNIFICANT HISTORICAL PERIODS
Pharaohs of Ancient Egypt

Core Curriculum Content Standard: 6.3

Indicator: 7

Page Number: 138

Grade Level: 5-8

Category of Adaptation:

Instructional Presentation–Instructional Application

A **flip book** is an alternative report format and study guide. Students can indicate their research findings using brief phrases and illustrations to enhance interest and memory. The abbreviated writing demands make this task accessible to a wide range of student abilities

A **timeline** illustrates the sequence of important events in a visual format. The act of creating a timeline enhances students' understanding and memory of events in time. A timeline can also be used as a manipulative review activity in which students reconstruct the timeline, matching dates with key events.

1. Brainstorm with students to assess their prior knowledge of the pharaohs of ancient Egypt. Record their responses on an overhead.

2. Introduce the names of pharaohs not mentioned by students (e.g., Menes, Hatshepsut, Thutmose III, Akhenaton, and Rameses II). Highlight these names in color and explain that students will discover the important roles these leaders played in the development of Ancient Egypt.

3. Discuss categories of contributions, including law, taxation, trade, and military stability. Emphasize each category by displaying and posting a word card in a different color during discussion. Keep the category cards displayed as a reference for research.

4. Demonstrate how to conduct research using reference texts and technology resources (CD-ROM, Internet).

5. Demonstrate on an overhead how to create a **flip book** to illustrate their research on the contributions of each ruler. Provide a template and an example of one pharaoh's achievements and the importance of these achievements (see illustration).

6. Arrange students in triads to develop a **timeline** illustrating the development of the three kingdoms of Ancient Egypt (see illustration).

7. Create a large class timeline by kingdom including dates, the names of the pharaohs, and key contributions. Add pictures to enhance memory of key accomplishments.

Additional Adaptations

Student Motivation–Student Involvement

- Work in groups.
- Use technology.
- Construct the flip book.

Instructional Monitoring–Student Self-Management

- Share drafts of their flip books in their cooperative groups. Students can add and revise based on peer and teacher feedback.
- Self-check and edit their timelines and research notes during class review.

Classroom Organization–Instructional Groups

- Arrange students in heterogeneous groups to conduct research and to develop a timeline.

Classroom Organization–Instructional Support

- Model the research process and use of resources.
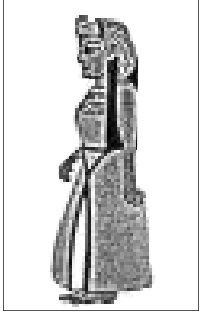- Demonstrate and show example of flip book.

Classroom Organization–Instructional MaterialsAdaptive Equipment

- Reference materials including texts and technology (CD-ROMs), Internet sites.
- Model of flip book.

Student Response–Response Format & Response Procedures

- Complete research and timeline in cooperative groups.
- Complete individual flip books.
- Discuss in cooperative groups, then present and explain the most important achievement of each pharaoh.
- Discuss in cooperative groups, and then with the whole class, what the pharaohs had in common and why a strong, organized government was crucial to the development of a civilization.
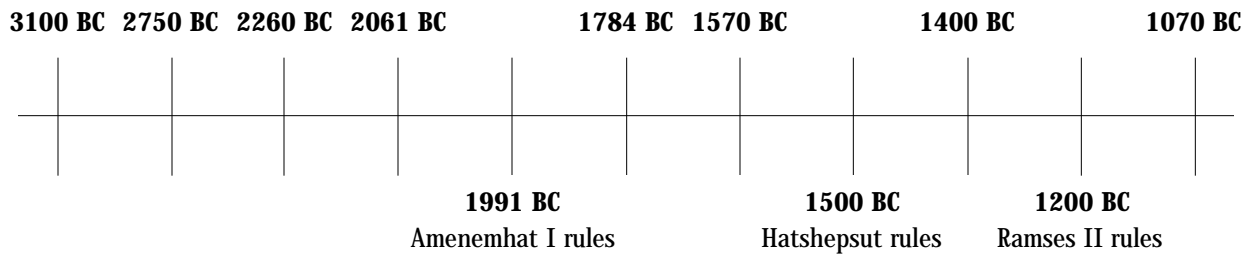
Ancient Egypt Flip Book

Menes

Queen Hatshepsut

Achievements:
- Defeated King of Lower Egypt
- United Upper & Lower Egypt
- Wore double crown to show the union of two lands
- Formed first Egyptian Dynasty

Achievements:
- Improved life at home
- Restored old temples
- Renewed peace & prosperity
- Egypt became a mighty empire
- Ruled 1500 BC

Thutmose III

Akhenaton

Rameses II

Timeline
Kingdoms and Pharaohs

MIDDLE KINGDOM

- Becomes stronger
- Art, literature, architecture advance

| 3100 BC | 2750 BC | 2260 BC | 2061 BC | | 1784 BC | 1570 BC | | 1400 BC | | 1070 BC |

1991 BC
Amenemhat I rules

1500 BC
Hatshepsut rules
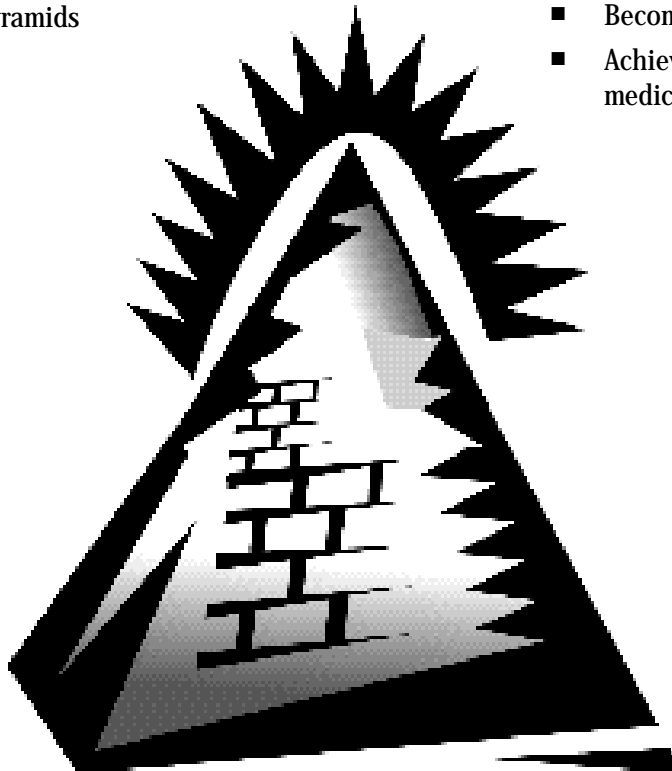
1200 BC
Ramses II rules

OLD KINGDOM

- Age of Pyramids

NEW KINGDOM

- Becomes mighty empire
- Achievements: calendar, medicine, art

NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

INTERPRETING HISTORY
Perceptions of the Enemy: U.S.—Soviet Relations

Core Curriculum Content Standard: 6.3

Indicator: 10

Page Number: 147

Grade Level: 10-12

Category of Adaptation:

Instructional Presentation–Instructional Prompts

Adapted reading material: Adding cues to use specific reading strategies, to understand vocabulary, and to clarify important information are several ways to make original source material accessible to students with disabilities Additionally, segmenting text into short reading passages accompanied by a reaction guide structures students' thinking about what they have just read. For students with disabilities who may not have internalized self-questioning strategies to aid comprehension, this form of external structure is very beneficial.

A **reaction guide** aids students' reading comprehension by prompting students' reflection and reaction to material they have just read. Reaction guides are developed with statements or questions to which students must respond before continuing to read. Integrating reaction guides into short reading passages is an effective means of enhancing students' comprehension of challenging original source material.

385

1.   Select one traditional and one revisionist document. (See Resource section for 6.3.10 in body of Framework.)

2.   Prepare **adapted reading handouts** of excerpts of original source material (see illustration).

3.   To aid in comprehending the passages, bold key vocabulary words and add definitions or clarifying statements in parenthesis. Add a **reaction guide** with statements or questions to focus reflection before proceeding to the next paragraph.

4.   Read aloud excerpts of passages of the sources you have selected as students read along silently. Pause to explain vocabulary whenever necessary.

5.   In triads, students complete the agree/disagree statements on primary source readings.

6.   To evidence their learning, each student in the triad will construct a Venn diagram visualizing the consistency and changes in their own interpretation of containment.

7.   In the same group structure, create Radio Free Europe two-minute propaganda announcements reflecting U.S. views in 1947 and 1985.

8.   Deliver propaganda announcements to the class using props, visuals, etc. Videotape student presentations.

Additional Adaptations

Student Motivation–Teacher Involvement & Student Involvement

- Show the film Missiles of October
- Show TV footage of JFK speech addressing the nation and placing an embargo against Cuba (10/22/62).
- Show TV footage of Khrushchev's "We will bury you" speech at the UN.
- Play Billy Joel's "We Didn't Start the Fire" (music and video). Give students a copy of the lyrics to read as they listen to the music.
- Read a passage from a "spy" novel or view a small clip of a James Bond film.

Instructional Monitoring–Teacher Management & Student Self-Management

- Assign the role of task coordinator to one student in the triad.
- Direct students to complete a self-monitoring checklist to ensure they complete all tasks.

Classroom Organization–Instructional Groups

- Assign roles to students in each triad such as:
  - Soviet View Specialist
  - U.S. View Specialist
  - Consistent Specialist & Task Coordinator
- Students research, record, and present the material to the entire class.

Classroom Organization–Instructional Support

- Enlist media center support.
- Develop a survey questionnaire for use by students when interviewing parents about their memories and reactions to the events involving the United States and the Soviet Union during the Cold War.
- Prepare adapted reading material and Venn diagram.
- Locate TV and video resources.

Classroom Organization–Instructional MaterialsAdaptive Equipment

- Selected readings from 1940's and 1990's
- Agree/Disagree statements
- Venn diagram
- Overhead projector
- VCR
- Access to the Internet, magazines, access to copy machine
- Video camera to tape Radio Free Europe announcements
- Tape recorder, tapes, and earphones for students requiring a taped version of the Kennan text

Student Response–Response Format & Response Procedures

- Make a collage of NATO and Warsaw Pact leaders illustrating their nationalities and political identifications.
- Identify and find pictures of leaders who embraced Kennan's philosophy.

Adapted Reading Handout and Reaction Guide

George F. Kennan

THE COLD WAR and CONTAINMENT, 1947

Read each Kennan passage. In 1947 did Kennan agree or disagree with the following statements? Circle the correct response after each question. Use your highlighter to note where your answers came from.

We have seen how deeply that concepts (of antagonism between capitalism and socialism) had become **imbedded** in the foundations of Soviet power. It had profound implications for Russia's conduct as a member of the international society. It meant that there could never be on Moscow's side any sincere assumption of community of aims between the Soviet Union and powers which were regarded as capitalist. It invariably was assumed in Moscow that the aims of the capitalist world were antagonistic to the Soviet regime, and therefore to the interests of the peoples it controlled. If the Soviet government occasionally set its signature to documents which would indicate the contrary, this was to be regarded as a **tactical** maneuver permissible in dealing with the enemy (who is without honor) and should be taken in the spirit of **caveat emptor** (let the buyer beware).

1. Soviet ideology rejected capitalism, and the Soviets sought friendly relations with capitalist nations.
<div align="center">

Agree   or   Disagree
</div>

2. Capitalist nations could not trust the Soviet government.
<div align="center">

Agree   or   Disagree
</div>

The second of the concepts important to the Soviet outlook…was the **infallibility** of the Kremlin. The Soviet concept of power, which permitted no focal points of organization outside the party itself, required that the Party leadership remain in theory the sole **repository** (storage place) of truth…

On the principle of infallibility there rested the iron discipline of the Communist party. In fact, the two concepts were mutually self-supporting. Perfect discipline required recognition of **infallibility**. Infallibility required the observance of discipline. And the two together determined the behavior of the entire Soviet apparatus of power. But their effect could not be understood unless a third factor was taken into account: namely, the fact that the leadership was at liberty to put forward for tactical purposes any particular thesis which it found useful to the cause at any particular moment and to require the faithful and unquestioning acceptance of that thesis by the members of the movement as a whole. This meant that truth was not a constant but was actually created, for all intents and purposes, by the Soviet leaders themselves.

3. The Soviet government always was completely honest with its members.
<div align="center">

Agree   or   Disagree
</div>

4. Communist party members were taught to question closely every move the Soviet government makes.
<div align="center">

Agree   or   Disagree
</div>

5. Communist party leaders always imposed their will on Soviet citizens.
<div align="center">

Agree   or   Disagree
</div>

Note: Bolding key words and adding definitions or clarifying notes in parentheses aids reading comprehension.

NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

WHEN SOCIETY FAILS THE INDIVIDUAL
Many Faces, One Family

Core Curriculum Content Standard: 6.4

Indicator: 3

Page Number: 168

Grade Level: 3-4

Category of Adaptation:

Instructional Presentation–Instructional Preparation

Brainstorming is a strategy to create interest in a new topic and prime students to learn new information. Brainstorming asks students to think about what they know (or think they know) about a topic before new information is presented. Making students aware of what they already know helps them to develop associations between new and previously acquired information, thereby enhancing memory.

Category of Adaptation:

Instructional Presentation–Instructional Prompts

Modeling the thinking process—including steps in a task—enhances students' understanding of the activity beyond verbal directions or explanations. Through demonstration, students see as well as hear what they are expected to do and, most importantly how to undertake the process.

389

Category of Adaptation:

Instructional Presentation–Instructional Application

Drawing is another means of expressing ideas and enhancing associations
For some students with disabilities, drawing is an easier mode of expression than
written description. For these students, illustrations enable them to express their
understanding in richer detail. Illustrations may then serve as a
springboard to facilitate oral or written expression.

1. Ask students to **brainstorm** individually why a person might immigrate to the United States using an "Open Mind" graphic (see illustration).

2. Display and discuss students' collective responses on an overhead

3. To build background knowledge, read aloud a book suitable to your grade level about the immigration process.

4. As a follow-up activity, **model** how to create a "double entry" journal on the board or overhead. Show students how to recall and record incidents from the book and then, how to record their reactions or feelings to each event (see illustration). Some students may need to draw pictures and then **dictate** their ideas to a teacher or peer. Their statements can then be copied or traced below their pictures.

5. Dress up in costumes and role-play what happened to the immigrants when they arrived at Ellis Island.

6. Show students how to create three **drawings** showing the sequence of immigration including the journey, arrival, and admissions process. Provide a template with a space for each drawing as well as space and/or lines to add a written description. Again, some students may need to dictate their descriptions and then copy or trace their sentence(s) below their pictures.

7. Create individual student books to illustrate the immigration process, and provide time for students to read their books to their peers.

8. Ask students to select one picture from their book to copy and include in a "class quilt" of the immigration process (see illustration).

Additional Adaptations

Student Motivation–Student Involvement

- Engage in role-play.
- Take pictures and record presentations using a movie camera.
- Create a class quilt.

Classroom Organization–Instructional Groups

- Cooperative groups set up the role-playing skit.
- Pairs can work on ideas for their drawings.

Classroom Organization–Instructional Support

- Demonstrate how to recall and record incidents and reactions to create the double entry log.
- Transcribe students' dictation.

Classroom Organization–Environmental Conditions

- Chairs set up for story time and role-playing.

Classroom Organization–Instructional MaterialsAdaptive Equipment

- Books on immigration
- Graphic organizers for brainstorming and double entry logs
- Template for illustrations and descriptions
- Old clothing and props for role-playing (e.g., long skirt, luggage)

Student Response–Response Format & Response Procedures

- Encourage written response in journal, but allow students to use pictures to initially communicate ideas and reactions.
- Dictate responses as needed.
- Share books with peers.

Open Mind
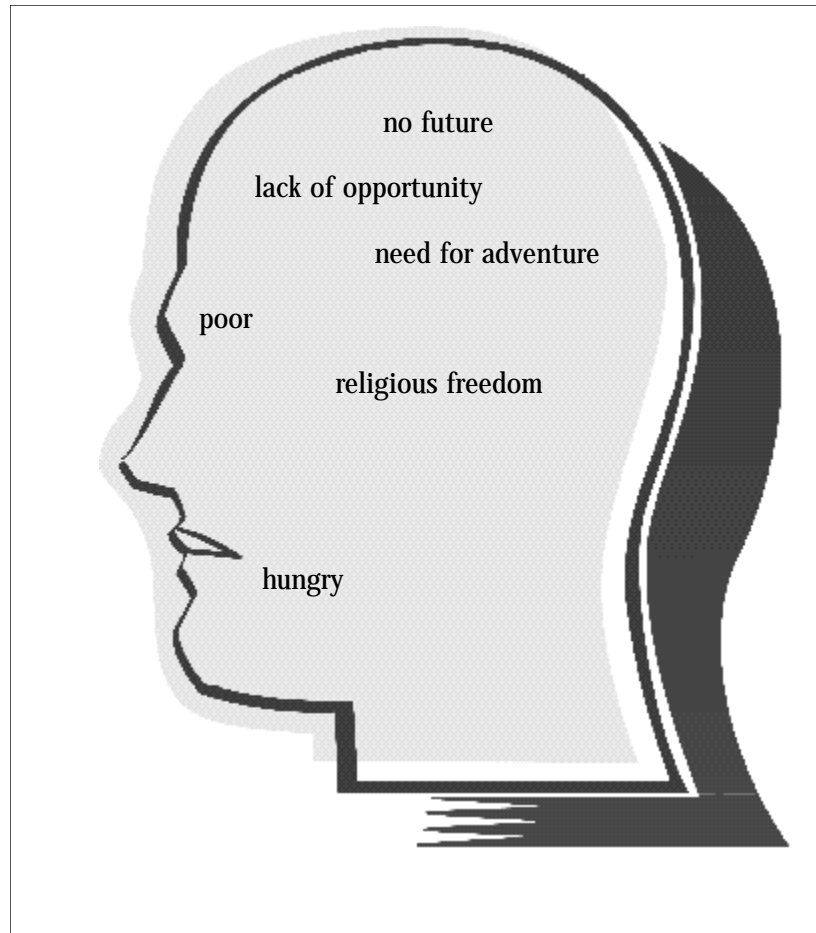
Children pretend that this is a head of someone immigrating to America. They brainstorm why this person has left his or her homeland. These reasons are written inside the outline of the head. Children can use pictures, words, or sentences when brainstorming.

Adapted from Current Best Strategies for 4th Grade, by Jane Duke, Bureau of Education & Research.

Double Entry Journal*

Incident	Response
1. I spent three weeks traveling in small quarters.	1. The journey was horrible, uncomfortable, and wretched. I hardly had space to move.
2. As the ship pulled up at a New York pier, the upper class walked down the gangplank.	2. I hate being poor. I don't deserve this treatment.
3. The medical examiners checked out the immigrants to see if they were healthy enough to stay in America.	3. I'm scared to get my eyes examined. The doctors flip up the eyelids using hairpins or buttons.

*Children listen to a story about immigration. They then write about an incident from the book on one side of the sheet. On the other side, they write their reactions or feelings about the incident. Model with the whole class first, then give each student his or her own journal page to work on. The student can respond with pictures, words, or symbols.

Create a Quilt

1. Give each student a square piece of paper.

2. Draw a scene about the immigration process. (Children must first be exposed to the events by listening to many stories.)

3. Children decide which scenes come first (e.g., traveling to America) and arrange them on the floor.

4. Tape squares together to display.
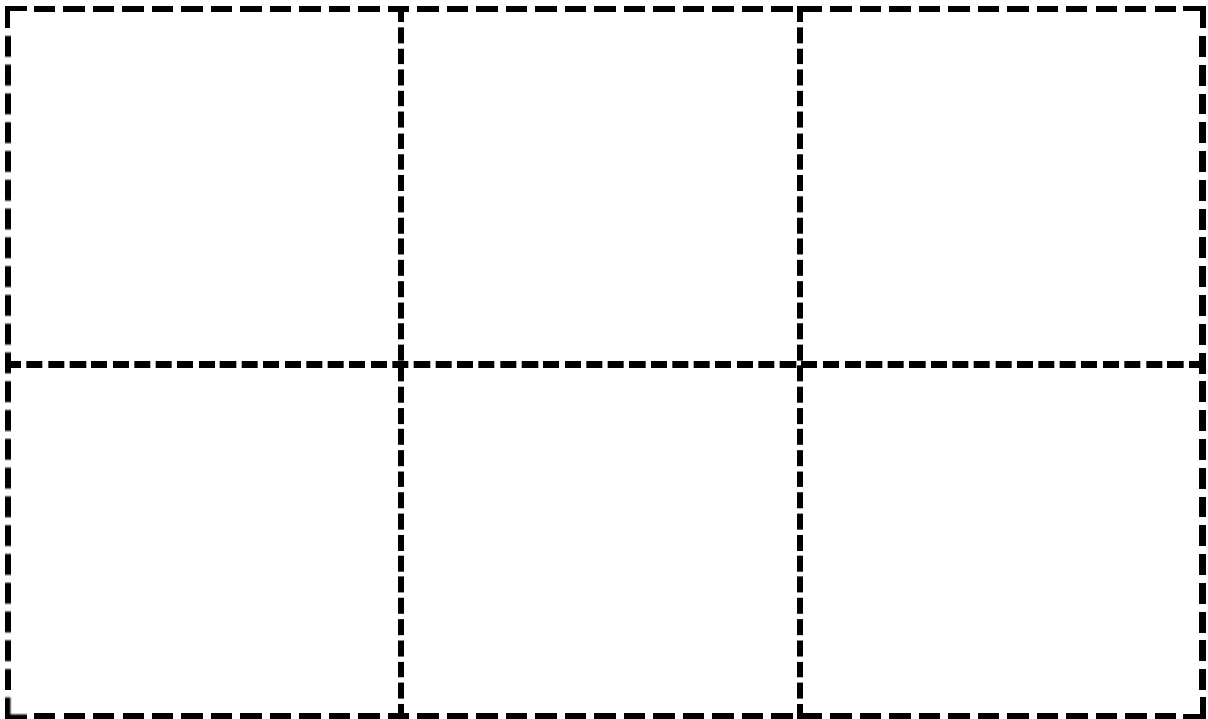
NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

SOCIETIES GROW ACROSS TIME AND SPACE
The Garden State

Core Curriculum Content Standard: 6.4

Indicator: 5

Page Number: 174

Grade Level: 6-8

Category of Adaptation:

Instructional Presentation–Instructional Prompts

Graphic organizers are a visual means of structuring and displaying information to aid attention, comprehension, and recall of important material. They are also useful tools for note-taking and prewriting activities. Graphic organizers can structure information categorically through maps or charts to illustrate patterns such as sequence of events, compare and contrast, cause and effect, or problems and related solutions

A **writing frame** contains cues such as directions, signal words, and labels to prompt students to include particular information. The writing frame also models cohesive paragraph structure.

Category of Adaptation:

Instructional Monitoring–Student Self-Management

A writing skills checklist can be used to assist students to independently review and revise their draft essays. By highlighting selected skills, teachers can individualize elements that students must attend to.

1. Assign students in triads to research and record data for their investigations.

2. Teams will research the historical development of land use and road building in Northern New Jersey, Southern New Jersey, or the United States in general between 1900 and the present.

3. Provide **graphic organizers** to record information (see illustrations).

4. Discuss and demonstrate how to use maps, an atlas, The WPA Guide to New Jersey CD-ROMs, and the Internet to obtain information.

5. Following the research activity, have groups share data recorded on graphic organizers to determine if there is a pattern of similarities or differences between New Jersey's land and road development and that of the United States in general. (Options: graphic organizers can be photocopied, quadrants cut apart and grouped with similar categories for comparison/contrast, and shared among teams, if deemed appropriate.)

6. Provide a comparison and contrast chart for teams to record data as findings are shared.

7. Provide students with a **writing frame** and a **writing skills checklist** to develop their summary essays (see illustrations).

Additional Adaptations

Student Motivation–Student Involvement

- Conduct research with peer support.

Instructional Monitoring–Teacher Management & Student Self-Management

- Provide written prompts for paragraph and/or essay writing.
- Provide a writing skills checklist for self-assessment.

Classroom Organization–Instructional Groups

- Arrange students in triads.
- Assign roles of reader, recorder, and checker. Roles can be rotated, as appropriate.

Classroom Organization–Instructional Support

- Demonstrate the research process, how to access resources and record information on graphic organizers.
- Focus student attention on key areas of investigation with graphic organizers. These tools enable all groups to have data, which can be compared in like categories for discussion and writing activities.

Classroom Organization–Instructional MaterialsAdaptive Equipment

- Graphic organizers for New Jersey road construction and land use (see illustration)
- Graphic organizers for United States roads/land
- Compare/Contrast graphic organizers (see illustration)
- Writing frame (see illustration)
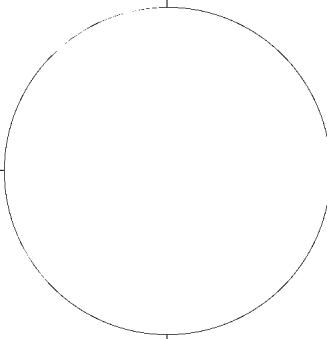- Writing skills checklist (see illustration)

Student Response–Response Format

- Complete graphic organizers, including compare/contrast charts, in triads.
- Write individual essays about findings.
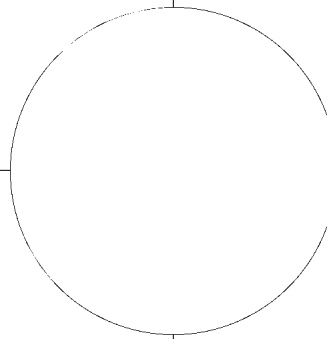
Graphics Organizers for Data Collection

ROAD CONSTRUCTION - 1900 to PRESENT

North Jersey

Where were roads built?	When were roads roads built?
Who oversaw road building?	What influenced road building?

Yellow
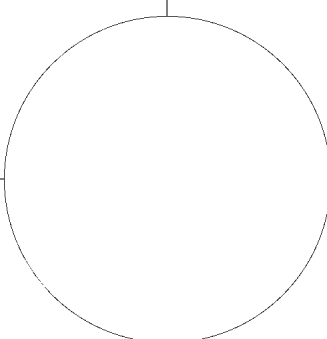
South Jersey

Where were roads built?	When were roads roads built?
Who oversaw road building?	What influenced road building?

Green

LAND USE - 1900 to PRESENT

North Jersey

Residential	Industrial
Farming	Recreational

Blue

South Jersey

Residential	Industrial
Farming	Recreational

Gray

Compare/Contrast Graphic Organizers

How are Northern and Southern New Jersey **ALIKE?**

How are Northern and Southern New Jersey **DIFFERENT?**

North   **South**

North   **South**

Where were roads built?

When were roads built?

Who oversaw the road building?

What influenced road building?

Where were roads built?

When were roads built?

Who oversaw the road building?

What influenced road building?

399

Essay Writing Frame
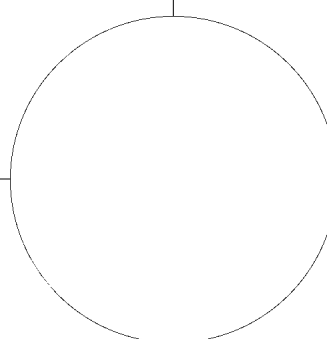
Use the writing frame below to develop a "compare and contrast" essay. Your essay should contain four basic parts:

1. An opening sentence that **introduces** your findings.
2. Statements that express how the two ideas, things, or people are **alike**.
   Use signal words like both, alike, similar, same, and resemble
3. Statements that express how the two ideas, things, or people are **different**.
   Use signal words like but, although, in contrast to, unlike and while.
4. A **concluding** sentence that summarizes your belief or findings.

ESSAY WRITING FRAME

_____

_____.   _____
          Introductory Sentence

_____
                                    Comparison Sentences

_____

_____

_____

_____
                Contrast Sentences

_____

_____.   _____

_____
                                    Concluding Sentence

Writing Skills Checklist

Name:_____ Date: _____

Writing Assignment: _____

As you write the final draft of your assignment, focus on the specific skills that are checked or high lighted below

Capitalization
- ☐ beginning of sentences
- ☐ days of the week
- ☐ names of the month
- ☐ holidays
- ☐ street names
- ☐ title
- ☐ proper names
- ☐ abbreviations

_____

_____

Punctuation
- ☐ sentence ending
- ☐ commas: month, day, year
- ☐ commas: city, state
- ☐ commas: a series
- ☐ commas: compound sentence
- ☐ apostrophes: contractions
- ☐ apostrophes: possessive nouns
- ☐ apostrophes: quotation marks

_____

_____

Usage
- ☐ subject/verb agreement
- ☐ proper use of irregular verbs
- ☐ no double negatives
- ☐ complete sentences

_____

_____

Creativity
- ☐ contains original thoughts
- ☐ varies sentence beginnings
- ☐ wide variety of vocabulary

_____

_____

_____

Writing
- ☐ develops main idea
- ☐ uses paragraphs
- ☐ uses details
- ☐ effective dialogue

_____

_____

Spelling
- ☐ uses standard rules
- ☐ uses correct homonyms

_____

_____

_____

NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

SOLVING SOCIETY'S PROBLEMS
Fair Housing Act of 1985

Core Curriculum Content Standard: 6.4

Indicator: 10

Page Number: 185

Grade Level: 9-12

Category of Adaptation:

Instructional Presentation–Instructional Application

Drawing is an alternate means of expressing ideas and enhancing associations
For some students with disabilities, drawing is a way to enhance their
memory of linguistic material, such as new vocabulary or summaries
of information they have heard or read.

Category of Adaptation:

Instructional Presentation–Instructional Prompts

Providing **reference material** in a clear readable format makes
information accessible to students with handwriting, spelling or memory difficulties
Students with disabilities who have limited handwriting or spelling skills may be
unmotivated to write or to read their own handwriting. For students who
have difficulty recalling basic facts or steps in a process, reference material
assists students to apply information, facilitating both use and memory

Guided reading/note-taking guide is a structure to aid students as they read text. The questions in the guide provide a focus for reading by directing students to search for specific information while they read.

1. Introduce vocabulary indigenous to the study of The Fair Housing Act of 1985 by providing students with a glossary of terms. Discuss examples of each. Students will use the glossary as a **reference** to conduct their research (see illustration).

2. Assign students to groups of four to create **drawings** of the vocabulary terms using a graphic organizer. Jigsaw the new vocabulary and review in parts (see illustration).

3. Review process for accessing articles from the SIRS (Social Issues Resources Series) database using a SIRS **reference guide** Familiarize class with words that are listed in bold on the SIRS reference guide, and emphasize self-questioning after students have read the directions (see illustration).

4. Demonstrate how to locate an article on Fair Housing using SIRS.

5. Model reading and note-taking using the **guided reading/note-taking guide** (see illustration).

6. Students work in pairs to locate an article on SIRS and then individually record important points and information on their guides.

Additional Adaptations

Student Motivation–Student Involvement

- View examples of different qualities of housing in the United States and in the local community.
- Read an editorial from the New York Times related to fair housing to examine arguments made.

Instructional Monitoring: Teacher Management and Student Self-Management

- Monitor students' work on the SIRS database for procedures, content, and spelling. Accuracy in spelling will cut down on the frustration of finding information.
- Students may have "cue" cards with all correctly spelled vocabulary needed for data entry.

Classroom Organization–Instructional Groups

- Assign students to heterogeneous groups (quads and pairs). Assign students the roles of recorder/drawer, materials manager, task coordinator, and spell checker.

Classroom Organization–Instructional Support

- Demonstrate how to conduct research using SIRS.
- Prepare reference guides and note-taking materials.

Classroom Organization–Environmental Conditions

- Alternate from classroom to media center or computer lab.

Classroom Organization–Instructional MaterialsAdaptive Equipment

- "Glossary of Words Associated with Fair Housing" (see illustration)
- "Graphic Interpretations of Vocabulary Terms Associated with Fair Housing" (see illustration)
- "Reference Guide to Using SIRS" (see illustration)
- "Guided Reading/Note-Taking Guide" (see illustration)
- Computers
- SIRS research
- Master Maps CD-ROM for Windows (1995 Soft Key Multi Media)
- Internet access

Student Response–Response Format

- Complete a written evaluation at the completion of the assignment reflecting on how fair housing has impacted on their personal lives.
- Write an editorial to the local newspaper expressing views on how they see the housing issue in their town.

Glossary of Words Associated with Fair Housing

Absentee Landlord	The owner of a house who rents to tenants but is not present to deal directly with problems
Blue-Collar Neighborhood	Community population made up of working nonprofessionals
Fair Housing	Housing that does not discriminate because of age, race, ethnicity, and disability and that meets acceptable living standards
Gentrification	Upgrading and rehabilitating of inner-city housing by young urban professionals
Ghettoization	Isolating a minority or ethnic group by restricting movement from their own neighborhood
Racial Polarization	The tendency toward society into separate groups based upon ethnicity
Substandard Housing	Housing that does not meet construction, safety, or health standards
Subdivision	Part of a tract of land that was surveyed and divided into lots for purpose of sale; a single-family home development
Suburb	An outlying part of a city or town usually within commuting distance to the city
Trailer park	A community where mobile home owners rent the land upon which the home stands
White Flight	The departure of the white middle class from urban to suburban neighborhoods
Zoning Restriction	The act of setting off an area or region as separate from adjoining areas by requiring certain characteristics; commercial zoning

Graphic Interpretations of Vocabulary Terms Associated with Fair Housing

In the space provided, draw a **picture** and write a statement that describes your own interpretation of the vocabulary term listed.

Absentee Landlord	**Gentrification**
Blue-Collar Neighborhood	**Ghettoization**
Fair Housing	**Racial Polarization**

Reference Guide to Using SIRS

Description: SIRS (Social Issues Resource Series) is a database of articles related to social issues, science developments, and issues within the topics of earth, life, physical, medical and applied science. Articles are selected from over 800 domestic and international magazines, newspapers, journals, and U.S. government documents.

Getting Started: Click on the SIRS icon. Read the instructions on each screen for guidance through your search.

Search Options:

- From the main menu screen, select **SUBJECT HEADINGS, TOP BROWSE**, or **KEYWORD SEARCH.**

- Use the arrow keys to select **SUBJECT HEADINGS SEARCH**. Press **Enter**. The alphabetical list beginning with "a" appears on the screen. Start to type in your subject and press **Enter**. A list of titles for your subject appears. Use the down arrows to browse the list. Select function key **F5** for source (citation), **F4** for summary, **F6** to tag (select), and **F7** to print a summary of selected citations.

- Use Esc (escape) to go back one screen, **F2** to start another search, or **F10** to go back to the main menu.

- Use the arrow keys to select **TOPIC BROWSE SEARCH**. Press **Enter**. Use the arrow keys to select a topic. Press **Enter**. Use arrow keys to select the year. Press **Enter**. A list of articles will appear on screen. Use function keys **F4, F5, F6,** or **F7** as needed. Press **F10** to return to the main menu.

- Use arrow key to select **KEYWORD SEARCH**. Press **Enter**. Type in keyword search on lines combining terms as it is outlined. Boolean choices will be given. Press **Enter** after each line. Press **Enter** to see the numerical results of your search. Press **Enter** to see the articles. You may select **F7** for enhanced options if you want to add **title, author,** or **subject heading**. Press any key of **F6** for a new search. Use functions keys **F4, F5, F6,** or **F7** as needed. Use **F1** for help.

- Select **D** from the main menu, and press **Enter** to return to the Banner Screen.

Guided Reading/Note-Taking Guide

Fill in the following table. Remember: Correct spelling is KEY!

Subject:	
Title:	
Source:	

As you read, search for the following information.

What is/was the problem?
What steps were taken to address the problem by individuals? (Who & What)
What steps were taken to address the problem by government? (Name of Agency & What)
What steps were taken to address the problem by institutions? (Name & What)
In your own words, evaluate the outcome of the action taken.

NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

SUPPLY AND DEMAND

Core Curriculum Content Standard: 6.6

Indicator: 2, 4

Page Number: 247

Grade Level: K-4

Category of Adaptation:

Instructional Presentation–Instructional Preparation

Simulations provide students with an opportunity to develop new concepts through an experiential activity. While these activities are very beneficial to enhance the learning of students with disabilities, some students may lose sight of the purpose of a multistep simulation without careful preparation. One means of providing preparation is to first engage students in an **introductory simulation**, a simpler version of the simulation that focuses on the key concept(s) to be developed.

Category of Adaptation:

Instructional Monitoring–Student Self-Management

Some students with disabilities have difficulty planning and reflecting upon their own activities. These students benefit from structures, such as **planning and reflection guides**, to help them to think about their actions before and after they engage in an activity

1. Engage students in an **introductory simulation** of the trading process using colored candy. Give each student three pieces of candy, all the same color. Each student has a different color of candy. The teacher begins by trading with one candy with one student. That student then trades with another student and so on until every student has had a chance to trade once. Conduct follow-up class discussion to review the motives of trades, the strategies used to trade, and whether or not each student is satisfied with his or her final candy collection and why.

2. To structure the trading simulation among countries, arrange students in triads, assign each triad an imaginary country, and provide each with objects to be trade. Each triad is also assigned a different task to perform.

3. To focus each group's trading activity, emphasize the group's goal—to secure objects to complete its assigned task.

4. To structure each group's planning and actions, provide each group with a **planning and reflection guide** and a graphic organizer to record trades made (see illustrations). Model on an overhead how to complete the guide.

5. Following the trades, discuss responses to the reflection questions to analyze each group's activity and how the experience applies to the real world.

6. Return to whole-group activities using materials for which the groups traded.

Additional Adaptations

Student Motivation–Teacher Involvement

■ Assessment is made by the teacher. A group grade based on completion of the project and an individual grade based on an individual student's response to the lesson are given.

Instructional Monitoring: Teacher Management

■ The trading should be a timed exercise. Explain the length of time available, and give periodic time checks (e.g., "10 minutes left").

■ Students must work together to complete their group's task.

Classroom Organization–Instructional Groups

■ Each group consists of a President (monitor), Secretary of Commerce (in charge of trading), and Attorney General (record trades and handle disputes). Explain and assign each group position. Students wear name tags with their positions.

■ Groups are arranged into "countries." Each country should have an area to display its name and articles to trade.

Classroom Organization–Environmental Conditions

■ Arrange the room into separate groups of desks with three desks in each area.

Classroom Organization–Instructional MaterialsAdaptive Equipment

■ Articles to be traded (articles distributed randomly so groups must trade) and task cards for each group
  ‣ Task 1: One sheet of paper, a pencil, a drumstick, a tape recorder
  ‣ Task 2: One sheet of newsprint, a box of markers, a ruler, a pen
  ‣ Task 3: Five paper squares, a glue stick, colored pencils, a large sheet of construction paper
  ‣ Task 4: A journal book, a pencil, a piece of chalk, an eraser
■ Discussion outline for overhead or board
■ "Planning and Reflection Guide"

Student Response–Response Format

■ Distribute one task card to each group.
  ‣ Task 1: Write and perform a song/rap about the trades made and why.
  ‣ Task 2: Create a newspaper advertisement about articles to be traded and why.
  ‣ Task 3: Draw a cartoon strip to show sequence of trades made.
  ‣ Task 4: Write a group paragraph to persuade the class why your group made the best trades.

411

Planning and Reflection Guide

Group Name: _____

Group Members:_____

PLANNING (before trading)	**A. Group Materials** 1. 2. 3. 4. **B. Materials Needed** 1. 2. 3. 4. 5.

REFLECTION (after trading)	**1. Did you end with materials needed to complete assignment?** **2. What problems did you encounter in trading?** **3. How does trading help or hinder a real-world country?** **4. How does this activity mirror the real world?**

Record of Trades

TO BE TRADED　　　　　　　　　　　　　**TRADE MADE**

NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

HOW TO EVALUATE AN ECONOMIC DECISION
What Are Spotted Owls, Timber Products, and Magical Stones Really Worth?

Core Curriculum Content Standard: 6.6

Indicator: 15

Page Number: 272

Grade Level: 9-12

Category of Adaptation:

Instructional Presentation–Instructional Prompts

A **research guide** provides direction to locate and record information.
It includes prompts such as key phrases, explanations
hints or questions to guide students' research.

Response statements are a means to assess students' comprehension
of essential content. By requiring students to generate an explanation
and to provide evidence for their answers, teachers can
evaluate students' understanding.

Category of Adaptation:

Instructional Presentation–Instructional Application

Creative writing activities afford students a novel, imaginative
way to interpret and apply new information. This type of activity can
serve as a motivational technique, particularly for students who
are reluctant to engage in more traditional question and answer formats

1. Show the film The Grapes of Wrath to show the impact of the Depression on families and individuals.

2. Conduct library research on John Maynard Keynes and the New Deal using a **research guide** (see illustration).

3. Distribute and review a reference list of New Deal Agencies also known as the Alphabet Agencies (see illustration).

4. Direct students to apply information about the impact of the depression on families and individuals through a **creative writing** activity. In groups of four, students compose and illustrate fictional stories which depict how the Alphabet Agencies could have helped various American families (see examples).

5. Display all illustrations and read aloud the stories for the entire class.

6. After completing the stories and illustrations, students evaluate the impact of the Great Depression on America, especially the adoption of Keynesian economics. Demonstrate how to complete the four **response statements** with a thesis statement, supporting details, and concluding statement to assess students' understanding (see illustration).

Additional Adaptations

Student Motivation–Teacher Involvement & Student Involvement

- Show the full length movies or clips from John Steinbeck's
  - The Grapes of Wrath
  - Cannery Row

  (Have students keep emotional response journals.)

- Look up ads from the 1930s to get an idea of what items cost and what was available. Make posters or collages of this information.

Instructional Monitoring–Teacher Management & Student Self-Management

- Award cooperation and courtesy points for each group's participants.
- Display "Looks like" and "Sounds like" charts around the room so that students can always visualize what a working classroom is like.

Classroom Organization–Instructional Groups

- Assign students to heterogeneous groups to complete the creative writing activity.
- Assign the following group roles:
  - Fiction Coordinator
  - Illustrator
  - Copier
  - Presenter
- When designing groups, make sure that students have an opportunity to undertake different roles. Also ensure that students are prepared to succeed at their roles, with support if needed.

Classroom Organization–Instructional Support

- Develop research guide and reference list of agencies and the family scenarios.
- Demonstrate how to complete the four-statement worksheet.

Classroom Organization–Environmental Conditions

- Flat desks for drawing

Classroom Organization–Instructional MaterialsAdaptive Equipment

- "Research Guide: John Maynard Keynes and the New Deal" (see illustration)
- "New Deal Agencies" reference guide (see illustration)
- "Fictional Families"—three scenarios (see illustration)
- "The Great Depression: 4-Statements Worksheet" (see illustration)
- Print media and computers
- Poster paper and markers
- Internet or magazine pictures for visuals

Student Response–Response Format

- Complete research guide in pairs.
- Compose and illustrate fictional stories with their cooperative group.
- Students can photograph New Deal construction in their community.
- Interview family members who lived during the Depression.

Research Guide

JOHN MAYNARD KEYNES AND THE NEW DEAL

John Maynard Keynes was a British **economist** (one who studies the production, distribution, and consumption of wealth) who advised the United States government and FDR in the 1930s.

Keynesian theory of **deficit spending** is that government does not need a balanced budget (spending equals income) in a crisis situation. The government is advised to spend more money than it actually receives. This spending (on government programs) stimulates growth. When the economy eventually improves, it is easier for the government to pay off its debt because of an increase in tax revenues.

Compile five additional facts on Keynesian Economics:

1.

2.

3.

4.

5.

Make special note of how Keynesian ideas helped the environment.

HINT: What New Deal Agencies funded by big government addressed environmental concerns?

New Deal Agencies

AAA   **Agricultural Adjustment Administration.** Founded in 1933 to advise and assist farmers, and regulate farm production by limiting production. The Supreme Court declared it unconstitutional in 1936.

CCC   **Civilian Conservation Corps.** 1933. Provided jobs for the unemployed. The CCC put young men from needy families to work at useful conservation projects like planting trees, building damns, and fighting forest fires. The young men lived in camps and were required to send part of their pay home.

FCA   **Farm Credit Administration**. 1933. Provided long-term and short-term credit for farmers. The federal government first provided the capital for the FCA to start up.

FCC   **Federal Communications Commission.** 1934. Regulates radio, telegraph, and telephone systems.

FDIC   **Federal Deposit Insurance Corporation.** 1933. Insures bank deposits up to $5,000.00 (in 1933; today it is $125,000.00) and examines banks to insure safe business practices.

FERA   **Federal Emergency Relief Administration.** 1933. This provided direct aid to the unemployed caused by drought or inability to find work.

HOLC   **Home Owners Loan Corporation.** 1933. Granted long-term mortgage loans at low cost to homeowners in financial difficulty.

NLRB   **National Labor Relations Board.** 1933. Was set up to enforce the Wagner Act, which guaranteed the rights of workers to form unions and bargain for better wages.

NRA   **National Recovery Administration.** 1933. Was set up to help American industries prepare "codes of fair competition" that established standards wages, prices, and hours.

NYA   **National Youth Administration.** 1935. Provided job training for unemployed youths and part-time work for needy students.

PWA   **Public Works Administration**. 1933. Increased employment and purchasing power through the construction of useful public works, such as bridges, schools, courthouses, and dams.

RA   **Resettlement Administration.** 1935. Was created to help needy farmers and migrant workers and to plan suburban communities.

SEC   **Securities and Exchange Commission.** 1934. Set up to regulate the nation's stock exchanges.

SSA   **Social Security Administration**. 1935. Gave the government new responsibility for the welfare of the old and unemployed. Was set up to provide benefits for retired workers, employ ment insurance, and a health and child-welfare program.

TVA   **Tennessee Valley Authority.** 1933. Built dams to produce electricity in a 41,000-square-mile region of the South. It sold this electricity to homeowners, farmers, and new industries.

WPA   **Works Progress Administration.** 1935. Funded public works jobs for millions of American and supported the work of many artists, writers, musicians, and actors.
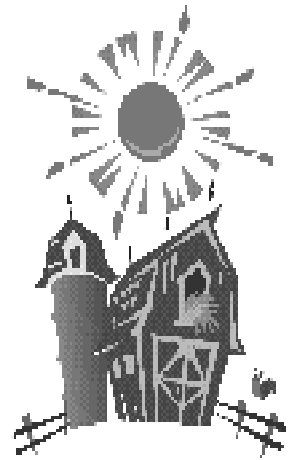
Fictional Families

Family #1. Your family contains the members listed below in the setting described. Using at least eight agencies of the New Deal, make up and illustrate a story about how this fictional family could have coped during the Great Depression. Use your imagination. Have fun—but your story and pictures must show that you have acquired understanding about the 1930s in America.

The Jefferson family of western Oklahoma. It is 1935.
They are sharecroppers.

> George Jefferson, 40, and Chrissie Jefferson, 39
>
> George and Chrissie's three sons: Jeremiah, 22; Lincoln, 20; and Tom, 15
>
> George's parents: Jeremiah, 62, and Delia, 55

Family #2. Your family contains the members listed below in the setting described. Using at least eight agencies of the New Deal, make up and illustrate a story about how this fictional family could have coped during the Great Depression. Use your imagination. Have fun—but your story and pictures must show that you have acquired understanding about the 1930s in America.

The Johnson Family of Norris, Tennessee. The year is 1935. They were a family whose male members traditionally worked in the coal mines and loved to play country music.

> Daniel Johnson, 48, and Sara Johnson, 44
>
> Daniel and Sara's six children: Daniel, Jr., 26; Jim, 24; Jackie, 22; Daisy, 19; Mary, 17; and Ricky, 11
>
> Daniel, Jr.'s wife Alice, 22, and their baby, Danny, 2

Family #3. Your family contains the members listed below in the setting described. Using at least eight agencies of the New Deal, make up and illustrate a story about how this fictional family could have coped during the Great Depression. Use your imagination. Have fun—but your story and pictures must show that you have acquired understandings about the 1930s in America.

The Rizzo family from Newark, New Jersey. The year is 1935. Frank Rizzo used to drive a delivery truck for a household appliance factory before the Great Depression began. He is out of work now. Theresa Rizzo met her husband in the late 1920s when she worked as a telephone operator and receptionist at a fancy department store. They have been married three years. Theresa's five younger siblings live with them. Theresa's parents are dead.

> Frank Rizzo, 26, and Theresa Rizzo, 25
>
> Theresa's five siblings: Christine De Stefano, 22; Mario De Stefano, 19; Tony De Stefano, 17; Joe De Stefano, 12, and Rose De Stefano, 8

419

The Great Depression
4-STATEMENTS WORKSHEET

Statement I
The Great Depression was the greatest **economic crisis** in American history.

Evidence:

Statement II
The Great Depression brought deep changes in people's **attitudes** about government and responsibility.

Evidence:

Statement III
During the Great Depression, organized labor acquired **new rights**.

Evidence:

Statement IV
During the Great Depression, the New Deal (F.D.R.'s domestic policies) set in place **legislation** that reshaped American capitalism.

Evidence:

NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

USING MULTIPLE SOURCES IN LOCATION PROBLEMS
New Jersey Geography II

Core Curriculum Content Standard: 6.7

Indicator: 9

Page Number: 297

Grade Level: 5-8

Category of Adaptation:

Instructional Presentation–Instructional Prompts

Mnemonics are memory devices to help students recall factual information. Mnemonics can take several forms including key words, pictures and phrases

A **chart** is a form of graphic organizer that aids students in recording and remembering related information. Arranging information by categories with labels facilitates association and retrieval of material.

1. Using a United States classroom map, students determine the location of New Jersey in relation to the other states surrounding it, the bodies of water around it, etc.

2. Preview a copy of a New Jersey map with students on an overhead. Display a blank outline of the 21 counties first, and then show a map with counties labeled.

3. Demonstrate how to use resource material (e.g., reference texts, CD-ROMs, and the Internet) to find information about each county.

4. Model on an overhead how to complete the "New Jersey" summary chart listing each county, county seat, and point(s) of interest.

5. Arrange students in pairs to do their research and complete the summary chart.

6. Present the idea of a **mnemonic** device as a memory tool. Using the mnemonic study sheet (see "The Counties of New Jersey") on an overhead, demonstrate how to complete the county mnemonic using their summary research chart.

7. Show students how to practice the county mnemonic in pairs and award bonus points to those who can demonstrate their knowledge of all counties. Allow students to determine when they want to take the "test" to show they have mastered the names of the counties.

8. As a summary activity, have students complete a book of New Jersey counties displaying information from their research (see "Book of New Jersey Counties" sample page).

Additional Adaptations

Student Motivation–Student Involvement

- Work in pairs to research and study new information
- Use a variety of technology resources, including CD-ROMs and Internet, with video and pictures to supplement text.

Instructional Monitoring: Teacher Management

- Discuss goal setting and time management: What needs to be done? When?
- Rotate among groups to ensure students are following directions and are able to complete their assignments appropriately.
- Conduct debriefings periodically with the entire class to give feedback on good strategies and areas of difficulty as well as to answer questions.

Classroom Organization–Instructional Groups

- Arrange students in pairs to complete activities.

Classroom Organization–Instructional Support

- Collect reference materials.
- Prepare student materials: four-column chart on counties and points of interest, mnemonic study guide, and template for county book.
- Demonstrate how to use reference tools to do research and how to complete each activity.

Classroom Organization–Instructional MaterialsAdaptive Equipment

- Classroom map of the United States
- Maps of New Jersey—outline and complete maps
- Computer research and CD-ROMs for reference
- Reference texts and handouts containing New Jersey state information
- Internet address of New Jersey Web site: www.state.nj.com

Student Response–Response Format & Response Procedures

- Complete summary chart, mnemonic study sheet, and book of New Jersey counties.
- Conduct a follow-up activity to create a model of New Jersey depicting natural regions, landforms, and other features through clay models, a cake, papier-máché, a mural, a slide show, etc.

New Jersey

Name: _____

In the first column list ten counties in New Jersey.

In the second column, list the county seat of that particular county.

In the third column list at least one point of interest in that county.

In the fourth column add details about points of interest.

County	County Seat	Point(s) of Interest	Details
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____

Note: A point of interest may include:

- Fishing
- Mining
- Manufacturing
- College/University
- Natural resource (pine barrens)
- Historical site
- Recreation area
- Residence of a famous person
- Cultural site (museum, theater)
- Agriculture (cranberry bog)

The Counties of New Jersey

Name: _____

Using the following information, you will be able to create a mnemonic device to help you remember 21 counties of New Jersey.

1,2,3–A,B,C,   2,3,4–H,S,M

Every **G**orilla **O**pens **U**nderWear **P**ackages

Directions: Fill in the county name that begins with the specified letter

1. There is 1 county that begins with an A: _____

2. There are 2 counties that begin with B: _____, _____

3. There are 3 counties that begin with C: _____, _____, _____

4. There are 2 counties that begin with H: _____, _____

5. There are 3 counties that begin with S: _____, _____, _____

6. There are 4 counties that begin with M: _____, _____, _____, _____

7. Using the first letter of each word in the sentence, "**E**very **g**orilla **o**pens **u**nderwear **p**ackages," we can find the rest of the 21 counties.
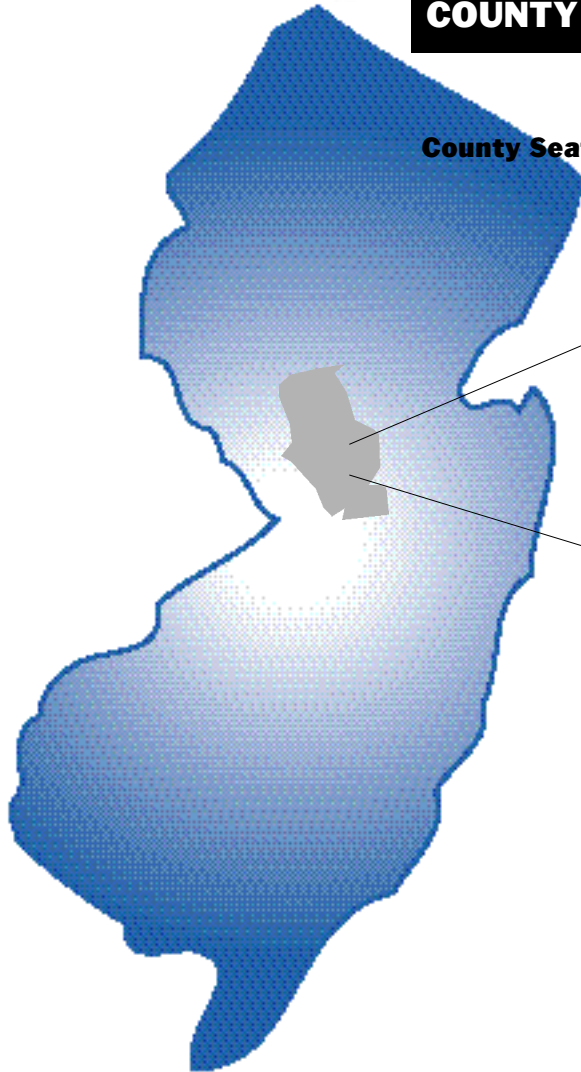
   E _____

   G _____

   O _____

   U _____

   W_____

   P _____

**I hope that you enjoyed doing this, and that it will help you
to remember the counties of our state**

Book of New Jersey Counties

COUNTY - MIDDLESEX

County Seat: New Brunswick

New Brunswick (county seat)

Rutgers University (point of interest)
Chartered in 1776 as Queens College, the
eighth institution of higher learning
founded in the colonies

Middlesex County

Directions: On each page, list a county, the county seat, and at least one point of interest in that county. Locate this information on your map. For extra credit, include detailed information on your point of interest.

NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

USING MAPS TO SOLVE PROBLEMS

Core Curriculum Content Standard: 6.7

Indicator: 11

Page Number: 301

Grade Level: 12

Category of Adaptation:

Instructional Presentation–Instructional Preparation

A physical model is a concrete representation of concepts and relationships Using physical models facilitates concept development and exploration in a fun, novel way. Physical models permit students to observe phenomena from multiple perspectives and to change aspects of the model.

1. Students create a **physical model** of latitude and longitude on the classroom floor using colored string or twine. One color is used to represent lines of longitude and a different color is used to represent lines of latitude. The center horizontal and vertical lines are labeled 0° with Post-it notes. Each of the remaining lines is labeled by 10s starting from zero. The desks can be used to outline the grid with labels for the four main directions: North, South, East, and West.

2. The students then place different objects at many different points below the grid. Individually or in teams of two, students locate the "address" of the different objects (e.g., stapler: 0° E, 20° S; ruler: 35° W, 15° N; textbook, 10° E, 40° S).

3. Place a much larger object (such as a garbage can, a cot spread out, several pieces of paper taped together, or a poster) under the grid. Students should give the "address" of the boundaries of the object.

4. Propose that the object is an area of dispute between three different countries and must be split. Student pairs must determine how to divide the area using lines of latitude and longitude. Pairs must write clear directions and "addresses" for the divisions.

Additional Adaptations

Student Motivation–Student Involvement

■ Movement and use of objects creates interest.

Classroom Organization–Instructional Groups

■ Students need to work cooperatively to create the grid. Assign group roles for different tasks (e.g., furniture arranger, timekeeper, longitude number markers, latitude number markers).

Classroom Organization–Environmental Conditions

■ Move the desks to form a grid to outline the area.

Classroom Organization–Instructional Materials/Adaptive Equipment

■ Color string or twine and tape
■ Post-it notes
■ Markers and paper
■ Common classroom objects: ruler, scissors, tape, book, etc.
■ One larger item

Student Response–Response Format & Response Procedures

■ Students individually write a decision concerning the division of the disputed area. They must include "addresses" for the splitting of the disputed area.

Classroom Setup

North

West

East

South
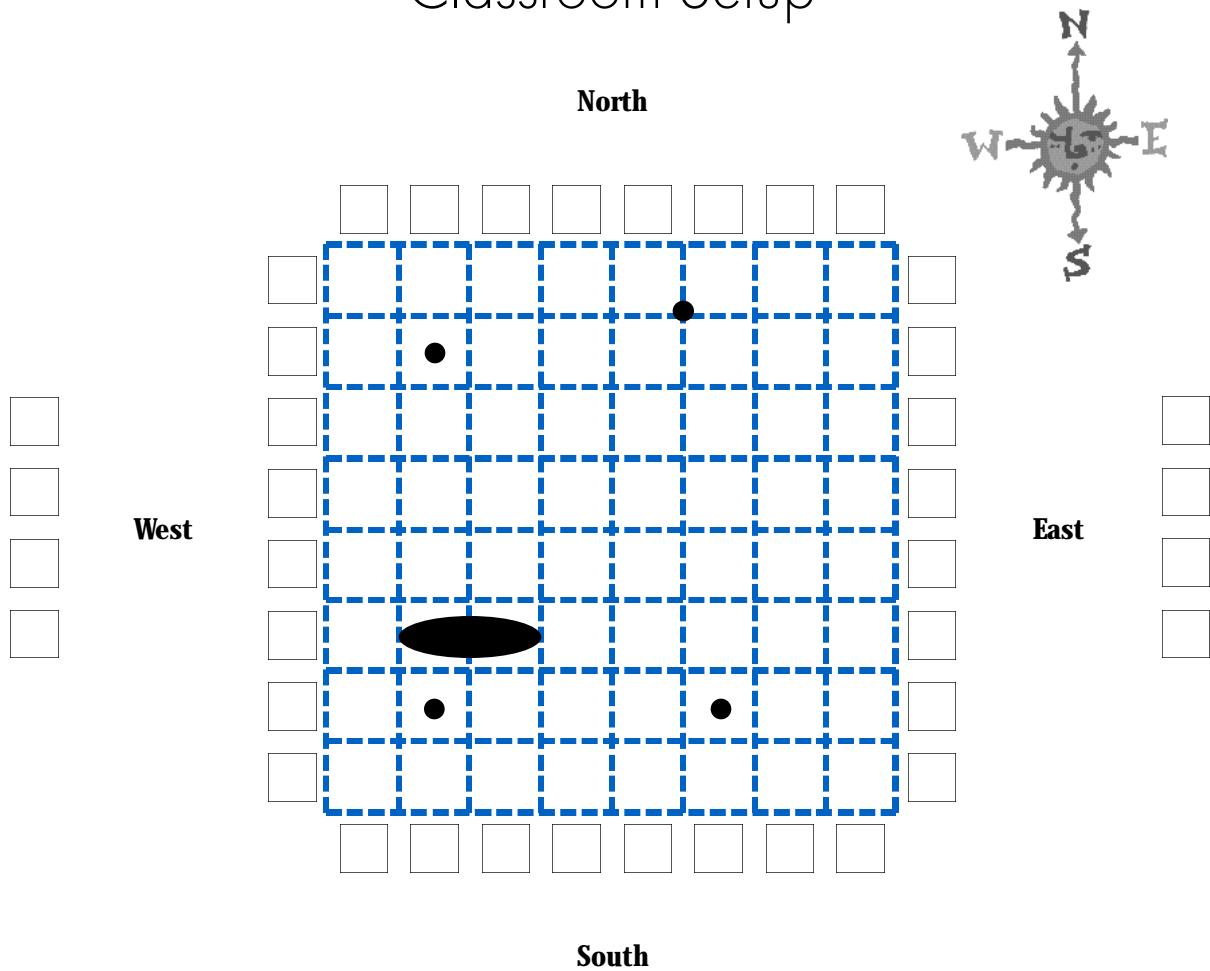
STUDENTS' DESKS FORM A GRID.

●   - Individual objects

⬬   - Disputed area

NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

NATURAL RESOURCES ARE THE NATION'S WEALTH

Core Curriculum Content Standard: 6.9

Indicator: 1

Page Number: 344

Grade Level: K-4

Category of Adaptation:

Instructional Presentation–Instructional Prompts

Highlighting assists students to differentiate key features or terms, facilitates categorization and retention of information.

A **research guide** provides direction to locate and record information. It includes prompts such as key phrases, questions, or hints to guide students' research.

Category of Adaptation:

Instructional Presentation - Instructional Application

Active learning tasks engage all students simultaneously in the learning process. These activities are a departure from traditional assignments by requiring students to apply their knowledge in ways that require movement, use of objects, and discussion with other students.

1. Brainstorm with entire class a list of natural resources that we need in order to live.

2. **Highlight** (with yellow marker) those items that could never be used up—**renewable resources** Highlight (with another light colored marker) those resources that are in limited amounts or that can be used only once.

3. Plan an **active learning** task such as a scavenger hunt to search, first for renewable resources and then for nonrenewable resources.

4. Students go on a scavenger hunt around and/or outside the building. When they locate a renewable resource, they mark it with a Post-it labeled "R" and add the name of the item to their individual list of renewable resources.

5. After the search, students gather to make a group list and to discuss the renewable resources they found. The same process is repeated for nonrenewable resources (which are labeled "N").

6. Students go to the library to research one resource of their choice using a **research guide** Keep a resource information file using index cards (see illustration).

7. As a review activity, play a resource race game with pictures students have found of renewable and nonrenewable resources. Each student has two cards, in different colors, to use for responding. One card has the word "Renewable" and the other has the word "Nonrenewable."

8. Hold up a picture and together students race to hold up the proper sign.

Additional Adaptations

Student Motivation–Student Involvement

- Use active learning tasks.
- Searching for pictures to illustrate their research maintains interest.

Instructional Monitoring: Student Self-Management

- Provide rules for conducting the scavenger hunt to minimize distractions to other classrooms.

431

Classroom Organization–Instructional Groups

■ Involve the entire class in brainstorming and the active learning tasks.

■ Students individually use answer cards (labeled "Renewable" and "Nonrenewable") to respond in the resource race game.

Classroom Organization–Instructional Support

■ Demonstrate how to find information in the library and how to complete their "index card."

Classroom Organization–Instructional MaterialsAdaptive Equipment

■ Cards labeled "Renewable" and "Nonrenewable"

■ Magazines for the collage

■ Chart paper and highlighters

■ Breakfast and house charts

Student Response–Response Format & Response Procedures

■ Mark resources with Post-its and make resource lists.

■ Complete resource "index card."

■ Hold up response cards in the resource race game.

Research Guide

Picture
of resource
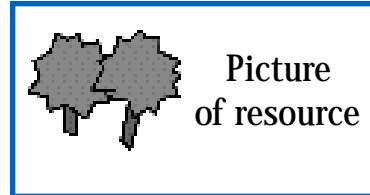
NAME OF RESOURCE: _____

RENEWABLE ☐   **NON RENEWABLE** ☐

COUNTRY OR STATE CONTAINING THIS RESOURCE: _____

GEOGRAPHY OF AREA WHERE RESOURCE IS FOUND: _____

JOBS ASSOCIATED WITH RESOURCE:_____, _____

_____

Keep a resource information file using index cards

NEW JERSEY SOCIAL STUDIES CURRICULUM FRAMEWORK
Sample Adaptations of Selected Learning Activities

INTRODUCTION TO THE ENVIRONMENT

Core Curriculum Content Standard: 6.9

Indicator: 2

Page Number: 346

Grade Level: 4

Category of Adaptation:

Instructional Presentation–Instructional Preparation

Vocabulary development: Creating an **A-Z list** is a fun way for students to recall key vocabulary related to a particular topic
When generated individually, the list can also serve as a tool for teachers to assess what each student knows at a particular point in time. The list can be compiled into a class list to which vocabulary can be added as new information is discovered.

Category of Adaptation:

Instructional Presentation–Instructional Prompts

Guiding questions prompt students to search for specific answers
One format for questions is "Question-Answer-Detail" (Q.A.D.). This format poses a question and asks students to respond with a brief answer and supporting details
The graphic format adds novelty and permits a wide range of responses—from a few words to sentences—facilitating the participation of students with varying abilities

A framed paragraph contains cues such as sentence stems or segments to prompt students to include particular information. The framed paragraph also models cohesive paragraph structure.

1. Provide each student with a map of the Amazon rain forest in South America to focus attention on key features and to guide discussion.

2. Direct students in pairs to locate and label geographical features on their maps using different colors.

3. Engage students in dramatic play using animal cutouts (laminated and attached to tongue depressors) to act out the problems of different animals in the story. Retell the events of the story using the animal cutouts.

4. Create an **A-Z vocabulary list** containing the names of animals, insects, and plants that can be found in the rain forest. Add to the list as students discover new information (see illustration).

5. Model for students how to conduct research to answer questions using the **guided question** format (see illustration).

6. Demonstrate how to use the information obtained to complete a **framed paragraph** to reflect on the importance of the rain forest and the effects of deforestation (see illustration).

Additional Adaptations

Student Motivation–Student Involvement

- Retelling through the puppet show
- Working in groups

Classroom Organization–Instructional Groups

- Listen to the story as a class and retell the story using animal cutouts
- Students individually complete their own A-Z list, then share with a partner, and finally compile a class list.
- Assign students to cooperative heterogeneous groups with the roles of recorder, reader, and encourager to complete their guided questions.

Classroom Organization–Instructional Support

- Create graphic organizers and model how to conduct research.
- Assign students to cooperative groups to complete the research and note-taking task.

Classroom Organization–Environmental Conditions

- Area for the puppet theater

### *Classroom Organization–Instructional MaterialsAdaptive Equipment*

- Tongue depressors and patterns for animal cutout puppets
- Graphic organizers: A-Z list, Q.A.D. format
- Framed paragraph

Student Response–Response Format & Response Procedures

- Complete the A-Z vocabulary list to recall knowledge of the rain forest.
- Participate in a puppet show to retell animals' problems and story sequence.
- Complete the guided questions in groups.
- Complete the framed paragraph individually using the guided questions to reflect on the importance of the rain forest.

Rain Forest A–Z List
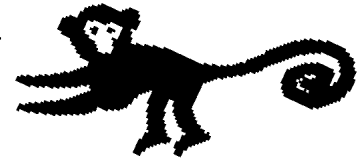
A avocado, anaconda, army ants, African violet

B banana, balsa, bamboo, butterflies, boa constrictor

C canopy, caiman, cinnamon, coconut, coffee, conservation

D dense, deforestation

E endangered, extinct, ecology

F ferns, frogs

G

H

I

J

K

L

M monkey

N

O

P

Q

R rubber

S

T teak, tangerine

U

V

W

X

Y

Z

1. First students individually write 3-5 items on their list (any letter).
2. Then they can share their list with another person (add new information).
3. Next, the whole class shares their ideas to create a big class A-Z chart.
4. Finally, children fill in their individual lists.
5. Add to the list as students discover new information.

Developed by Write Track (1995)

Question-Answer-Detail (Q.A.D.)

Question	Answer	Detail
Where is the Amazon Rain Forest?	South America	North of Brazil stretching west across the continent
Who/What inhabits the rain forest?	birds, insects, animals, plants	rare birds including _____ over 200 species of plants_____
Why are scientists interested in the rain forest?	_____	_____ _____ _____
What will happen if we continue to cut down and destroy the rain forest?	_____	_____ _____ _____

This Q.A.D. format can contain any type of Questions. Students fill in the Answer with a few words or main idea. The Detail column includes the supporting facts.

A framed paragraph can be developed from the Q.A.D.

Developed by Write Track (1995)

Framed Paragraph
(Based on Q.A.D.)

The Amazon rain forest is located in _____,

Many _____, _____, _____,

and_____ inhabit the rain forest.

It is important to us because_____

_____

_____

_____

If we continue to destroy our rain forest, _____

_____

_____

_____

Developed by Write Track (1995)

PART B: SOCIAL STUDIES INSTRUCTIONAL ADAPTATIONS FOR STUDENTS WITH LIMITED ENGLISH PROFICIENCY

INTRODUCTION

The language and culture of a new school setting often overwhelm new learners of English. Most students entering New Jersey schools from other countries have acquired the ability to think, speak, and reason in their home languages. The political and social environment may have been much different. Certainly, the history was. However, they come with various levels of schooling and life experiences. These factors—along with differences in learning styles; in physical, social, and intellectual abilities; and in cultural understandings and heritage—affect the students' progress in learning social studies and must be considered in the design and delivery of their instructional programs. This section of the Framework provides teachers of students with limited English proficiency (LEP) with examples and illustrations of specific adaptations for teaching social studies.

Who are limited English proficient (LEP) students?

- Students moving to the United States from other countries whose native language is not English
- Students coming from homes where the first language is not English
- Students having difficulty speaking, reading, writing, and understanding the English language

Providing students who are linguistically and culturally diverse with an appropriate education is a national concern. The growing numbers of learners who are considered to be linguistically diverse represented a 38% increase in the period from 1980 to 1990 (Census Reports, 1993). A comparison of the bilingual/ESL program enrollment in New Jersey between September 1987 and October 1997 shows that the number of limited English proficient students increased 41 percent during the 10-year period. New Jersey now ranks seventh in the nation in the number of LEP students. This diversity is further distinguished in the range of circumstances that inform students' identification as second language learners. With such vast differences in the demographic backgrounds of the students, teachers must have access to and use a variety of strategies and materials to address the individual needs of the learners.

Identifying the primary language and assessing the relative English and native language proficiency of students is a critical first step in providing LEP students with an effective language support program. The bilingual education staff in your school usually does this. These students vary greatly in their readiness for school, and this initial process of identification and assessment will enable educators to adapt the learning experience to the appropriate skill level of their students. When such practices are not followed, instruction is not as effective, and students struggle in misguided programs with little benefit. For students to prosper in their educational program, teachers need to know who their LEP students are and what these learners know and can do.

THE PURPOSE OF ADAPTATIONS FOR

STUDENTS WITH LIMITED ENGLISH PROFICIENCY

Research supports the notion that children from different cultures or different economic levels may differ in learning modalities. When the native language of the learner is different from the dominant language of the classroom, these differences can become all the more pronounced. Regular classroom teachers need to be familiar with and have access to the literature that describes the educational needs of these students. In addition, all teachers, including mainstream educators and bilingual/ESL teachers, must work collaboratively in the sharing of ideas, strategies, and resources for making appropriate adaptations.

The purpose of adapting content lessons for LEP students is to lower the language barrier and make the English used in such lessons as comprehensible as possible. Two factors affect the comprehensibility of language:

- The degree to which the language used is contextualized through visible situations
- The student's level of experience and familiarity with the content of the spoken or written text

Thus, to be successfully communicative, the lessons must be designed to build upon the students' background knowledge and to rely on nonlinguistic cues so that LEP students can comprehend the material and the teacher's messages.

Students' initial progress will also depend on the level of literacy each attained in his or her first or native language. If a student is a good reader in the first language, he or she will probably be a good reader in English. A major goal in bilingual education, therefore, is to ensure that while a student is learning a new language, cognitive development and literacy continue to develop without interruption.

ORGANIZING THE CLASSROOM FOR LEARNING

Various classroom organizational patterns and tools can be used to help the LEP student grasp the content. Members of learning groups and pairs should be rotated in order to provide the student with varying language and learning style experiences within the classroom. Consider pairing second language learners with same-language peers. Other grouping strategies include the following:

- Flexible grouping
  - mixed-ability groups based on students' interests and experiences
  - similar-ability groups based on students' needs and abilities
  - cooperative groups
  - whole-class activities

- Paired learning
  - peer buddies, pairing more proficient second language learners with less proficient learners
  - buddies, pairing same-grade native speakers with second language learners
- Cross-age tutoring

Additionally, teachers can draw on a number of instructional supports and resources to assist LEP students. Of particular value to these students is ongoing access to visual and auditory support for learning.

Adaptation strategies will vary depending on the language proficiency level of the LEP student. Initially, these learners understand little in English and will respond by guessing from context what is expected or by imitating other students. At this stage, the teacher should provide many visual cues, such as pictures, videos, filmstrips, picture books, and demonstration lessons, to aid understanding.

With increasing exposure to English, the LEP student will begin to understand simple language but may not be ready to produce language. During this "silent period," rather than force speaking, the teacher should focus on making speech comprehensible to the student by using simple language and visual aids. For example, the teacher says, "Open your book," as the student listens and observes the teacher opening a textbook. This concurrent demonstration of behavior and modeling of spoken language enables the student to develop constructs (that is, to think) in English.

As the student begins to produce language, he or she will imitate words and phrases used by the teacher and other students but will make many errors. The teacher should support the student's efforts by responding positively to build self-confidence and correcting errors sensitively and judiciously. At this stage, the teacher continues to engage the learner in many classroom activities and asks him or her to respond to questions nonverbally or with simple one-word or short-phrase utterances. Evaluation of student's progress should focus on measuring understanding rather than production.

As the student begins to use previously learned language in a new way, he or she may continue to make many grammatical mistakes and have trouble understanding and producing the complex structures of academic language, even though he or she may appear or sound fluent in a social setting. The continuing aim should be to lower the language barrier by making classroom communication simple and clear. Information should be presented visually by means of graphic organizers, such as semantic webs, charts, and graphs as well as pictures. All students, particularly second language learners, should be encouraged to work in small-group activities, which provide ongoing opportunities to build language proficiency, self-confidence, and respect for the ideas of others. Keep in mind that being limited in English is a temporary situation and that students are capable of attaining full fluency in the language. A student's capacity to become fluent in English will be greatly enhanced by activities in oral and written language that connect to one's own life in meaningful and engaging ways.

INSTRUCTIONAL SUPPORTS

- Use of bilingual dictionaries in the classroom
- Use of parent volunteers to tape, transcribe, or prepare a written explanation of difficult concepts in the native language
- Collaboration between bilingual/ESL and mainstream classroom educators
- Provision of content area lessons/topics on cassette tape or in written form for learners to take home to study as supplements to class discussion
- Access to native language content texts, available through the library system, in nearby schools, or from parent or senior-citizen volunteers

ADDITIONAL RESOURCES

- Close-captioned video or TV
- Franklin speaking dictionaries
- Electronic translators
- Computer programs and CD-ROMs about world cultures such as Mesoamerica (e.g., Mayans, Aztecs)
- Teacher-made adaptations, outlines, and study guides
- High-interest/low-reading-level civics and history materials
- Books with audiotapes
- Music plus tape recorder (slows down speech on tape)
- Native language reference materials
- Specially taped materials for bilingual/ESL classrooms

PREPARING THE STUDENTS FOR THE LESSON

LEP students need to develop a clear understanding of the teacher's lesson objectives (e.g., "Students will be able to understand the causes of the Civil War."). They also need instruction that presents the main concepts of the lesson in a clear, concrete, and comprehensible manner and that excludes all nonessential or ancillary information. Help students conceptualize classroom lessons by translating ideas into concrete form through hands-on activities (e.g., recording notes in a learning log or conducting an interview).

Because LEP students have such varied educational and life experiences, they may need more comprehensive background information than other students. Teachers should not take for granted that these learners will understand or have experience with some of the concepts being taught. The content area teachers should work with bilingual/ESL educators to identify specific problems confronting these students. Instructional preparation should also focus on the following:

Building Background Information. The teacher can develop the needed information through brainstorming; semantic webbing; use of maps, photos, and illustrations; and use of the KWL strategy.

Simplifying Language for Presentation. Teachers can use "sheltered English," in which they make content-specific language more comprehensible for LEP students by using short, simple syntactic structures; introducing one concept per sentence; limiting structures to one tense; using the active voice; substituting common words for unfamiliar vocabulary; and eliminating any unnecessary language or ideas.

Developing Content Area Vocabulary. Vocabulary specific to social studies may be developed through activities such as the following:

- Starting a picture dictionary or word bank especially related to historical figures or events, geographic land or water forms, or governmental structures such as the three branches
- Teaching the vocabulary appropriate to the U.S. Constitution, the Bill of Rights, various periods of American or world history, geographic land or water forms, longitude and latitude, and so on
- Reviewing and reinforcing the vocabulary during the content activities
- Labeling objects in the classroom such as types of maps and globes, pictures of the presidents, forms and other aspects of voting or other citizenship actions
- Taping vocabulary words in context so that students learn to recognize the words
- Using realia (actual objects, such as physical maps or a variety of foods or textures) as tools for teaching so that vocabulary becomes real and tangible
- Encouraging students to use a dictionary to learn or confirm word meanings

Concept Development. This is a major issue in social studies as students learn about rights and duties, voting, public issues, revolutions, the environment, and many other new concepts. Use such techniques as webbing and graphic organizers to relate what is known to the new concept. Develop the new vocabulary in relation to the lesson and use graphic illustrations wherever possible. Thus, a lesson on **cultural artifacts** (Standard 6.5, Indicator 4) might use pictures, drawings on teacher-drawn sketches to illustrate the concept.

Giving Directions. Routines help create a secure learning environment in which LEP students are able to anticipate what will happen without having to rely solely on language cues. Expectations and routines such as arriving on time or checking homework should be communicated clearly and positively early in the school year so students have these structures to guide them. Working with buddies and peer tutors will also help second language learners acclimate to the school and classroom settings and routines.

Directions should be stated clearly and distinctly and delivered in both written and oral forms to ensure that LEP students understand the task. Students with limited English proficiency are further supported when they have access to a list of commonly used "directional" words such as **circle**, **write**, **draw**, **cut**, **read**, **fix**, **copy**, **underline**, **match**, **add**, and **subtract**. Lessons relating directional concepts to map and chart reading can be helpful. Students can work with a buddy or on their own to find these action words in a picture dictionary and to create their own illustrated file of direction words to be illustrated with their own handmade maps and charts.

PRESENTING THE LESSON

Because LEP students present such different learning styles and individual needs, teachers should incorporate a variety of strategies in daily classroom activities to ensure that instruction communicates meaningfully to each student. By using multiple strategies and varied instructional tools, teachers increase the opportunities for students to develop meaningful connections between the content and the language used in instruction.

Teaching Strategies

The following instructional strategies are recommended:

- Simplify vocabulary and sentence structure so that language is uncomplicated and manageable. For example, substitute "begins" for "originates" or "People think" rather than "It is believed" for those students less able to grasp the language structure.
- Build connections and associations that link new knowledge to what students already know about a subject.
- Provide concrete examples through hands-on social studies activities and techniques that make abstract concepts more comprehensible and enable students to construct meaning. Examples are listed in the chart below.

Graphic organizers for the U.S. Constitution and other documents	Tables, charts, and graphs on populations	Surveys and interviews of political leaders	Drawings and illustrations of Mayan sculptures	Response journals for visits to museums
Posters from U.S. history and the Russian Revolution	Simulations of famous trials and hearings	Labeling pictures of historic sites	Tape recordings of presidential speeches	Word banks focused on government
Games and puzzles about the great English and European explorers	Student-made flash cards of important dates	Student-made scrapbooks of diverse cultures and groups	Language experience stories about students' families	Role-playing the drama of the Continental Congress

- Promote understanding using demonstrations and think-alouds that model thinking processes and behavior.
- Present materials in a variety of ways: orally, visually, graphically, and auditorially.
- Elaborate on figurative language and idiomatic expressions, which are not universal figures of speech, through paraphrasing, use of concrete examples, and development of meaningful connections to the context and graphic representations.

- Emphasize key words and phrases using intonation and repetition.
- Summarize key points on the board or an overhead transparency as you speak and model the lesson.
- Include the LEP student in all classroom activities. The more the student feels a part of the class, the higher his or her motivation to learn English.
- Model a "shadow" strategy where the bilingual/ESL educator reiterates in the student's native language or in simplified English the key concepts learned in civics, history, economics, and geography.
- Paraphrase information and main ideas as, for example, key principles of the Constitution, the colonies and the mother country, and continents and oceans.
- Provide bilingual classroom resources, such as bilingual dictionaries, picture books and dictionaries, and English language encyclopedias.

Additional Suggestions for Classroom Strategies

Four over-arching strategies are most effective for assisting students from a background of limited English proficiency to meet success in content area classes. These strategies include the following:

Integrate Activities into Thematic Units. One of the ways students learn best is through repetition: of ideas, of words, of actions. When concepts to be developed are being reinforced across several content areas, students benefit from seeing and hearing the same information or vocabulary over and over. English language learners will have more opportunity to use key words and practice desired skills when they work with the same concepts in several classes. Developing and teaching thematic units across content areas takes joint planning by a number of teachers. Certainly, the ESL teacher needs to be involved in the planning. In many cases, the ESL class can reinforce the language skills needed by the students to successfully complete the content area activities. Often, the ESL teacher can suggest ways to assess the student's understanding without depending heavily on language-based tests. In the case of thematic approaches to learning, it is certainly true that "many hands lighten the load."

Tap Student's Prior Knowledge and Experience (which differs from that of other students in the class). In the case of immigrant students as well as others who are acquiring English, prior knowledge cannot be taken for granted. Before introducing a new unit or concept, it is wise to find out what information students already have about it. However, students who have not lived in New Jersey all their lives may have a very different background understanding than those born here. The entire class can be multiculturally enriched, but the need to tap into a variety of students' perceptions and experiences still exists. For example, a New Jersey student's understanding of elephant, ostrich, and llama may simply reflect animals found in a zoo. On the other hand, students from Thailand, Australia, and Peru may think of them as farm animals.

With regard to concepts that are typically American (e.g., historical figures, artists, "fast food"), teachers are advised to expect little or no background knowledge and to "build in first-hand experiences." References to television programs, holiday practices, or geographic areas may mean nothing

to LEP students. They will not have mental maps of the United States to draw from when Seattle or Miami are mentioned. They will not be likely to defend the Redskins against the Cowboys, or recognize fireworks as symbolic of July. They will, most likely, know distances to other cities, follow other sports teams, or celebrate different holidays. Teachers need to make every effort to explain concepts related to the lesson; a peer tutor can be enlisted in explaining concepts to LEP students.

Teach Learning Strategies and Scaffold Complex Tasks. Much has been written recently about students' needs to develop strategies for learning. Some learners have developed a few strategies to help make sense of their learning. Now, teachers at all levels are encouraged to model and demonstrate thinking and learning strategies. Graphic organizers are invaluable tools to create visual relationships between concepts. All students benefit when information is organized graphically for them. Overtly teaching students to reflect on how they are doing, what they are understanding, and what else they need to know will help them to be successful. Appealing to multiple intelligences within the context of a single unit of study enables students to develop or enhance a variety of skill areas. LEP students may have developed strategies different from those of other students. They can be encouraged to share their own learning approaches with the whole class since it builds self-esteem. LEP students need to be challenged by complex concepts, but they will be better able to grasp complexities if tasks or information is scaffolded by what has gone before. As with the effectiveness of thematic units, scaffolding learning by building in foundation skills will aid LEP students' understanding.

Group Students into a Variety of Learning Groups. English is learned most efficiently when it is used to conduct meaningful, natural communication. To encourage English learning, students need many opportunities to talk, use new vocabulary, and to share ideas with their peers. These opportunities are most available to them when they learn in cooperative learning groups, pairs, or other small-group settings. In classes with native speakers of English, LEP students will hear the content area language modeled by their peers, and have more chance to use it when they participate in group work. Students who have not yet attained intermediate proficiency can shadow the work of a native-English-speaking peer in paired work. Students with greater ability can contribute their ideas in groups of four or five while someone else restates the comments in standard oral or written form. Groups can be formed and disbanded into a variety of sizes depending on the nature of the task. LEP students can be grouped together to develop some background cultural knowledge; then a single language learner can be matched with three native speakers to complete a graphic organizer. However, in all cases, limited English learners benefit from working with peers and from having more chances to use the language.

Included at the end of this section are several social studies sample learning activities at various grade-level clusters that flesh out the techniques and strategies described above. Each of these activities were designed for use with a content area class consisting of five LEP students, 15 or more native English speakers, and a content area teacher. The LEP students participate most fully if they have attained at least an intermediate language proficiency level. For students below that level, the ESL teacher should take the lead in presenting content information.

Reference
Haynes, B.J., & O'Loughlin, J. (1997). Instructional and assessment considerations for ESL students Paper prepared for the New Jersey State Department of Education.

CHECKING FOR STUDENT UNDERSTANDING

Teachers need to use a variety of strategies for monitoring student progress and to adjust their strategies and expectations to fit the level of language proficiency of the English language learner. With beginning language learners, emphasis should be on comprehension of named things and actions; more advanced students should begin demonstrating understanding of connections between things and subsequently their ability to articulate the relationships between basic social studies concepts and generalizations. Social Studies teachers should work closely with the bilingual/ESL teacher to identify instructional and assessment strategies that are appropriate to all aspects of the student's development and that permit teachers to expand expectations gradually over the school year.

Successful strategies for **monitoring** student progress in the content areas include:

- Providing periodic checks for understanding
- Promoting nonverbal as well as verbal participation
- Encouraging students to think aloud to practice concepts
- Modeling responses that provide appropriate information using correct grammar
- Breaking tasks down into sequentially developed parts using simple language
- Structuring questions to student's language level (e.g., begin with yes/no and embedded questions and advance to open-ended questions)
- Avoiding use of questioning techniques that contain negative structures, such as "all but," "everything is _____ except," or "one of these is NOT the reason/cause"
- Rephrasing questions and information when students do not understand the first time
- Observing student's behaviors for evidence that they understand assignments, directions, and instructions
- Reviewing student's work for evidence that they understand assignments, directions, and instructions
- Using visual reviews (e.g., lists and charts) that enable students to show what they know and can do
- Providing increased "wait time" to allow students time to process questions before responding
- Providing modified "double" grading to assess the content as well as the structure of responses

ADAPTATIONS OF SOCIAL STUDIES FRAMEWORK

CPI/ACTIVITY PAGES FOR LEP STUDENTS

Suggested strategies for adapting social studies instruction for LEP students are given on the following pages alongside the learning activities. The three sets of strategies illustrate social studies instructional adaptations at the K-4, 5-8, and 9-12 grade levels, respectively.

Standard 6.4

All students will acquire historical understanding of societal ideas and forces throughout the history of New Jersey, the United States, and the world.

Indicator 1: **Compare and contrast similarities and differences in daily life over time.**

Indicator 2: **Identify social institutions, such as family, religion, and government, that function to meet individual and group needs.**

As a social institution, the family is an essential thread in the fabric of our society. Our beliefs, morals, and attitudes stem from our family life and are further developed by the larger society. The traditional family consists of a social group having common characteristics. It is composed of parents and their children, and sometimes an extended family of other relatives. Although the structure of the family has changed over time, some basic characteristics have remained the same.

LEARNING ACTIVITIES: Grades K–2

FAMILIES PAST AND PRESENT

Historical Period: World History—The Ancient World (2000 BC to 500 AD)

The Modern World (1950 to present)

Historical Theme: The History of Gender Differentiation

Overview. Through the following vignette and activities, students begin to appreciate the value of the family as a social institution. They gain an understanding and appreciation of their own families and the families of other children throughout the world and throughout history.

Vignette. This vignette focuses on Etruscan family life and invites students to compare and contrast similarities and differences in daily life over time. Students examine their own family life and draw comparisons to the family life of the ancient Etruscans. Students also examine how the family functions to meet individual and group needs.

The teacher, Mrs. Fay, instructed her students to listen to a story about ancient families. She told her students to use their notebooks to make comparisons between the ancient families she described and their own families. She also asked her students to compare the roles of the father, mother, and children of long ago with the same roles today.

Mrs. Fay began reading the story to the class: "Once upon a time there lived an Etruscan family in the country that is now called Italy. They inhabited the west-central region, north of Rome, before the Romans came along." Ms. Fay pointed out the locations on a large map. "The name for Rome was originally an Etruscan word. The Etruscans were fine engineers, artists, and farmers. As with the Romans, family life was thought to be very important. In Etruscan families, the men hunted, fought, managed money, shepherded animals, and farmed the land. The women performed household work, such as spinning and weaving. The mother and father worked together to improve the lives of their family."

A student raised his hand and remarked that both his parents work as well as buy food and clothes for the family. "My dad is the mayor of our town, does all the banking, goes to work, shovels snow, reads to us with mom, and knows how to fix stuff. My mom cooks for us after she comes home from work, reads, exercises, plays the piano, and helps us with our homework. Both of my parents go to baseball games too," added the student. Mrs. Fay encouraged the class to write this in their notebooks.

Mrs. Fay continued the story: "The Etruscan women took very good care of their health. They read and were very sophisticated. They also enjoyed some freedom (for that time) because they were allowed to attend games and banquets. They also influenced social customs, such as dress and food preparation."

"The Etruscan man was considered to be the head of the household, teacher of the children, and leader of political activities, while his wife remained involved in family life and served as his companion for social

Strategies for LEP students:
With the class, prepare a videotaped dramatization of this vignette. LEP students can follow the dramatization with a printed script.
Prepare a large map of Roma with labels for the Etruscan settlements.
Present materials on the Etruscans in a variety of ways, including photographs, photocopies of museum pictures and artifacts, recordings of talks, and graphics about Etruscan history.

activities. The children had toys to play with just like you have. They also had words for **son**, **daughter**, **wife**, **husband**, **grandfather**, **grandmother**, **mother**, **father**, **brother**, **sister**, **granddaughter**, and **grandson**." As the story continued, the students wrote down more comparisons between the Etruscans and their own families.

Comparing Etruscan and Contemporary American Family Life. The students compare the Etruscan family with that of a modern day family, using a retrieval chart with two columns, ETRUSCAN FAMILY and MY FAMILY, and individual descriptors such as the following: **father**, **mother**, **children**, **home**, **other relatives**, and **neighbors**. Students discuss each category and make entries on their individual retrieval charts, which they then present to the class in short oral presentations.

Mural of an Etruscan Family. Using available materials, students create a talking mural depicting the activities of the daily life of an Etruscan family. They list what the components of the drawing should be and then number them. Each student selects one of the elements to draw and color. Assign a team of coordinators to put it all together. After completing the mural, they tape-record descriptions of each daily activity depicted in the mural.

Examining Heritage. Students research and write about their heritage and how it relates to the traditions of and daily life within their own family. This project may take the form of journal entries or, if the technology is available, a videotape of their family in action.

Ms. Past versus Ms. Present. In pairs, students analyze the family roles of women, past and present. One student can serve as "Ms. Past," the other as "Ms. Present." Students develop a script and perform a puppet show based on the information gathered.

Strategies for LEP students:

Develop a family worksheet for all students with information on parents, names of siblings and other relatives, and a description of the home and the community including the language and customs of the ethnic group. Students should illustrate their booklets with photographs and their own drawings. Prepare a large map of Roma with labels for the Etruscan settlements.

Further Exploration. The children's section of any public library or bookstore contains many stories of various world cultures and historical examples of family life. Students could explore past and present familial roles of every member of the family in, for example, ancient India, ancient China, the Middle Ages, or the Middle East. How have familial roles changed? How do family roles change when the family includes an individual with disabilities? Students can watch popular films to observe heroic familial responses to a physical disability.

Connections. These activities cover a range of skills specified in the New Jersey Social Studies Standards. Students analyze varying viewpoints of individuals and groups throughout history (Standard 6.3, Indicator 2). They also learn to identify common elements found in different cultures, describe ways that family members influence their daily lives, and explore the customs of different ethnic groups (Standard 6.5, Indicators 1, 2, and 3).

Standard 6.1

All students will learn democratic citizenship and how to participate in the constitutional system of government of the United States

Indicator 8: **Identify and interpret the balance between the rights and the responsibilities of citizens**

Students learn that as American citizens they have rights that are established by the U.S. Constitution: free speech, freedom of religion and of assembly, the right to petition the government, and so forth. They also learn that these rights are not absolute. For example, there are limits to free speech, and we cannot incite a mob to riot. Every citizen has responsibilities as well as rights, and the welfare of society must be considered by each of us. This concept has already been covered at an earlier grade. Through activities addressing this indicator, middle school students take a more incisive look at these notions.

LEARNING ACTIVITIES: Grades 5–8

THE BILL OF RIGHTS

Overview. There has been, from the beginning of the Republic, an enduring concern about the rights of all Americans. Disputes and disagreements with the English crown over rights led to the American Revolution and the consequent establishment of a new nation. After writing the Constitution, the founders initially did not add a statement of rights. Many individuals, such as George Mason, believed that a statement of rights was not necessary, that the document would protect the rights of all by the restraints it placed on government. However, two years later, James Madison, goaded by public pressure, added the Bill of Rights to ease the fears that states had about this new powerful federal government. The history of the Bill of Rights is the history of the evolution of our thinking about rights—what rights we have, why they are important, and how they were extended to people denied them in the past.

Rights Guaranteed by the First Amendment.
Prepare a list of First Amendment rights readily understood by students in this grade cluster. After

the students have studied the list, discuss each of the guaranteed rights and what they mean to every individual. Record specific applications mentioned during the discussion. Discuss with students these rights: free speech, freedom of religion, freedom of assembly, the right to petition the government, the right to be secure in our homes, the right to due process of law, the right to a speedy and public trial, the right of trial by jury, and protection against cruel and unusual punishment.

Prepare for students summaries of several Supreme Court cases dealing with several of the rights guaranteed by the First Amendment. Sources include U.S. Law Week, the Supreme Court Reporter, and the Rutgers Law Review. Instruct students in the basics of writing a very simple legal brief outlining the facts of the case and referencing the relevant portions of the

Role-Playing. (Develop the format in conjunction with the language arts teacher.) After researching cases, cooperative learning groups develop their own legal brief related to the specific right that the group members have researched. Students can then role-play some of these in a moot-court setting, as is done in law schools. For each case, roles may include the judge, attorneys for both sides, witnesses, plaintiffs, and defendants.

Vignette. James Madison Middle School has been experiencing a problem common to many schools today. Its students favor the use of backpacks in order to carry their books and supplies. However, these backpacks have created somewhat of a difficult situation. Students and staff have been hit, mostly by accident, with bulging backpacks. The backpacks can clog the aisles, thereby creating another safety hazard. As a result, the Board of Education created a regulation that barred bringing backpacks to school. Punishments attached to the order ranged from a warning (first offense), to a detention (second offense), to a suspension (third offense).

One of the backpackers, Jim Taylor, disagrees with this regulation. He needs his backpack in order to

---

Strategies for LEP students:

Develop for LEP students a keyword chart with visuals. Include these words: **rights**, **mother country**, **revolution**, **rules**, **responsibilities**, **founders**, and **colonies**. Include brief definitions for each term with specific referents.

Prepare a simplified version of the Bill of Rights, and distribute it to the class. Pair an LEP student with a proficient English language student to study this simplified version.

A tape-recorded or videotaped account of the vignette with a printed copy for all children will help LEP children to hear the language spoken and to read the text.

carry the many tools he needs to maintain his position as an honor student. He notes that he has never hurt, nor hit, anybody in school with the backpack. He and his parents are of the opinion that the Board of Education has overreacted to the situation. Contesting the regulation, he continues to bring the backpack to school. The first time resulted in a warning, after a teacher turned him in to Mr. Santiago, the school's principal. Believing in his cause, Jim continues to carry the backpack, and receives a detention, followed by a suspension. The parents appealed Mr. Santiago's actions to the district superintendent, Dr. Chen. Upon review of the facts, the superintendent upheld the principal's action. Upon consultation with an attorney, the Taylors filed a lawsuit.

The following questions pertain to the vignette. After examining the powers of each of the three branches of government, who maintains a similar power within the school environment? In what ways are these similar to, or different from, the government's power? What powers and limits are maintained by each of the characters in the scenario? Does each player in this little drama have rights and responsibilities? What about the student's responsibility for safety in the school? What about defiance of school authorities who are charged with responsibility for that safety? Why is it necessary, in a democracy, that power over others is both divided and limited? On the other hand, what danger might there be in imposing too many limits? What protections does Jim have in his dilemma? Students debate the school rule and its application. They comment on the decision-making process and its appropriateness.

Further Exploration. Students should be encouraged to uncover real-life situations that illustrate how government powers have been separated into various sources. The concepts of impeachment, judicial review, and civil rights can be illuminated by such study. In addition, research into, and discussion of, students' rights might ensue.

Strategies for LEP students:

Teaching the same concepts to all children through differentiated instruction allows the teacher to address different learning styles, abilities and varied learning experiences.

Connections. Relate this activity to Workplace Readiness Standard 3, Indicator 12, on interpreting and analyzing data to draw conclusions. Through discussion and activities, students examine the evolution of the Bill of Rights. In the "trial" activities, it will be helpful for students to examine selected Supreme Court Cases for practice with analyzing and evaluating different points of view about the same set of facts relating to the rights of citizens under the United States Constitution.

Resources. The following resources provide support for the suggested activities:

Burns, James MacGregor. (1995). Government by the people (national version). Upper Saddle River, NJ: Prentice-Hall.

Center for Civic Education. (1991). With liberty and justice for all: The story of the Bill of Rights Calabasas, CA: Author (5146 Douglas Fir Road, Calabasas, CA 91302).

Engan-Baker, Dorothy. (1994). We the people: Skills for democracy. St. Paul, MN: League of Women Voters of Minnesota Education Fund.

Friedrich, Linda D. Discovering our fundamental freedoms: The Bill of Rights in the early and middle grades. Philadelphia: Paths/Prism.

Pincus, Debbie, & Ward, Richard. Citizenship: Learning to live as responsible citizens Carthage, IL: Good Apple (1204 Buchanan Street, Box 299, Carthage, IL 62321-0299).

The following U.S. Supreme Court decisions are useful for this topic:

Bethel School District No. 403 v. Fraser (1986).

Hazlewood School District v. Kuhlmeir (1988).

School District of Abington Township v. Schempp (1963).

Tinker v. Des Moines School District (1969).

Wisconsin v. Yoder (1972).

Zorach v. Clauson (1952).

Summaries of these cases can be found in the weekly issues of U.S. Law Week (available in any law library).

Standard 6.2

All students will learn democratic citizenship through the humanities, by studying literature, art, history, philosophy, and related fields.

Indicator 11: **Compare artistic and literary interpretations of historical events with accounts of the same events that aim at objectivity.**

Painters and writers depict historical events through their perceptions and emotions. The passion they bring to their art instructs students in a vivid and interesting way that is different from and supplementary to the (intended) objective presentation of the textbook. Through studying artistic and literary interpretations of major historical events, students learn how artistic observers emphasize aspects and themes of history to reinforce a point of view.

LEARNING ACTIVITIES: Grades 9–12
HOW ARTISTS VIEW HISTORICAL EVENTS
Romanticism and Revolution

Historical Period: Age of Revolutions (1700–1850)

Historical Themes: The History of Social Classes and Relations

                               The History of Literature

Overview. Few events have inspired as many literary and artistic works as the French Revolution. To the romantic writers and artists of the 19th century, the revolution symbolized the freedom of the human spirit-the triumph of the common man and woman over injustice and oppression. Poems by Wordsworth and Coleridge and paintings by David and Delacroix drew upon the revolutionary theme to celebrate the quest for individual liberty. Students learn from and are inspired by these emotional presentations based on a passionate love of liberty and equality.

The most well-known literary work on the French Revolution is Charles Dickens's A Tale of Two Cities (1859). Dickens' novel recounts the bloody summer of 1792 in Paris, the execution of King Louis XIV, and the reign of terror orchestrated by the infamous revolutionary leader, Robespierre. These events serve as backdrop, however, for Dickens's tale of unrequited love and individual sacrifice. Like his 19th century peers, Dickens saw history as an opportunity to celebrate individual honor and heroism. The library media specialist can provide alternate resources for teachers and students to use.

Comparing Accounts of the French Revolution. After reading excerpts of British accounts of the French Revolution, such as Edmund Burke's Reflections on the French Revolution(1790) and Thomas Carlyle's The French Revolution(1837), students compare these accounts with Charles Dickens's fictional treatment of the same period in A Tale of Two Cities Students compare conservative and liberal reactions to the revolution. They also read selections from Simon Schama's recent study of the French Revolution, which argues that the revolution may not have been necessary.

Studying Historical Fiction. Students consider the accuracy with which Dickens depicts historical events and debate the value and viability of historical fiction as a literary genre.

Through an examination of the saga of Lucie Manette, Charles Darnay, and Sydney Carton, students explore the novel's subordination of history to individual heroism, as exemplified by Carton's willingness to take Darnay's place on the guillotine so that Darnay and Lucie may be together.

Documenting Revolt and Revolutionaries. Students prepare a radio play on the subject of heroism in the face of tyranny. The social text could be the American Revolution, the French Revolution, or Tiananmen Square. Individual groups of students work on the scenario, dialogue, and background (or sets). Alternately, students develop a front page for a newspaper reporting the events surrounding the French Revolution in 1789, beginning with the tennis court oath on June 20. Students do some background research and work together to create an interesting presentation, including writing, artwork, and layout. They use computer desktop publishing software for the final product (if available).

Further Exploration. Students may explore additional literary representations of the French Revolution from the Romantic period and compare the treatment of history by other authors with that of Dickens. Samuel Coleridge's "France: An Ode," Mary Alcock's "Instructions, Supposed to be Written

Strategies for LEP students:

Prepare a lesson on an audiocassette recorder on the basic concepts LEP students will need to understand the French Revolution. Define key words like **royalty**, **revolution**, **justice**, etc. Create a booklet to accompany the tape that contains pictures and explanations using these words and other relevant terms.

Prepare a study guide for LEP students with selections from the various historical interpreters of the French Revolution, highlighting their differences. Link the selections to the key words for this lesson identified in the first suggestion.

Prepare the printed text of the radio play for LEP students to follow along as they listen with the rest of the class. Highlight the key words for this topic as identified in the first two suggestions.

in Paris, for the Mob in England" (1799), and William Wordsworth's "London 1802" (1805) all serve as vehicles through which students may observe the various ways that writers use literature to address important historical concerns. Students also examine their differing reactions to the struggle for liberty in France and the resulting excesses.

Connections. These activities will facilitate students' grasp of political, diplomatic, and social ideas, forces, and institutions in world history (Standards 6.3 and 6.4).

Resources. The following resources provide support for the suggested activities.

Burke, Edmund. (1790). Reflections on the French Revolution.

Carlyle, Thomas. (1837). The French Revolution.

Dickens, Charles. (1859). A tale of two cities

Norton anthology of nineteenth century English literature (Many editions).

Schama, Simon. (1993). Citizens.

Harvard University Press.

ADDITIONAL SUGGESTIONS FOR LIMITED ENGLISH PROFICIENT STUDENTS

The following suggestions supplement the CPI/activity pages in this Framework. They provide suggestions for teachers of LEP students. There is one activity for each of the nine Social Studies Standards.

Standard	CPI	Suggested Activity
6.1	(14) Differing viewpoints on public	Prepare charts of keywords and definitions. Label the pictures in news stories. For example, label the following: President, Congress, the White House, the First Lady (or First Spouse), the Secretary of State, a battle in Kosovo, a fire in Chicago, and so forth. Bridge the cultural gap by also including labels that will be meaningful to the LEP student: e.g., Parliament, the Prime Minister, and other familiar titles of officials and places.
6.2	(3) Arts are cultural	LEP students bring in works of art from their homes. The class compares them with works of art in the school and those from magazines and newspapers. What are the similarities and differences from a cultural standpoint?
6.3	(4) Issues related to human rights	Ask LEP students to compare the American concept of the rights of citizens (as embodied in the U.S. Constitution) with their experiences in their native lands.
6.4	(7) How family and institutions meet individual needs	Develop a format for students to report on family structure and customs related to American holidays like July 4th, Thanksgiving, Christmas, and New Year's Day. LEP students should report on differing customs in their homes related to these and to ethnically-related holidays.
6.5	(5) Material artifacts of a culture	LEP students compare a variety of artifacts and describe them. Such comparisons would be an opportunity for enriching the vocabulary as well as the experiential base of the LEP students.
6.6	(2) Relationship of price to supply and demand	Review and reinforce the key words for LEP students during introductory lessons on basic economic concepts. Ask them to supply the native language terms if possible and then to restate the English words in their own words. Use flash cards for these key concepts.
6.7	(8) Geographical questions with major physical and human characteristics	LEP students compare the geography of their native countries with that of the United States focusing on New Jersey and the community surrounding their own homes here. Use pictures and maps extensively. Encourage students to draw their own maps and collect pictures from newspapers, magazines, and television.
6.8	(17) How social and cultural processes shape regions and English	LEP students use the knowledge they have of their own country and culture as a bridge to learning about their new country and culture. Use charts of key words with equivalents in various native languages
6.9	(1) Renewable and nonrenewable resources	Make collections of realia including products that are immediately available in the classroom (chalk, erasers, pencils, paper, etc.) and materials students bring from home. Label all such products as resources using their English names. Provide LEP students with a list of translations to their respective native languages.

461

PART C: SOCIAL STUDIES INSTRUCTIONAL ADAPTATIONS FOR EXCEPTIONALLY ABLE (GIFTED) STUDENTS

INTRODUCTION

When implementing the Core Curriculum Content Standards, schools must provide all students with appropriate challenges so that raised expectations do not result in lowered expectations for the exceptionally able. Exceptionally able (gifted) students often remain in regular classrooms for the better part of the day and are pulled out for enrichment for a designated amount of time. As a result, teachers face the challenge of accommodating the gifted student in the regular classroom.

The needs of gifted learners are oftentimes overlooked in the classroom instruction because it is believed that they will succeed without any special help from the teacher. Consequently, some gifted students may not achieve to their full potential, and others may find school unchallenging. It is important for the teacher to recognize the gifted students. Such students need accommodations or special instruction to achieve at levels commensurate with a challenge to their abilities.

Gifted children will have some combination of the following characteristics:

- They have the ability to grasp concepts rapidly and/or intuitively and, if they are being challenged, demonstrate a high degree of intellectual, creative, and/or artistic ability.
- They frequently possess exceptional leadership skills.
- They often excel in some areas and not in others. Many of them are multitalented.
- They function academically above grade level if the opportunity to do so is provided.
- They have intense curiosity about principles, ideas, and how things work.
- They have the ability to generate theories and hypotheses and pursue methods of inquiry. This is why it is important to involve them in the evaluation of their own work.
- They can—if the work is structured to permit it—produce products that express insight, creativity, and excellence.

In the past, the term "gifted" described people with high scores on IQ tests. Today, new concepts connected to creative thinking models and multiple intelligences have expanded the definition of intelligence to include other dimensions. Giftedness reflects a multifaceted, multicultural, and multidimensional perspective and is defined by aptitude, traits, and behaviors rather than changeless test performance. These students are found in both genders, in all cultural groups, and across all economic levels. Increased understanding of culturally determined and environmentally affected behaviors will enable teachers and administrators to interpret performance indicators of creative potential.

The process of identification is ongoing because students are continuously entering and exiting school districts. Fluidity should be maintained as students' needs change each year. Procedures for identification and placement in the gifted program should be reviewed annually through Grade 12.

STRATEGIES FOR TEACHING THE EXCEPTIONALLY ABLE LEARNER

Making appropriate adjustments to content, teaching strategies, expectations of student mastery, and scope and sequence is necessary in educating gifted students. Gifted students are more likely to develop study and production skills, experience success and struggle, and feel challenged in a classroom setting that encourages learners to master information more quickly.

Teaching strategies that will help gifted students do well include the following:

- Interdisciplinary and problem-based assignments with planned scope and sequence
- Advanced, accelerated, or compacted content
- Abstract and advanced higher-level thinking activities
- Allowance for individual student interests
- Assignments geared to development in areas of affect, creativity, cognition, and research skills
- Complex, in-depth assignments
- Diverse enrichment that broadens learning
- Variety in types of resources
- Community involvement in student learning
- Projects that focus on cultural diversity
- Internship, mentorship, and other forms of apprenticeship

Specific instructional approaches and arrangements for gifted education include **acceleration**, **enrichment**, and **grouping**. The following sections describe these three approaches with detailed examples for each.

Acceleration

Acceleration involves grade skipping or changing the rate of presentation of the general curriculum to enable the students to complete the program in less time than usual. Prescribed seat-time is not always necessary for achievement of the standards. Acceleration can occur in any subject area. Middle school students can take high school courses; high school students can take college courses with appropriate credit accrued. Some provision can be made for continued acceleration or high-level enrichment.

Examples of accelerated types of programs are described below.

Flexible Pacing. Assignment to classes is on the basis of ability to be challenged as well as ability to handle the work; assignment should not be age discriminatory.

Content Acceleration. Superior performance in some areas may be addressed with placement in a higher-grade level for the areas warranting it.

Early Entrance to School. Eligibility might be evaluated in terms of (1) degree of advancement in relation to peers; (2) number of areas of advanced achievement; and (3) student's self-concept.

Multiage Classes. Two or more grade levels are combined in multiage classes. Students can accelerate through self-pacing.

Compacting. Compacting, also known as **telescoping** refers to a form of acceleration in which part of the curriculum is covered in a shorter-than-usual period of time. Previously mastered content materials are determined through pre-evaluation and elimination.

College Course Work. Qualified students take college courses for college credits while completing high school requirements (concurrent enrollment). College courses may be taken in the summer.

Early College Work. Once the standards for high school courses are met, early admission to college is an option. Students may leave high school early and enter college.

Advanced Placement. The advanced placement program (APP), administered by the College Entrance Examination Board, enables high school students to obtain both high school and college credit for demanding course work offered as part of the school curriculum.

Enrichment

Enrichment is another way to meet the differentiated needs of exceptionally able students. Well-articulated assignments that require cognitive processing, in-depth content, and alternate modes of communication can be effective and stimulating.

The following are some examples to consider when differentiating classroom instruction to meet the needs of academically talented students:

Alternate Learning Activities/Units. Opportunities to pursue alternate activities permit students to engage in new learning and avoid the boredom of repeating instruction or unnecessary practice in skills already mastered.

Independent Study. Students conduct planned, self-directed research projects carefully monitored by the teacher. Prerequisites include instruction in field-based and library research skills, the scientific method, and other authentic types of inquiry.

Advanced Thinking Processes. Assignments in all curriculum areas should emphasize higher-level thinking skills such as synthesis, analysis, and evaluation.

Guest Speakers. Guest speakers provide information on topics beyond the teacher's expertise. University, faculty, parents, business and industry leaders, or other teachers in specific areas may be used as resources.

Mentors/Internships. Both mentors and internships allow students to interact with adult experts in the field of mutual interest. Mentors act as role models. Student's areas of interest, as part of career awareness, should be considered.

Alternate Resources. This category may include materials from a higher grade level and access to business, university, and community resources such as laboratories, libraries, and computer facilities.

Exchange Programs. Students attend schools in a different community or country to enrich educational experiences.

Grouping

> **Grouping** students of like ability together in homogeneous arrangements such as special classes or **clustering** in the same classroom allows for more appropriate, rapid, and advanced instruction without isolating the exceptionally able student. Research indicates that gifted students are more likely to work well with others when they are with students who share their interests. Flexible grouping is recommended in the regular classroom to give gifted students an opportunity for development of advanced skills, including skills of expression and production. Grouping flexibly allows exceptionally able students time for advanced work and a chance for independent study as well as interaction with other students.

Students may be grouped using the following scheduling arrangements or project emphases:

Self-Contained Classes. These classes enable exceptional students to be challenged in every area throughout the day and week, to be stimulated by their intellectual peers, and to have guidance from teachers with experience in sequential, integrated curriculum for the exceptionally able.

Pullout Programs. These programs combine regular class integration and homogeneous grouping on a part-time, regular basis. Pullout programs require careful coordination and communication between the teachers of both classes.

Cluster Grouping in the Regular Classroom. This type of grouping permits homogeneous and heterogeneous grouping according to interests and achievement. For example, one group studies the events leading up to the development of the U.S. Constitution while a second group analyzes the debates at the 1787 Convention and the actual document that was adopted.

Cluster Scheduling. Schedules are arranged so that exceptionally able students can take their required core courses together to enhance rapid pacing, less drill, and greater depth and breadth.

Honors and Enrichment Classes. These classes provide opportunities for practicing higher-level thinking skills, creativity, and exploration of in-depth course content. For example, students write research papers on various theorists of history.

Seminars. Seminars are aimed at research, interdisciplinary studies, visual and performing arts, academic subjects, or other areas of interest. These seminars provide interaction with specialists who can give guidance in specific areas. Gifted specialists can be powerful resources to assist in teacher in-service programs.

Resource Centers. Districts might consider establishing a resource center that is available to all students. It may be effective to reserve designated time to utilize these facilities for exceptionally able students from a broader geographical area (e.g., interdistrict or countywide).

ASSESSMENT OF STUDENT LEARNING

A variety of strategies are needed for monitoring the progress of the exceptionally able student. Teachers can develop strategies and adjust expectations upward to fit the nature and quality of the work to be produced by this type of student. The student may be involved in developing procedures (including rubrics and performance checklists) for assessment. Heavy use of projects and project evaluations is advisable; use of rubrics developed specifically for projects done by the gifted and in cooperation with them; extensive use of peer review; and involvement of other educators in setting and applying criteria.

With gifted students, emphasis should be on development of the higher-order thinking skills in regard to the following kinds of issues:

- **Civics** — Understanding and appreciating the history and development of the concept of citizenship from 5th century Athens down to the most recent interpretations.
- **History** — Understanding history on a global level including models and meta-historical theories
- **Economics** — Understanding the importance of economic philosophy as a component of economic thinking by reading and applying the theories of Adam Smith, Karl Marx, the Austrian school, and others to real-world problems
- **Geography** — Understanding and applying the ecosystem concept to real-world problems

These more advanced students should begin demonstrating understanding of connections between concepts and events sooner than other students and subsequently the ability to articulate the relationships between a broad array of social studies concepts and generalizations. Social studies teachers should work closely with teachers of related disciplines to identify instructional and assessment strategies that are appropriate to all aspects of the student's development and that permit teachers to expand expectations gradually over the school year.

Successful strategies for **monitoring** student progress in social studies include the following:

- Providing for periodic interactions with the student
- Encouraging the student to think "out of the box"
- Having the student develop long-range plans for projects and investigations
- Working with the student to continually reexamine the purpose of the investigation
- Observing and supporting the student's motivation and providing significant encouragement for cognitive risk-taking
- Providing support in terms of making materials available for visual presentations that enable the student to show what he/she knows and can do
- Providing flexible scheduling of projects to allow the student time to do the advanced thinking required for projects and reports
- Developing individualized rubrics with the student to assess unique work products

SUGGESTED SPECIFIC STANDARDS-BASED

ACTIVITIES FOR GIFTED STUDENTS

These activities are based on the CPI/activity pages in this Framework. Use these extensions of those activities which will be more challenging for your more able students. There is one activity for each of the nine standards.

Standard	CPI	Suggested Activity
6.1	(9) Apply knowledge of government structure to town or city.	Students invite public officials to their classroom to conduct a simulated press conference. Students play reporters from radio, television, and the print media. Each student prepares a list of questions he/she will ask. The press conference is taped and replayed for other classes.
6.3	(4) Explain a conflict related to universal human rights.	After researching the experiences of people in South Africa under Apartheid, students write a short story/diary/one-act play/letter to Nelson Mandela explaining how they feel about the experiences of African children in relation to the idea of universal human rights and their own situations as Americans.
6.5	(7) Analyze differences and similarities between cultures.	Students collect artifacts from homes, local stores, yard sales, fairs, etc. which are related to specific cultures. They develop a small Museum of Cultures in which artifacts are mounted and displayed in various ways. Each artifact is displayed with a place describing its significance. Students come to a greater understanding of the concept of a culture.
6.1	(14) Evaluate validity of different viewpoints on public issues.	When studying current events, students prepare a videotape of selected portions of the evening news broadcasts of the three major networks plus CNN to do a study of television coverage of a specific issue. They measure the objectivity of the presentations and produce a research report on their findings.
6.2	(7) Analyze differing artistic and historical versions of the same event.	Students assemble (a) a set of artistic depictions of a historic era or event; (b) several contemporary eyewitness descriptions; and (c) some current interpretations of the event or era. Examples include the Battle of Concord, Boston Tea Party, Battle of Monmouth, Civil War Battles, and Vietnam War. Students analyze and explain the various products and participate in a panel discussion of their respective findings. Finally, they prepare a set of recommendations for studying of history through artistic products.
6.3	(13) Synthesize historical interpretations to reach personal conclusions.	Students study selections from Gibbon, Vico, Hegel, Spengler, Toynbee, or others on general theories of history the teacher might select. Each student writes a research paper summarizing one of the theories. Students then meet as a group to discuss the individual theories and to attempt to reach agreement on their own theory of history. When they have reached consensus, they prepare a series of transparencies that they will use in an oral presentation to the class entitled, "Our Theory of History."

6.4	(12) Argue an ethical position regarding a historic dilemma.	Students develop a questionnaire to be used in a telephone survey of a representative sample of about 100 adults in the community. Students select an ethical issue or dilemma as the topic for the survey. Examples include euthanasia, hate on the Internet, the ethics of personal responsibility, and the duty of voting. After conducting the telephone survey, students report the results to the class.
6.5	(12) Analyze how cultures transmit customs.	Students do library research on the subject of diffusion of innovations and then investigate the diffusion of innovative American products and ideas in Europe and Asia.
6.6	(9) Explain how attitudes and beliefs influence economic decisions	Students research the collapse of many Asian economies in the late 1990s. They focus on the conflict of recommendations of economists and the response by Asian bankers and government officials as influenced by their own customs and beliefs (e.g., the Japanese difficulty with bank regulation).
6.7	(11) Use maps to explain geographic problems.	Working in groups, students do a sophisticated analysis of the topography, locations, and political and ethnic divisions of the former Yugoslavia and then use this understanding to analyze the conflicts between Serbs, Muslims, and Croats.
6.8	(15) Analyze the changes in urban structures.	Students research the criteria and variables used to measure degree and quality of urbanization in all parts of the world. What measures are used? How can they be applied to the major cities in the United States?
6.9	(8) Evaluate technology's influence in history.	Students develop a broad definition of technology which can include any constructed or discovered application—from rubbing two stones together to make a fire to creating the computer. Each student selects one technological innovation and researches the impact of this innovation on its society and subsequent ones.

REFERENCES

Association for Supervision and Curriculum Development. (1994). Challenging the gifted in the regular classroom: Facilitator's guide Alexandria, VA: ASCD.

Reis, S. M., Burns, D. E., and Renzulli, J. S. (1992). Curriculum compacting: The complete guide to modifying the regular curriculum for high ability students Mansfield Center, CT: Creative Learning Press.

New Jersey
Visual and Performing Arts Framework

NEW JERSEY STATE DEPARTMENT OF EDUCATION - FALL 1998

FRAMEWORK

CURRICULUM

NEW JERSEY VISUAL AND PERFORMING ARTS CURRICULUM FRAMEWORK

A Document in Support of the Core Curriculum Content Standards in the Visual and Performing Arts

CHRISTINE TODD WHITMAN
Governor

LEO KLAGHOLZ
Commissioner of Education

ELLEN M. SCHECHTER
Assistant Commissioner
Division of Academic and Career Standards

JAY DOOLAN
Director
Office of Standards and Professional Development

ROBERTA CAROL
Arts & Gifted Education Specialist
Framework Project Coordinator

November 1998

PTM #1500.64

i

NEW JERSEY
VISUAL AND PERFORMING ARTS
CURRICULUM FRAMEWORK

Visit the Visual and Performing Arts Curriculum Framework on the
New Jersey State Department of Education Web Site:

http://www.state.nj.us/education

ii

Acknowledgments

The New Jersey Department of Education gratefully acknowledges the thoughtful contributions and outstanding efforts of the many educators, parents, and citizens who have worked on this Framework Project. We especially wish to note with appreciation those who served on the Task Force that developed this document (see Appendix); our partner organization, The New Jersey Performing Arts Center; and the state's professional arts associations.

Table of Contents

List of Tables

List of Figures

Historical Background

On May 1, 1996, the State Board of Education adopted a set of *Core Curriculum Content Standards* in seven content areas along with a set of *Cross-Content Workplace Readiness Standards* that apply to all subject areas. Since the adoption of these standards, frameworks have been developed to assist local districts in the implementation of the standards. The New Jersey State Department of Education and its corporate partner, the New Jersey Performing Arts Center, convened a task force in June 1997 composed of distinguished K-12 educators, higher education representatives, and professionals in the arts. This task force was charged with designing a *Visual and Performing Arts Curriculum Framework* for New Jersey.

The intent of this Framework is to support the educational content reform in arts education that was initiated by the *New Jersey Visual and Performing Arts Core Curriculum Content Standards* and to generate higher levels of achievement for all students in arts education.

All learning takes place through the senses, sharpened and honed through active engagement in dance, music, theater, and visual arts. Our memories are stored and accessed in the mind through our perceptions of sounds, smells, tastes, images, sounds, and kinesthetics. Thought processes in creative arts are continuously practiced: observation, divergent thinking, analysis, synthesis, and reflection. Art-making requires keen awareness, total immersion, and the thoughtful habit of framing problems and finding solutions, using appropriate media and technology. The present sensory overload from electronic media demands that students be highly perceptive and able to differentiate reality from virtual reality.

The arts are a catalyst for curriculum integration and learning. This was the fundamental premise behind New Jersey's recent adoption of the arts as one of the seven core academic subjects. Arts education provides students with opportunities to develop creative, expressive skills and enjoy active participation as doer and critical/analytical viewer. Productions of music, theater and dance require not only individual skills, but cooperative effort. A challenging arts education program provides a constructivist, experiential education—just right for the school-to-career transition.

1

The purpose of the Visual and Performing Arts Standards is to improve student achievement in arts *education*, not arts-as-entertainment, not art-assembly projects, not art-as-activity. An education in the arts requires curricular scope and sequence and the intellectual rigor of experiential learning. The *Visual and Performing Arts Standards* require that all students at the elementary level experience arts education in all four arts disciplines: dance, music, theater, and visual arts. As students become selective in their preferred form of artistic expression at the middle and high school levels, they are expected to *gain expertise in dance, music, theater, and/or visual arts.*

Knowing the Difference Makes the Difference

Not all art-related experiences should be considered *arts education.* Please note the differences among the following definitions.

- **Arts Education:** An integral, sequential curricular program of knowledge and skills to be acquired and applied.

- **Arts Enrichment:** Part of an educational program (e.g., a field trip to a museum or gallery, the opera or concert) related to the curriculum.

- **Arts Entertainment:** Viewing for diversion or amusement: movies, videos, television, performances, or the like.

- **Arts Exposure:** A new experience with the arts, such as a demonstration, lecture, or performance by an artist.

This Framework provides guidance for infusion of the arts, workplace readiness, and cognitive skills standards, for selected indicators, in delivery instruction. It is not intended to be a substitute for the district curriculum in the arts; the *sample activities* that are included are intended simply as ideas to help educators revamp or recreate their own activities in support of the standards. The *Framework* is designed as a toolbox to gain easy access to methods for implementation of the standards and indicators. The standards have specified the results but not the means of achieving them, affirming the importance of local district decision and discretion. Each district knows best which curriculum designs and instructional strategies are most appropriate for its students. The activities included are to be considered merely as examples and are not mandated.

The framework developers for the Visual and Performing Arts sought a format that was succinct and user friendly. Several hundred educators reviewed this document and acclaimed that these goals were met

Tools to broaden the students thinking skills are found in Chapter 1. Knowledge of cognitive styles and levels creates and enables the flexibility for each student to be provided with challenging work based on individual ability level and learning styles. Chapter 1 is intended to inform teaching and learning about cognitive development, a requirement of the Cross Content Workplace Readiness Standards. Providing each student with challenging work based on individual ability level and learning style is possible only with in-depth knowledge of cognition. To whet the appetite for additional research in metacognition, an overview of several cognitive theories are included:

- A comparison of right and left brain functions and approaches to a task;
- A description of multiple intelligences, as identified by Howard Gardner;
- A listing of instructional verbs and products categorized according to Bloom's taxonomy;
- A description of the factors and behaviors that contribute to creative thinking; and
- A description and samples of systems thinking: the ability to think through processes, practices and projects.

Educators are encouraged to investigate other theories and research on the brain, the mind, the senses, and metacognition. Several grids reflect the connections between the arts and various thinking skills, levels, and other subject areas. Blank grids are provided for district level teachers to brainstorm their own connections. Grids or tables for the teachers' use when brainstorming similar activities are included in the chapter. See the tables listed below to view these samples.

- Table 1.1 (p. 9)   suggests arts projects that challenge the various intelligences described by Howard Gardner.
- Table 1.2 (p. 10)   for teacher use in designing arts studio assignments
- Table 1.3 (p. 11)   Bloom's taxonomy
- Table 1.4 (p. 13)   suggests activities for systems thinking in the arts

For easy reference, when developing curriculum and lesson plans, the six *Arts Standards* are listed in Table 2.1 (p. 17) and Table 2.2 (p. 18) contains a "short phrase" list of the *Workplace Readiness Standards*. Suggestions for integrating the accompanying indicators in the arts curriculum are presented in Table 2.3 (p. 21); and Table 2.4 (p. 22) is a blank grid for teacher use to brainstorm related activities. The second half of Chapter 2 focuses on the use of technology in arts education, providing guidance for the implementation of the second workplace readiness standard.

The Activities Section (Chapter 3) provides instruction for the use and purpose of the suggested activities. It is important that it be understood that the activities designed to meet the standards and indicators are merely suggested and not required. Teachers may adopt, adapt or replace them with ideas of their own. Design education is highlighted to alert curriculum developers and teachers to the requirements of Standard 1.6 in all of the arts. To further assist arts educators in the implementation of design in classroom instruction, Chapter 4 explains the process of design and a number of instructional topics, thematically linked. The arts disciplines of dance, music, theater and visual arts have their own introductory statements so that they can be distributed with the individual sections to the appropriate specialists. **Some adaptations for special populations are provided in Chapter 5.** Experts in the education of the specific populations provided the input for these adaptations.

4

RELATE THINKING SKILLS TO THE ARTS

2nd Grader, Jessee Samper is working on his printed tessellation inspired by M.D. Escher.
Brunswick Acres School, Kendall Park

RELATE THINKING SKILLS TO YOUR ACTIVITIES:

A Few Theories to Work with...

BRAIN HEMISPHERES

The brain has right and left hemispheres with distinct functions:

- **Left:** Rational, logical, sequential, linear, and concrete
- **Right:** Intuitive, imagery, holistic, spatial, and abstract

Tasks should be designed to take advantage of the part of the brain that best serves the successful completion of the task. For example, the students are given the task of drawing a portrait. A portrait is an image. A *mathematical, left brain* approach provides the students with an oval dissected with lines to reflect placement of the eyes, nose, and mouth. This geometric/mathematical approach fails as soon as the subject slightly turns or tilts the head. The oval prohibits accuracy of facial lines; all faces do not fit the pattern provided.

Visual perception of the image, a *right brain approach,* requires the student to focus and concentrate on details of shape as well as linear and spatial proportions. (Note: See *spatial intelligence* defined in the "Multiple Intelligences" section that follows.) Students analyze the identifying differences in the shape of each other's mouth, eyes, and other facial features. They draw several of each feature for comparison. Next, they draw one classmate beginning with one feature, then extend outward to incorporate the other features. They follow through with the hairline and facial outline attending to proportions and placement. This method allows students to alter the tilt and turn of the head and still obtain a good likeness.

There is generally a "best" approach to completion of a task. Knowledge and incorporation of thinking skills, thinking styles, and levels of thinking enable teachers and students to achieve at higher levels of performance.

Resource: Sperry, R.W., 1974. "Lateral Specialization in the Surgically Separated Hemispheres." In F. Schmitt and F. G. Worden, eds., *The Neurosciences: Third Study Program.* Cambridge, Mass.: MIT Press.

MULTIPLE INTELLIGENCES

In "Frames of Mind: The Theory of Multiple Intelligences," 1983, Howard Gardner wrote that a study of children's growth and development suggests a number of distinct intelligences (related to patterns of thinking or thinking styles).

- **Linguistic:** Sensitivity to the order and meanings of words; sounds, rhythms, inflections, and meters of words; and the function of words: to excite, convince, stimulate, convey information, or simply to please.

- **Logical-mathematical:** The ability to appreciate the actions performed upon objects (confronting, ordering/reordering) and assessment of quality relations among those actions; statements/propositions about actual or potential actions and the relationships among those statements.

- **Spatial:** The capacity to perceive the visual world accurately; to perform transformations and modifications upon one's initial perceptions; and to be able to recreate aspects of one's visual experience, even in the absence of relevant physical stimuli. Sensitivity to patterns, forms, and the whole.

- **Bodily-kinesthetic:** Use of the body as an object to express self and feelings; aspirations/use of body parts (including hands) to arrange, transform, and manipulate objects in the world.

- **Musical:** The ability to discern meaning and importance in sets of pitches rhythmically arranged and also to produce such metrically arranged pitch sequences as a means of communicating to other individuals.

- **Interpersonal:** The external aspect of a person: the ability to notice and make distinctions among other individuals—in particular, their moods, temperaments, motivations, and intentions.

- **Intrapersonal:** The internal aspects of a person: the capacity to effect discriminations among feelings, range of affects, or emotions; and to label them, enmesh them with symbolic codes, and draw upon them to understand and guide one's own behavior.

Table 1.1
Blend Multiple Intelligences, the Arts and Interdisciplinary Connections:

INTELLIGENCES	ARTS	LANGUAGE ARTS	MATHEMATICS	SCIENCE	SOCIAL STUDIES
LINGUISTIC	Describe how art elements are composed for aesthetic effect in an artwork.	Read and report on a biography of an artist and what influenced his/her work.	Write step-by-step instructions for matting a drawing.	Describe and give examples of how new building materials change the design of commercial architecture.	Describe the impact of social/political ideas on artists of the Renaissance.
LOGICAL/ MATHEMATICAL	Diagram choreography on paper.	Prepare a marketing plan for sale of tickets to a targeted audience.	Create a modular design for construction of a building complex.	Diagram the workings of a musical instrument.	Analyze your artistic product based on a teacher-provided rubric.
SPATIAL	Draw an architectural structure on-site with visual perspective.	Present orally, with demonstration, three ways to represent 3-D space, two dimensionally.	Measure and diagram your backyard or other area and design landscaping for its use.	Explain how "what you know" interferes with the visual interpretation of perspective drawing.	Create a timeline (1900 to present) citing prominent composers and the social influences on their work.
BODILY/ KINESTHETIC	Study, rehearse, and practice movement, vocal delivery, and emotional tension in acting/vocal music.	List 10 qualities of a natural object. Translate those qualities to a human personality, and create a character for a play.	In your journal, list your food intake for one week, and calculate the rate at which you burn calories through dance activities.	Identify alternative ways to condition/strengthen the body for dance.	Learn the basis for choreography of Hawaiian dance, then practice and perform a dance.
MUSICAL	Create and produce music for a variety of purposes.	Design sound effects and musical background for a play.	Study the physics involved in the design of a musical instrument.	Diagram the parts of the body affecting vocal presentation. Describe their impact on sounds.	Practice, rehearse, and perform in a choral group, band, or other musical or theater group.
INTERPERSONAL	Collaborate with a team to design a playground for an elementary school.	Facilitate a debate on the censorship of art works.	Create and implement a plan for determining the number of students using your playground during and after school.	Share your constructive ideas for improving your own and others' art performances.	Work with a partner to design and perform a choreography or musical piece for a duet.
INTRAPERSONAL	Prepare sketches of personal experiences for use in creating original art.	Maintain a journal of your artistic progress. Develop it into a resume.	Experiment with timing in dance/music/theater to change tempo, and emphasis.	List the ways in which you think. Describe how you arrive at solutions.	Mentally visualize yourself working through an idea or performance.

Table 1.2

Teachers' Grid to Develop Related Thinking Skills, Arts, and Interdisciplinary Connections:

INTELLIGENCES	ARTS	LANGUAGE ARTS	MATHEMATICS	SCIENCE	SOCIAL STUDIES
LINGUISTIC					
LOGICAL/ MATHEMATICAL					
SPATIAL					
BODILY/ KINESTHETIC					
MUSICAL					
INTERPERSONAL					
INTRAPERSONAL					

Taxonomy for a Cognitive "Full Bloom"

The words we use to instruct in the arts classroom should be carefully chosen. Lesson plans and instruction should be scrutinized for the use of appropriate, instructive verbs and tasks that elevate a child's cognitive functioning. Bloom's taxonomy of thinking skills identifies some of these instructional verbs and tasks/products and places them in a five-tiered table (with recall as the lowest level and evaluation as the highest level). Since the Standards require that all students be challenged to reach their maximum potential, the higher or lower functioning students can be assigned higher or lower level task challenges using Bloom's taxonomy. The verbs and products listed by Bloom can easily be adapted to art room and studio verbal instruction and arts products and performances. The levels listed reflect the thought processes for design. "A Taxonomy of Educational Objectives" conference presentation by Benjamin S. Bloom, 1949)

Table 1.3 *Instructional Verbs and Tasks/Products Associated with the Levels of Bloom's Taxonomy*

RECALL*		APPLICATION		ANALYSIS		SYNTHESIS		EVALUATION	
Verbs	*Products*	*Verbs*	*Products*	*Verbs*	*Products*	*Verbs*	*Products*	*Verbs*	*Products*
list	label	show	photograph	summarize	questionnaire	compose	film	decide	conclusion
identify	name	apply	illustration	abstract	survey	imagine	formula	rate	judgment
locate	list	translate	diagram	classify	report	infer	invention	evaluate	panel
memorize	definition	illustrate	collection	dissect	graph/chart	hypothesize	poem	dispute	opinion
review	fact	record	map	compare	outline	invent	prediction	discuss	verdict
match	test	teach	puzzle	deduce	diagram	create	project	verify	scale
reproduce	reproduction	construct	model	order	conclusion	estimate	new game	judge	value
name	recitation	demonstrate	diary	investigate	list	produce	story	grade	recommendation
read			report	differentiate	plan	forecast	machine	choose	
recall			lesson	categorize	summary	design	media	assess	
				separate	catalog	predict		select	

* knowledge/comprehension
The arts require creativity. The creative thinker tends to exhibit certain habits of mind and personality.
The following page assists in the identification and nurturing of creative thinkers.

The Creative Thinker

Without creative people and creative ideas we would still be living in caves, digging up roots for breakfast; and with luck, living to the ripe old age of 25 or 30. The history of civilization is the history of creative innovation in every area.

DAVIS, 1987

LEONARDO DA VINCI
Designed the parachute after watching a jellyfish float down to its prey!

THOMAS EDISON
Averaged one new patent every week of his adult life!

E. Paul Torrance (1962) in " Guiding Creative Talent" described *student behaviors and cognitive skills identified with the creative thinker*. Entertain, require, demand, solicit, include, instruct, and expect to enhance the factors and behaviors below to generate creative thinkers.

- **Fluency** and **Flexibility:** Thinks about many things; has lots of ideas; is a divergent thinker; creates many characters; sees various viewpoints; and sees things in a humorous perspective.

- **Originality:** Is unique and intuitive; comes up with original ideas; finds clever solutions to problems; and suggests unique methods and novel innovations.

- **Elaboration:** Embellishes jokes and stories; adds detail; expands ideas; builds on; embroiders.

- **Risk Taking:** Is courageous and daring; experiments and explores possibilities; risks failure; and tries new approaches and tasks.

- **Complexity:** Organizes unrelated data; recognizes relationships; restructures; and encapsulizes visual and verbal presentations.

- **Curiosity:** Wonders; follows hunches; ponders outcomes; pursues inquiry; questions; and puzzles over people's reactions.

- **Imagination:** Fantasizes; daydreams; thinks up characters and story lines; visualizes change; and imagines images and events.

Test your own creativity by designing activities requiring these behaviors and characteristics.

Systems Thinking

As part of the workplace readiness standards and indicators, it is anticipated that students be aware of and be able to analyze, understand, improve upon, or design systems. A system is an arrangement of parts, rules, and principles designed to be unified to work as a whole–e.g., the solar system; a political system; a system of government; office systems; a method, plan, or process; a mechanized or electronic system. A system provides the quality of being organized, orderly, and efficient.

Table 1.4
Activities for Systems Thinking

Do an on-site drawing of a school or other public area. Describe the traffic flow and use of space. Does it work as intended? Why or why not?	Create and establish a system for storing and securing tools, media, instruments, etc., in the studio.	Describe the scientific basis for the functioning of a musical instrument in developmentally appropriate language.	Participate in an "Internet treasure hunt" to find a prescribed list of "treasures." What "paths" did you take?	Make a list of the ways that you think. Write down when you think. Students share their lists. Each list is the student's "thought processing system" (TPS). Students write in their journal how they will change their TPS.
A dance or theater troupe is a group of parts that work as a whole. Identify the parts and how they function for the good of the whole. Create an organizational chart using a computer.	Identify your community support system for the arts. In what ways do they provide that support?	You're environmentally and aesthetically conscious and want a safe bike path for your town as part of the transportation system. Design it. How does the legal system apply?	What language systems are used by the arts? (Hint: symbols, music notation, *LabanWriter*, etc.)	Describe the functional differences between *brain* and *mind.* How does each function in the doing of art?
Explain the statement, "The whole is greater than the sum of its parts."	Research modular designs and how they are used. Identify and prepare visual representations of modular design in nature.	Using a module as a unit of construction, create a model for a functional structure.	Do a series of drawings that describes the life cycle of a plant or an animal.	Write a "design brief:" Explain how a proposed design will improve an existing situation and the process that effects the change.

THE ARTS AND WORKPLACE READINESS STANDARDS

*Andy Lepo, senior, Washington Township
High School, Sewell, New Jersey.
Painting by Michael Budden,
New Jersey Wildlife Artist.*

THE ARTS AND WORKPLACE READINESS STANDARDS

The Workplace Readiness Standards adopted by the State Board of Education are designed to ready students for entrance to college and the workplace. These standards should be developmentally woven into the students' educational program. District curricula and teachers' lessons may already include some of these standards and indicators. This Arts Framework provides guidance for implementing and enhancing these goals so students are ready for the changing workplace. It is one thing to incorporate activities that simulate the workplace; it is another to have the students realize that there is a carryover and that the penalties in the workplace for such things as poor self-management includes the loss of income—not just a scolding from the vice president. The school, after all, is the students' workplace. At each level (starting from kindergarten), students can learn skills related to career and that "other world" beyond school, sometimes referred to as "the real world" (as if the students' world were not real!) Some of the subject area indicators include workplace readiness skills development.

Foundation skills today go beyond "reading, writing, and arithmetic". Art-making develops keen perception; process and systems thinking; and awareness of appropriateness of tools, technology, and skills for achieving desired results. All these skills are essential for active participation in our nation's economy. Review the workplace standards and indicators, and decide at what level certain skills development should begin and continue to evolve. Self-management (Workplace Readiness Standard #4) is probably the earliest skill needed in the arts classroom or studio. Using time productively means being on time, focusing concentration for time on task, meeting timelines, and being responsible for tools and safety. Students should be made aware of how these valued skills impact on their success and the quality of their product.

THE STANDARDS AND INDICATORS

Table 2.1
The Visual and Performing Arts Standards

THE CORE CURRICULUM CONTENT STANDARDS IN THE VISUAL AND PERFORMING ARTS

Standard 1.1   All students will acquire knowledge and skills that increase *aesthetic awareness* in dance, music, theater, and visual arts.

Standard 1.2   All students will refine perceptual, intellectual, physical, and technical **skills through creating** dance, music, theater, and/or visual arts.

Standard 1.3   All students will **utilize arts elements and arts media to produce** artistic products and performances.

Standard 1.4   All students will demonstrate knowledge of the process of **critique**.

Standard 1.5   All students will identify the various **historical, social, and cultural influences and traditions** which have generated artistic accomplishments throughout the ages and which continue to shape contemporary arts.

Standard 1.6   All students will develop **design** skills for planning the form and function of space, structures, objects, sound, and events.

17

THE WORKPLACE READINESS STANDARDS AND ACCOMPANYING INDICATORS
(SHORT PHRASE LIST)

Table 2.2
Workplace Readiness Short Phrase List

Standard 1 All students will develop career planning and workplace readiness skills.

1.1	Demonstrate employability skills and work habits
1.2	Describe the importance of skills and attitudes
1.3	Identify career interests
1.4	Develop a career plan
1.5	Identify transferable skills
1.6	Select a career major
1.7	Describe the importance of academic and occupational skills
1.8	Demonstrate occupational skills
1.9	Identify job openings
1.10	Prepare a resume and complete job applications
1.11	Demonstrate a successful job interview
1.12	Demonstrate consumer and other financial skills

Standard 2 All students will use information, technology, and other tools.

2.1	Understand technological systems
2.2	Select appropriate tools and technology
2.3	Access and use technology
2.4	Use databases
2.5	Access communication and information systems
2.6	Access information
2.7	Use technology and other tools to solve problems
2.8	Use technology and other tools to produce products
2.9	Use technology to present designs and results of investigations
2.10	Discuss problems related to technology

THE WORKPLACE READINESS STANDARDS AND ACCOMPANYING INDICATORS (SHORT PHRASE LIST)
(continued)

Standard 3 **All students will use critical thinking, decision-making, and problem-solving skills.**

3.1   Define problem/clarify decisions
3.2   Use models and observations
3.3   Formulate questions and hypotheses
3.4   Identify and access resources
3.5   Use library media center
3.6   Plan experiments
3.7   Conduct systematic observations
3.8   Organize, synthesize, and evaluate information
3.9   Identify patterns
3.10 Monitor their own thinking
3.11 Identify/evaluate alternative decisions
3.12 Interpret data
3.13 Select and apply solutions to problem solving and decision making
3.14 Evaluate solutions
3.15 Apply problem-solving skills to design projects

**THE WORKPLACE READINESS
STANDARDS AND
ACCOMPANYING INDICATORS
(SHORT PHRASE LIST)**
(continued)

Standard 4   **All students will demonstrate self-management skills.**

4.1   Set short and long term goals.
4.2   Work cooperatively
4.3   Evaluate own actions and accomplishments
4.4   Describe constructive responses to criticism
4.5   Provide constructive criticism
4.6   Describe actions which demonstrate respect
4.7   Describe roles people play
4.8   Demonstrate refusal skills
4.9   Use time efficiently
4.10   Apply study skills
4.11   Describe how ability, effort and achievement are interrelated

Standard 5   **All students will apply safety principles.**

5.1   Explain injury prevention
5.2   Develop and evaluate an injury prevention program
5.3   Demonstrate safe physical movement
5.4   Demonstrate safe use of equipment or tools
5.5   Identify and demonstrate use of safety and protective devices
5.6   Identify common hazards
5.7   Identify and follow safety procedures
5.8   Discuss rules to promote safety and health
5.9   Describe and demonstrate basic first aid

Table 2.3
Suggestions for Integrating Workplace Readiness Indicators in the Arts Curriculum

WORKPLACE INDICATORS	DANCE	MUSIC	THEATER	VISUAL ARTS
Communication: interviews, sales, customer service	Use *LabanWriter*, participate in auditions, listen, direct, choreograph, perform.	Read music symbols, solo or group perform, audition and respond, listening as audience.	Practice and perform voice projection, inflection, poise, audience respect, listening, role-playing, directing.	Present and express ideas, feelings, thoughts, in advertising, nonverbal symbols, imagery, graphics, or charts.
Demonstrate financial skills	List the financial skills required for a career as a dancer (negotiating contracts, building business relationships, etc.).	Preview catalogs for music instruction software and determine where to find the best prices.	Determine the sources for financing the theater budget for the school.	Identify arts-related jobs or careers in the want ads of a city newspaper and the salary ranges for them.
Understand technological systems	Write a description of the *LabanWriter* software program.	Describe the physics involved in the working of a musical instrument.	Learn to operate the lighting and/or sound systems for the stage.	Create a landscape design using appropriate software.
Self-management	Demonstrate giving and getting constructive criticism.	State the reasons and importance of scheduling band/choral rehearsals and cite your % of attendance.	Describe what happens when the actor loses concentration and falls out of role.	Design a rubric for assessing their own use of productive time within the time constraints of an assignment.
Work in a group	Rehearse and perform in a dance troupe.	Participate in or conduct orchestra, band, chorus, ensembles.	Cast, stage manage, direct, plan lighting/sound, all functions.	Participate in group projects, set design, exhibitions, multimedia, interdisciplinary projects.
Relate ability, effort, and achievement	Maintain a journal of your ability levels related to various dance movements and what you have done to improve them.	Describe how physiology is related to singing ability and what can be done to improve the physiology.	Rate your performance after each rehearsal. Identify areas in which you improve. State why improvement occurred.	Read an artist's biography. Identify personality/other traits that helped/hindered the artist in pursuit of his/her work.
Safety	Develop guidelines for dance that enhance physical strength, stamina, and range of motion. Describe how they can prevent injury.	Inventory, store and secure musical instruments.	Design, construct and test stage setting for safety. Tell what can happen if certain safety rules aren't adhered to.	Identify, describe and be able to locate the OSHA rules and health/safety rules applicable to the use of chemicals.

Table 2.4

Teachers' Grid to Develop Activities for Integrating Workplace Indicators in Arts Curricula

WORKPLACE INDICATORS	DANCE	MUSIC	THEATER	VISUAL ARTS

TECHNOLOGY AND ARTS EDUCATION

Current technology is changing the world we work, live, and do business in. On both career and personal levels, students need to be in step with the tools of modern living. In order to provide students with the knowledge and ability to utilize today's tools, schools should assess and plan for their needs.

Technology tools available to the student should be assessed and a plan developed for the best use of what is available as well as a plan for acquiring technological tools for student success. Consider assignments that require the use of verbal, visual, and sound technologies:

- Using computers and other media to acquire, organize, analyze, and communicate— word processing, images, layouts, design, graphics, etc;
- Making informed judgments about media and its products; knowledge and use of various software and techniques;
- Creating, analyzing, and editing media products appropriate to a targeted audience with a purpose; and
- Demonstrating a working knowledge of media production and distribution.

The next few pages are intended to assist educators in the evaluation of their technological needs and opportunities within the curriculum for students' use of technology:

- A partial list of suggested technologies for use in the various art disciplines (Table 2.5, p. 24);
- A grid of suggested activities for technology use at various grade levels (Table 2.6, p. 25); and
- A grid to help teachers develop ideas for technology uses in classroom activities (Table 2.7, p. 26).

The more pervasive the use of technology, the greater the teachers' and students' ability will be to access and use it. Identify intended uses of a computer in your curriculum before purchasing hardware or software. List available technology and opportunities for student use. Make a plan to obtain and access additional technology. Table 2.5 (see below) lists potential uses for technology in the students' arts work.

*Table 2.5
Suggested Categories of Activities for Use of Technology

DANCE	MUSIC	THEATER	VISUAL ARTS
computer-assisted instruction	sequencing/orchestration	interactive	electronic drawing/painting
dance videos	note processing	improved evaluation process	video digitizing
movement analysis	creating multi-timbres	planning set designs	optical scanning
computerized lighting design	random composition techniques	greater range of expression	image processing
interdisciplinary studies	sampling techniques	script development	design applications, CAD
multimedia applications	audio and video recording	box office management	desktop publishing
inter-arts applications	effects processing	production management	combining text and images
interactive applications	interdisciplinary activities	lighting and sound design	computer animation
dance class management	hypermedia	theater classroom management	video art
interdisciplinary studies	electronic music evolution	interdisciplinary studies	interactive art installations
music accompaniment	interdisciplinary studies	teacher preparation	mixed media
teacher preparation	teacher preparation	assessment	interdisciplinary studies
assessment	assessment		art room management
			teacher preparation

*Adapted from "Technology and Arts Education" 1993, developed by the College of Fine Arts at The University of Florida and the Florida Department of Education, courtesy of the Florida Department of Education.

Since the technology component of workplace readiness is so important, an implementation grid is included below (Table 2.6). The more pervasive the use of technology, the greater the students' ability will be to access and use it. This list of suggested activities and opportunities can be complemented by your own ideas.

Table 2.6
Implementation Grid for Technology Standards

SKILLS TO BE LEARNED	SUGGESTED ACTIVITIES
Students in Grades 3-4 learn keyboarding skills.	Create titles for arts works, design invitations, create a greeting card, learn lettering (fonts).
Students in Grades 5-6 word-process research reports.	Write reports, prepare drafts for oral presentations on topics related to dance, music, theater, or visual arts.
Middle School students study CAD techniques and applications.	Create an interior design, product package, or landscape design.
Students in Grades 7-8 utilize the Internet and other online resources for research purposes.	Access information from museums, libraries, etc.
Middle school students utilize presentation applications.	Illustrate musical phrases and visuals for oral presentations.
Middle school students prepare an illustrated brochure/publication.	Prepare a brochure/program for a concert, play, or exhibition.
Middle school students learn and use stage lighting technician skills.	Design lighting to create mood/effects or to highlight.
High school students videotape project.	Videotape performances for assessment, events, or planned documentaries that integrate arts skills and subjects.
High school students learn and use sound technologies.	Tape-record presentations or performances related to the arts. Tape and use background music for a play or dance performance, or as a means to self-assessment.
High school students utilize computer skills for career planning.	Access Peterson's College Guides and Career Quest software to identify career majors. Explore jobs and related salaries in arts fields. Prepare resume.

Computers are undergoing rapid development. 'Keeping up' requires ongoing vigilance. Identify experts within the school and community to share information. Program time for teacher continuing education and practice once a skill is learned. Access educational videos and the Internet. Preview computer and software catalogs, attend conferences, etc. Determine how technological skills can improve your ability to complete your own tasks more efficiently. Use the blank grid below (Table 2.7) to brainstorm your own ideas for technology use in class activities.

Table 2.7
Teachers' Implementation Grid to Meet Technology Standards and Indicators

SKILLS TO BE LEARNED	SUGGESTED ACTIVITIES

3

ACTIVITIES SECTION

Gloucester County Institute of Technology

How to use this Activities Section

To assist educators in the alignment of their arts curricula with the standards and indicators, sample activities have been designed by teachers and artists in the arts disciplines. They are simply suggestions that you may use, modify, or improvise. While the standards and indicators should be met, schools maintain local control over how they implement them for the reason that they best know their own teachers' strengths, available resources, and facilities. These suggested activities are grouped as dance, music, theater and visual arts, from k-4, 5-8 and 9-12. *It is not the intent of the framework to produce a scope-and-sequence curriculum.* Scope and sequence for the sample activities are to be developed by the local school district. The objective of the framework is to provide some suggestions as starting points.

Interdisciplinary connections are essential to the students' understanding of the practical use for the knowledge and skills learned. Samples of activities that connect with different arts areas and other subjects are included in this Framework and should be included in the district curriculum.

A New Requirement in Arts Education in New Jersey: Design Education

Design is a new standards-based curricular requirement in the arts. Standard 1.6 is different from other arts standards: It is specific to the design of that which is functional—products, systems, structures, places, and events, all of which require the elements and principles of art, whether it be visual, audial, kinetic, or performance. Design is so intrinsic to our lives that it tends to be "invisible." Yet it is ubiquitous to our daily activities and our environments.

Design moves us "from the existing to the preferred." Imagine all of the adaptations made to the wheel and how civilization has been reengineered because of them. It is the cycling through of the design process that enables substantive improvements or adaptation, changing societal needs. Unlike an art object, a design is never "done." Time and circumstance change needs. Analysis, synthesis, and evaluation are at the top of Bloom's taxonomy. The pedagogical and career value of design is in the lessons learned through evaluating resources and assessing needs, identifying problems and solving them, mastering technical skills, and creating and evaluating the project and product-workplace know-how.

Design awareness is the first step in design education. What do you see? Analyze the design. What is its history? What has changed or is changing? Describe the problem and develop solutions. Evaluate solutions and synthesize for the best result. Students will be exposed to process, content and questions and should be given more challenging problems to solve as their skills grow. Concepts of design include the notion of order and clarity of form, and time and space. The contexts relating to communication and social relevance can be applied.

Sample design activities in each arts discipline are provided in this chapter to stimulate the teaching staff's creativity as they build the curriculum and develop lesson plans. Chapter 4 provides additional suggestions for design-related activities (Tables 4.1 through 4.3, pp. 146-148).
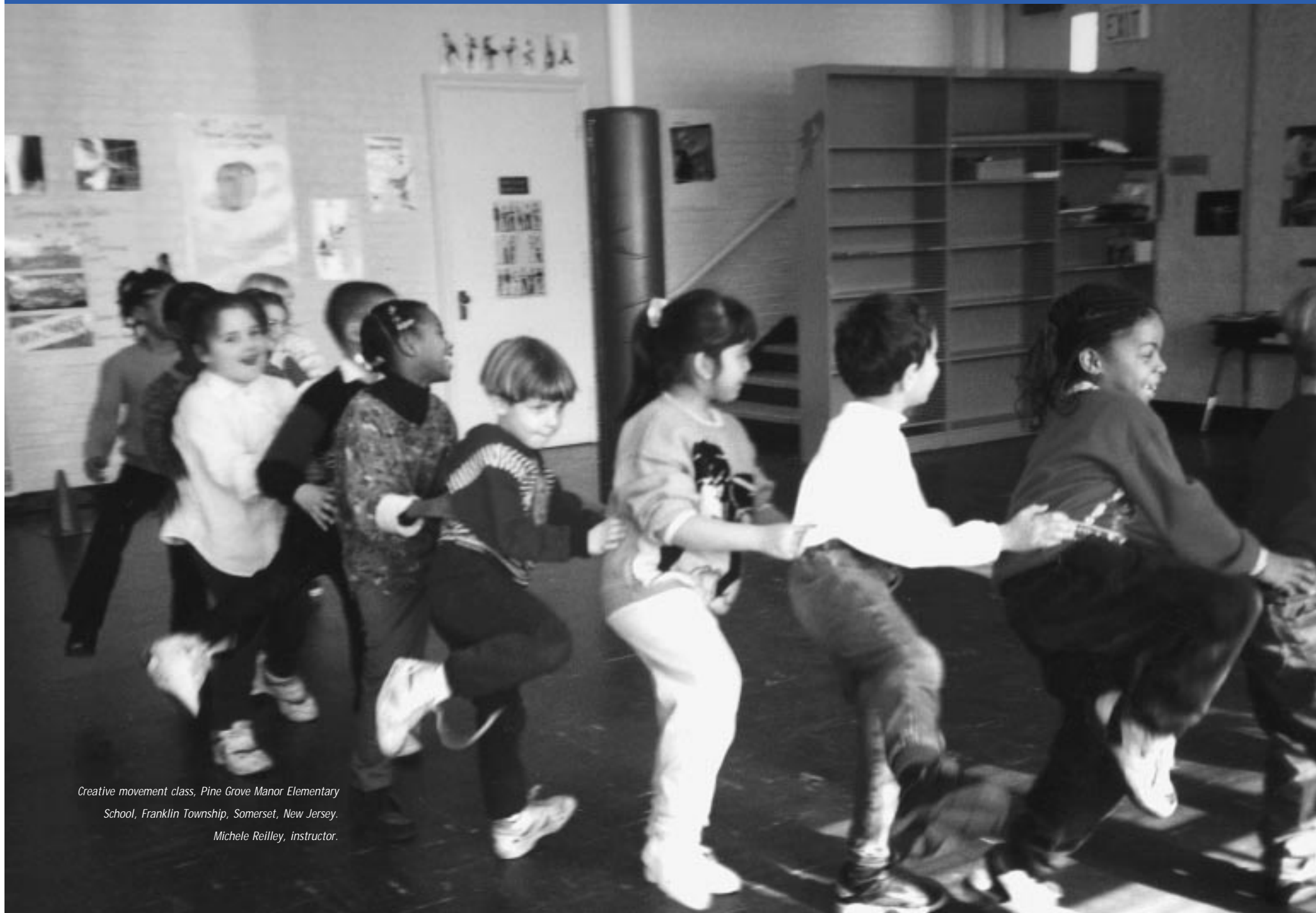
Creative movement class, Pine Grove Manor Elementary School, Franklin Township, Somerset, New Jersey. Michele Reilley, instructor.

DANCE

Dance is the expression of the intellect, emotions, and the body using energy, shapes, patterns, actions, and gestures—aesthetically. Personal creativity and imagination develop along with the mental skills of concentration, listening, and timing. Dancers are students of nonverbal communication through the art of rhythmic bodily movement. Mental endurance and the skills of concentration, listening and timing sharpen the senses. Practice, improvement, discipline, and precision enhance personal confidence. Performance in a group fosters intense cooperation and interpersonal skills.

Habits of physical skills—endurance, refined kinesthetics, flexibility, and coordination—complete the mind/body connection for gains that translate to other life and work skills. Practice in dance movements produces numerous anatomical, physiological, and health gains. Dance offers many opportunities for students to be spectators, critics, and participants.

Choreography structures the intellectual and emotional expression through design of movement. It draws on and reinforces collaborative skills for problem solving, decision making, evaluating, and goal setting. It requires mental exploration and visualization of the desired effect. Opportunities for students to create, plan, practice, and perfect their own ideas are inherent in dance education. Added to learning about grace, rhythm, and form are the joys of a partnered swirl, a lift perfectly executed, or the flow of aesthetic force.

Dance has a long history as an independent art form that records and celebrates historical, cultural, and social perspectives. Consider the social climate and historical trends that produced ballroom dancing, contemporary and modern dance, folk dance, and traditional and modern ballet. As an interdisciplinary subject, dance connects readily to other subjects such as social studies and science. While a language in its own right, dance has historical roots and meanings and has more forms than there are cultures in the world.

(Note: One of the *Comprehensive Health and Physical Education Standards* focuses on dance for social and/or recreational purposes. Where similar skill development exists in cumulative progress indicators, they are considered interdisciplinary.)

DANCE K-4:
Standard 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATOR #1

Communicate their responses to dance, music, theater and visual arts with supporting statements based on aesthetics.

ACTIVITY: DANCE TALKS

- Students observe, discuss, and mimic how people move/gesture (e.g., wave or shake hands) in everyday life to communicate messages (e.g., "hello," "stop," "come," or "go").
- Demonstrate abstracting and transforming a gesture into dance movements, with changes in rhythm, speed, energy, and space.
- Students practice several gesture transformations. They combine three transformations into one or more "dance" sentences and then perform them individually or in small groups.
- The audience (class) decides what body parts were most important to the messages: torso, face, hands, fingers, legs, etc.
- The members of the audience then state their preferences for the various performances, citing their reactions to the rhythm, speed, energy, and space and saying what they liked or didn't like and why.

WORKPLACE READINESS SKILLS:

- 4.2 Work cooperatively

THINKING SKILLS:

- observe, decide, synthesize, interpret, problem solve, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts 1.2, 1.3
- Language Arts Literacy

32

DANCE K-4: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATOR #1

Demonstrate performance and participation skills by working and creating individually and with others.

ACTIVITY: LOCOMOTOR

- Students explore the use of four locomotor movements (skip, hop, run, walk) in relation to the use of body parts: then explore the use of body parts in leading, isolating and supporting. Then:
  - add the use of low, medium, and high levels;
  - explore pathways and shapes; and
  - create, practice, and perform a dance sequence that incorporates changes in level, direction, pathway, and shape.

- Students create a dance phrase of four locomotor movements with variations in space, time, and energy using the basic elements of dance (body, space, time, energy).

- Practice and perform the dance. Discuss effects of concentration on performance quality.

WORKPLACE READINESS SKILLS:

- 3.9   Identify patterns
- 3.11   Identify/evaluate alternative decisions
- 3.15   Apply problem-solving skills to design projects
- 4.2   Work cooperatively
- 4.11   Describe how ability, effort and achievement are interrelated

THINKING SKILLS:

- decide, create, analyze

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts 1.6

33

DANCE K-4: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc., are the ingredients from which works of art are made.

PROGRESS INDICATOR #1

Apply elements and media common to the arts to produce a work of art.

ACTIVITY: NATURE DANCES

- Students explore various design and movement sources in nature and choose preferences with regard to line, color, shape, and rhythm (e.g., rivers, trees, leaves, butterflies). They translate these design and movement elements to dance movements and create short dances, planning the dance elements. The students practice and perform the dances individually.

- Students select a season to design a dance to include the above as well as air movements (breeze, hurricane winds); rain (drizzling, pouring, driving, etc.); snow and ice effects on movement; leaves drifting, falling, curling. Combine and synchronize students' individual dance ideas to create a group performance.

Suggestions:

- Use a selected painting that represents the particular season for inspiration.
- Use musical selections such as Verdi's "Four Seasons" or other selections representing storm, summer's day, autumn.

WORKPLACE READINESS SKILLS:

- 3.2   Use models and observations
- 3.7   Conduct systematic observations
- 3.15   Problem-solve for design

THINKING SKILLS:

- identify, compare/contrast, translate, assess

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts (Music and Visual Arts) 1.2, 1.6
- Science

34

DANCE K-4: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps students to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #1

Explain the criteria by which they evaluate the quality of their work and the work of others.

ACTIVITY: DANCE NARRATIVES

- Provide groups of students with a certain element of a dance performance to specifically focus on: story, roles, choreography, body language, postures, music, lighting, costumes, special effects, or characters. Discuss audience etiquette and the need to concentrate on the element assigned. Students view a narrative dance (or portion of a video) that is developmentally appropriate, such as the *Nutcracker.*

- Following the performance or viewing, each student in the group describes his/her observations to the class, identifying and explaining any likes and dislikes. The students may demonstrate the movements, facial expressions, body stance/posture, etc., if they choose.

WORKPLACE READINESS SKILLS:

- 3.7   Conduct systematic observations
- 4.2   Work cooperatively
- 4.6   Describe actions for respect
- 4.7   Describe roles people play

THINKING SKILLS:

- concentrate, analyze, recall

LINKS TO OTHER STANDARDS & SUBJECTS:

- Music
- Visual Arts
- Language Arts Literacy (Speaking)

35

DANCE K-4: STANDARD 1.5

All students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATORS
#1 & #4

Investigate, experience, and participate in dance, music, theater, and visual arts activities representing various historical periods and world cultures. (#1)

Use their senses, imagination, and memory to express ideas and feelings in dance, music, theater, and visual arts. (#4)

ACTIVITY: BIRD DANCE

- Students view the movements of birds through direct observation, video, etc.; then view how the movements are recreated in dance movement.
  - View "Ostrich" (African, Dance Black America). Students communicate their responses with supporting reasons for likes and dislikes. Expand on responses relating to dance elements.
  - View "Dying Swan" (Classical Ballet, Pavlova). Students respond verbally to bird movements in classical style, giving reasons to support their comments. Expand on comments as they relate to the elements of the dance.
  - View "Eagle Dance" (Native American, Indian Dance Theater). Students respond with supporting statements and compare/contrast it with the Ostrich and Swan presentations.
- Students select a bird they would like to be. They split into groups depending upon the dance style preferences they have viewed. By re-creating dance movements in that style, they choreograph a dance phrase.

WORKPLACE READINESS SKILLS:
- 2.2   Select appropriate tools (and technology)
- 3.7   Conduct systematic observations
- 3.8   Organize, synthesize, and evaluate information

THINKING SKILLS:
- identify, decide, compare/contrast, create

LINKS TO OTHER STANDARDS & SUBJECTS:
- Arts 1.5 and 1.3
- Language Arts Literacy

36

DANCE K-4: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATORS
#1 & #2

Identify and state needs and opportunities for design in the contexts of home, school, recreation, and play. (#1)

Plan and execute solutions to design problems. (#2)

ACTIVITY: STORY DANCE

- Students select a favorite story to express in dance. Discuss the characters, costumes, and props the students will need. Design the costumes to suit the characters. Create costumes from available materials. Students review the story and determine what props and sound effects/music are essential to the performance. Discuss as a group the limitations imposed by space and materials and how to overcome them.

- Students develop a plan for the choreography that will be expressive of the story, then practice and perform it.

- Students define the roles of costume designer, stage manager (including safety), choreographer, related roles, and dancers in a professional production.

WORKPLACE READINESS SKILLS:
- 1.2 Describe the importance of skills (and attitudes)
- 1.5 Identify transferable skills
- 3.1 Define problem/clarify decisions
- 3.4 Identify and access resources
- 3.8 Organize, synthesize, and evaluate information
- 3.11 Identify/evaluate alternatives
- 4.2 Work cooperatively
- 5.8 Discuss rules to promote safety and health

THINKING SKILLS:
- translate, illustrate, imagine, create, produce, design, decide, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:
- Music
- Visual Arts
- Language Arts Literacy
- Others (depending on the story selection)

37

DANCE 5-8: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATOR #1

Understand that arts elements, such as color, line, rhythm, space, form, may be combined selectively to elicit a specific aesthetic response.

ACTIVITY: MASTERWORKS I

- Observe and respond to dance masterworks (live or video) such as "Waterstudy" by Doris Humphrey, "Riverdance" by Michael Flatley, or another choice. Using dance terminology, students critique the use of fundamental elements of dance and their impact on the aesthetic effect.

- Improvise, based upon one of the works seen, a short dance emphasizing movement, shape, level, energy, and/or theme, using a selected musical work. Students plan the elements to achieve a desired aesthetic effect, then practice technique and perform in groups.

- Discuss their personal responses to each group's plan, the quality of the practice sessions, and aesthetic responses to the performances.

WORKPLACE READINESS SKILLS:
- 3.2   Use models and observations
- 3.7   Conduct systematic observations
- 3.11   Identify/evaluate alternative decisions
- 3.15   Apply problem-solving skills to design projects
- 4.2   Work cooperatively

THINKING SKILLS:
- observe, translate, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:
- Arts 1.4, 1.6

DANCE 5-8: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATORS #2 & #3

Understand that arts elements, such as color, line, rhythm, space, form, may be combined selectively to elicit a specific response. (#2)

Communicate about the aesthetic qualities of art works through oral and written analysis using appropriate technical and evaluative terms. (#3)

ACTIVITY: MASTERWORKS II

- Students view masterworks representative of two or three dance genres (e.g., ballet, jazz, tap, musical theater, mime, and social/cultural). Identify the hallmark characteristics of the different genres.
- Suggested masterworks videos:
  - *La Sylphide* (Bournonville); *Revelations* (Alvin Ailey); and *Dancing* (PBS eight-part series)
- Learn, practice, and perform the techniques and hallmarks of two genres.
- Analyze the common elements and differences of these genres and their effect on aesthetic response.

WORKPLACE READINESS SKILLS:

- 3.7 Conduct systematic observations
- 4.2 Work cooperatively
- 4.9 Use time efficiently

THINKING SKILLS:

- evaluate, analyze, create compare/contrast, judge, identify

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts 1.3, 1.4, 1.5
- Language Arts Literacy

DANCE 5-8: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATORS
#2 & #3

Demonstrate technical skills in dance, music, theater, or visual arts, appropriate to students' developmental level. (#2)

Create, produce, or perform works of dance, music, theater, or visual arts, individually and with others. (#3)

ACTIVITY: DANCE MACHINES

- Working in small groups, students create a machine (e.g., a washing machine, lawn mower, or conveyor belt) that incorporates the use of body parts, shape, level, movement, and vocalized sound. Each group practices and performs the movements for the class. Members of the audience observe each other's performances and identify the dance elements used. The students articulate the strengths in each performance.

WORKPLACE READINESS SKILLS:
- 2.1   Understand technological systems
- 4.2   Work cooperatively
- 4.5   Provide constructive criticism

THINKING SKILLS:
- analyze, create, decide, synthesize, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:
- Arts 1.3, 1.6
- Language Arts Literacy

DANCE 5-8: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATORS
#2 & #3

Demonstrate technical skills in dance, music, theater, or visual arts, appropriate to students' developmental level. (#2)

Create, produce, or perform works of dance, music, theater, or visual arts, individually and with others. (#3)

ACTIVITY: PRETZEL DANCE

- Students work with a partner. Dancer A creates a shape and freezes. Dancer B then creates a pretzel shape with Dancer A (going through negative shapes, over, under, in front/back, etc.) and also freezes.

- Dancer A carefully "oozes" out of the pretzel shape and creates a new pretzel shape with Dancer B, again through the use of the element of direction. The partners continue creating and changing shapes.

- Students create a dance phrase with a series of such movements. They select music to establish a rhythm, pace, etc.

WORKPLACE READINESS SKILLS:
- 3.1 Define problem/clarify decisions
- 3.9 Identify patterns
- 3.11 Identify/evaluate alternative decisions
- 3.15 Apply problem-solving skills to design projects
- 4.2 Work cooperatively

THINKING SKILLS:
- create, decide, identify

LINKS TO OTHER STANDARDS & SUBJECTS:
- Music

41

DANCE 5-8: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATORS #2 & #3

Demonstrate technical skills in dance, music, theater, or visual arts, appropriate to students' developmental level. (#2)

Create, produce, or perform works of dance, music, theater, or visual arts, individually and with others. (#3)

ACTIVITY: MODERN DANCE COMBOS

- Students learn, practice, and perform modern dance combinations that utilize fundamental modern dance concepts:
  - spinal contractions; off-balance sustained; parallel; turnout; fall and recovery; and limb flexion.

  (Include modern dance vocabulary.)

- In groups of four, students change two of the fundamental elements in the combination (e.g., timing, pathway, level, timing, energy). They perform the movements and critique each other's work.
- Using videos, the students view/discuss the use of these fundamentals in different dance styles and genres.

WORKPLACE READINESS SKILLS:
- 2.3   Access (and use) technology
- 3.15 Apply problem-solving skills to design projects
- 4.10 Apply study skills

THINKING SKILLS:
- concentrate, identify, reproduce, apply, demonstrate, design

LINKS TO OTHER STANDARDS & SUBJECTS:
- Arts 1.3, 1.6
- Language Arts Literacy

42

DANCE 5-8: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood are the ingredients from which works of art are made.

PROGRESS INDICATOR #2

Demonstrate appropriate use of technology, tools, terminology, techniques, and media in the creation of dance, music, theater, or visual arts.

ACTIVITY: WITH FEELING!

■ Students discuss and mimic facial and bodily gestures and movements that express the gamut of a human emotion, such as fear, shyness, nervousness, untrusting, joy, or hate. They explore movement, rhythm, timing, shape, etc., that expresses the various subtleties and strengths of the emotion.

■ With a partner, students create, practice, and perform a dance involving the relationship of two emotions, selecting the nuances of each to be depicted.

WORKPLACE READINESS SKILLS:

■ 3.1   Define problem/clarify decisions

■ 3.8   Organize, synthesize, and evaluate information

■ 3.15   Apply problem-solving skills to design projects

■ 4.2   Work cooperatively

THINKING SKILLS:

■ identify, analyze, problem-solve, interpret

LINKS TO OTHER STANDARDS & SUBJECTS:

■ Theater

■ Science

■ Social Studies

DANCE 5-8: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps students to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #2

Offer constructive critique in the evaluation of their own and others' work in dance, music, theater, or visual arts.

ACTIVITY: EVALUATE

- Students describe and critique specific dance phrases (video/live/own/other students') using criteria such as:
  - feeling/emotion; look/shape; dynamics/energy; size; design: line, pattern, color, rhythm, texture, etc.; and aesthetic effects (including use of sets, costumes, etc.).
- Students evaluate all performances in some manner. They support their critiques and make positive suggestions for improvement or other interpretation. Suggested possibilities:
  - Use the computer to create a rubric to include the above criteria for future evaluation purposes; use numbered values on cards for technical/artistic evaluations at the end of a performance, similar to the judging method used for ice skating. Discuss disparities; and use a "thumbs up or down" evaluation (like the Romans did) when evaluating criteria as a class.

WORKPLACE READINESS SKILLS:
- 2.9 Use technology to present designs and results of investigations
- 3.7 Conduct systematic observations
- 3.12 Interpret data
- 4.5 Provide constructive criticism

THINKING SKILLS:
- observe, evaluate/assess/judge, dispute, judge, grade

LINKS TO OTHER STANDARDS & SUBJECTS:
- Arts 1.1
- Mathematics

44

DANCE 5-8: STANDARD 1.5

All students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATOR #5

Identify significant artists and artistic works in dance, music, theater, and visual arts representing various historical periods, world cultures, and social and political influences.

ACTIVITY: CONTEMPO

- Students learn the historical, social, and cultural origins of recent and contemporary dance genres indigenous to the United States (e.g., swing from the 20s and 40s, ballroom/Ginger Rogers and Fred Astaire, tap/Gregory Hines, jazz, musical theater/film, hip-hop/Savion Glover) and the artists and times that fostered them.
- Utilizing technology, the students trace the career of at least one of the representative professional dancers or choreographers.
- Students learn, practice, and perform basic modern dance utilizing basic modern dance concepts, principles, skills, and aesthetics. Suggested dancers:
  - Doris Humphrey/fall and recovery; Mary Wigman/vibratory action, swing, percussion; Martha Graham/contraction-release; Alvin Ailey; Mark Morris; Lester Horton; Paul Taylor; Merce Cunningham; and Alwin Nikolais.

WORKPLACE READINESS SKILLS:

- 1.3   Identify career interests
- 1.5   Identify transferable skills
- 2.6   Access information
- 3.2   Use models and observations
- 3.5   Use library media center
- 3.8   Organize, synthesize, and evaluate information
- 4.10 Apply study skills

THINKING SKILLS:

- identify, name, record, demonstrate, summarize, abstract, compose

LINKS TO OTHER STANDARDS & SUBJECTS:

- Social Studies (History)

45

DANCE 5-8: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATOR #3

Identify and solve design problems in space, structures, objects, sound, and/or events for home and workplace.

ACTIVITY: DANCE SET

- Students design a model to scale for an abstract stage set for a designated dance performance. Scale will be to the area in which a dance performance would take place, e.g., in the school auditorium, cafetorium, or outside location. Consider where off-stage areas will be.

- Students consider as an alternative a realistic set that is representative of the theme, time, and place.

- The class critiques the prototypes by demonstrating movement paths within the space. They consider both stability and safety.

WORKPLACE READINESS SKILLS:

- 1.1   Demonstrate employability skills
- 3.2   Use models and observations
- 3.13   Select (and apply) solutions to problem solving (and decision making)
- 3.15   Apply problem-solving skills to design projects
- 5.6   Identify common hazards

THINKING SKILLS:

- match, imagine, design, select

LINKS TO OTHER STANDARDS & SUBJECTS:

- Music
- Visual Arts
- Language Arts Literacy

DANCE 5-8: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATOR #3

Identify and solve design problems in space, structures, objects, sound, and/or events for home and workplace.

ACTIVITY: DANCE EVENT

- Students design a dance program to be presented to an audience (other students, parents, community). The program may be for a specific event, an assembly, holiday, celebration, etc. Consider inclusion in a theater production or music concert, and work with other arts disciplines.
- Students then determine the target audience and available locations. They make appropriate dance and musical selections. Students prepare a one-page resume listing the skills they believe will enable them to take the roles of a director, announcer, choreographer, stage manager, public relations, costumer, etc. They share the resumes with the class, and groups form based on student interest and self-appraisal of skills. The marketing group uses a computer to generate the dance program, which they will distribute at the event. They use available technology as appropriate. The program is videotaped.
- Students learn, practice, and perform the program.

WORKPLACE READINESS SKILLS:

- 1.1 Demonstrate employability skills (and work habits)
- 1.2 Describe the importance of skills (and attitudes)
- 1.10 Prepare a resume (and complete job applications)
- 2.2 Select appropriate tools (and technology)
- 3.4 Identify and access resources
- 3.8 Organize, synthesize, and evaluate information
- 3.15 Apply problem-solving skills to design projects
- 4.2 Work cooperatively

THINKING SKILLS:

- identify, order, investigate, differentiate, categorize, imagine, create, design

LINKS TO OTHER STANDARDS & SUBJECTS:

- Music
- Visual Arts
- Language Arts Literacy

47

DANCE 9-12: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATOR #4

Demonstrate an understanding of different aesthetic philosophies through the evaluation and analysis of artistic styles, trends, and movements in an art form.

ACTIVITY: MASTERWORKS III

- Students discuss the sources of inspiration for the creation of dance. They explore movement possibilities given thematic ideas taken from preselected masterworks.
- View and compare/contrast masterworks from multiple dance genres, such as the following:
  - "Firebird" (Fokine); "Green Table" (Kurt Joos); "Appalachian Spring" (Martha Graham); "Hard Nut" (Mark Morris); and "Moiseyev in Concert"
- Students select and research the socio-historical contexts of a genre and significant choreographers.
- Student(s) choreograph(s) a dance that demonstrates an evolving personal aesthetic and submit(s) a 100-word philosophical statement supporting it.

WORKPLACE READINESS SKILLS:
- 3.2   Use models and observations
- 3.7   Conduct systematic observations
- 3.11   Identify/evaluate alternatives
- 3.13   Select (and apply) solutions to problem solving (and decision making)

THINKING SKILLS:
- identify, evaluate, analyze, compose, create, judge

LINKS TO OTHER STANDARDS & SUBJECTS:
- Arts 1.3, 1.4, 1.5
- Language Arts Literacy
- Social Studies (History)

48

DANCE 9-12: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATOR #4

Demonstrate originality, technical skills, and artistic expression in the creation, production, and performance of dance music, theater, or visual arts.

ACTIVITY: TRAIN 4 DANCE

- Students refine skills through experiencing the following:
  - Alternative training and conditioning methodology for dance (e.g., Pilates Method, Alexander Technique, Barrtenieff Fundamentals, Laban Movement Analysis, Feldenchrist, or yoga); the use of fitness equipment to increase range of movement and motion, muscle strength, stretch and tone; and aerobic exercise.

WORKPLACE READINESS SKILLS:

- 1.5   Identify transferable skills
- 2.8   Use technology and other tools to produce products
- 3.2   Use models and observations
- 3.11   Identify/evaluate alternative decisions
- 4.3   Evaluate own (actions and) accomplishments
- 5.1   Explain injury prevention
- 5.3   Demonstrate safe physical movement
- 5.4   Demonstrate safe use of equipment (or tools)
- 5.6   Identify common hazards
- 5.7   Identify and follow safety procedures

THINKING SKILLS:

- identify, compare/contrast, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:

- Health & Physical Education
- Science (Anatomy & Physiology)

DANCE 9-12: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATOR #4

Demonstrate originality, technical skills, and artistic expression in the creation, production, and performance of dance, music, theater, or visual arts.

ACTIVITY: CONTEMPORARY

- Students participate in and demonstrate competency in the execution of contemporary concepts and intermediate-level skills including the following:
  - ◗ Extensions; dynamic alignment; off-center turning; and refined axial center awareness.
- The warm-up and combinations should reflect increasing complexity in dance technique, skill level, retention, aesthetic refinement, musicality, and design. Suggested:
  - ◗ Twyla Tharp (rhythmic complexity/fusion); Mark Morris (movement invention); Laura Dean; Meredith Monk; and Pina Bausch.

WORKPLACE READINESS SKILLS:
- 1.2   Describe the importance of skills (and attitudes)
- 4.2   Work cooperatively

THINKING SKILLS:
- recall, concentrate, demonstrate

DANCE 9-12: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc., are the ingredients from which works of art are made.

PROGRESS INDICATOR #3

Demonstrate an understanding of technology, methods, materials, and creative processes commonly used in dance, music, theater, or visual arts.

ACTIVITY: DANCE PRODUCTION

- In groups, students choreograph, practice, and perform a complete dance work utilizing choreographic elements and principles and refined technical skills. The accompaniment, theme, and style of the work should reflect students' consensus, practical experiences, and individual movement vocabularies.
- Design/create costumes, set, and lighting design.
- Create a computer-generated program. Invite and perform for parents, other students, or the community.

WORKPLACE READINESS SKILLS:

- 1.8   Demonstrate occupational skills
- 2.8   Use technology and other tools to produce products
- 3.1   Define problem/clarify decisions
- 3.15   Apply problem-solving skills to design projects
- 4.2   Work cooperatively

THINKING SKILLS:

- decide, create, produce

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts (Dance and Visual Arts) 1.6 Design
- Language Arts Literacy

51

DANCE 9-12: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc., are the ingredients from which works of art are made.

PROGRESS INDICATOR #3

Demonstrate an understanding of technology, methods, materials, and creative processes commonly used in dance, music, theater, or visual arts.

ACTIVITY: MULTIMEDIA / INTRADISCIPLINARY

- Students create, rehearse, and perform a multimedia production for a live or taped medium, utilizing the six elements of structure: mass, volume, line, plane, texture, and color.

- Students partake in the design and construction of sets, costumes, and properties necessary for production. Include the use of appropriate technologies (film, video, lighting effects, computer-generated imagery, soundscapes, etc.) to alter the more conventional materials and expand form relationships.

- Research concepts for the above from multimedia sources (MTV) artists (Pina Bausch, Ping Chong, Alwin Nikolais). Describe how various sources influenced their work.

WORKPLACE READINESS SKILLS:

- 1.8   Demonstrate occupational skills
- 2.1   Understand technological systems
- 2.7   Use technology and other tools to solve problems
- 3.4   Identify and access resources
- 3.8   Organize, synthesize, and evaluate information
- 3.11   Identify/evaluate alternative decisions
- 3.14   Evaluate solutions

THINKING SKILLS:

- select, create, apply, translate, compose, design, assess

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts 1.6

52

DANCE 9-12: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

Gloucester County Institute of Technology

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps students to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #3

Evaluate and interpret works of art orally and in writing, using appropriate terminology.

ACTIVITY: GENRE CRITIQUE

- Students view live or taped performances (student or professional) of two genres. In oral or written discussions, students:
  - define the genre and style; and
  - discuss the historical, societal, economic, aesthetic, and political contents.
- Students appraise the level of craftsmanship and technical skill of the choreographers and performers as well as the effectiveness of the communication of the choreographic intent.
- Students discuss the effectiveness of production values, e.g., the set, costumes, music, lighting.

WORKPLACE READINESS SKILLS:

- 3.7 Conduct systematic observations
- 3.8 Organize, synthesize, and evaluate information
- 3.15 Apply problem-solving skills to design projects
- 4.10 Apply study skills
- 4.11 Describe how ability, effort, and achievement are interrelated

THINKING SKILLS:

- identify, comprehend, investigate, analyze, appraise

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts 1.6
- Language Arts Literacy

53

DANCE 9-12: STANDARD 1.5

All students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATORS #8 & #10

Demonstrate knowledge of how artists and artistic works connect with political, social, cultural, and historical events. (#8)

Create works of art that communicate personal opinions, thoughts, and ideas. (#10)

ACTIVITY: MASTERWORKS IV

- Students view and compare/contrast, through discussion, masterworks from multiple dance genres. Suggestions include the following:

  - "Firebird" (Fokine); "Green Table" (Kurt Joos); "Appalachian Spring (Martha Graham); "Hard Nut" (Mark Morris); and "Moiseyev in Concert".

- Students select and research the socio-historical contexts of a genre and professional backgrounds of its significant choreographers using the media center and the Internet.

- Student(s) choreograph(s) a dance that demonstrates an evolving personal aesthetic and submit(s) a 100-word philosophical statement supporting it.

WORKPLACE READINESS SKILLS:
- 1.7   Describe the importance of academic (and occupational) skills
- 2.5   Access communication and information systems
- 3.4   Identify and access resources
- 3.5   Use library media center
- 3.8   Organize, synthesize, and evaluate information
- 3.11   Identify/evaluate alternative decisions
- 3.14   Evaluate solutions
- 4.2   Work cooperatively

THINKING SKILLS:
- compare/contrast, evaluate, analyze, compose, create, judge

LINKS TO OTHER STANDARDS & SUBJECTS:
- Music
- Language Arts Literacy
- Social Studies (History)

54

DANCE 9-12: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATOR #4

Identify, plan, and provide solutions to design problems of space, structures, objects, sound, and/or events in a public or private environment.

ACTIVITY: TWO & MORE

- Students explore various movement and design elements within the choreographic process by doing one or both of the following:
  - Choreographing a duet emphasizing partnering skills (unison, weight sharing, spatial and shape design).
  - Creating an ensemble work with emphasis on manipulating groups and forms of canon/repetition/unison/accumulation of movement and space.
- Finally, students practice, perform, and critique the choreographies.

WORKPLACE READINESS SKILLS:

- 3.1   Define problem/clarify decisions
- 3.6   Plan experiments
- 3.8   Organize, synthesize, and evaluate information
- 3.9   Identify patterns
- 3.14   Evaluate solutions
- 4.2   Work cooperatively

THINKING SKILLS:

- decide, create, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts 1.6
- Music

55

MUSIC

Music exalts the human spirit. To quote Aaron Copland, "So long as the human spirit thrives on this planet, music in some living form will accompany and sustain it to give expressive meaning." To the Greeks, the word "Quadrivium" defined the essence of education. The quad included math, geometry, music, and astronomy. Popular music influences children's thinking and behavior. Through exposure to various historical, cultural, and contemporary styles of music, students learn to hear, feel, and examine the thoughts and feelings of what others have communicated through their music and songs.

The making of music is a thoughtful practice involving formal and informal knowledge. It requires the development and practice of sensory skills, the manipulation and translation of complex symbol systems, and the understanding of the component parts and of the "whole" within the composition. The continuum and practice of thoughtful synthesis, expressiveness, dynamics, movement, flow, and timing are essential to success in music and virtually all aspects of a person's life.

The production of musical sound creates awareness of the shape, size, physics, and mechanical functioning of the instruments. Personal physical involvement and development of skills in breathing, voice projection, and intonation are intimate personal activities that most people give little notice to but which are essential skills.

The ensemble, the orchestra, the band, and the chorus are opportunities for mutual effort and success. The knowledge that the group's successful performance is reliant on the practice and perfection of each individual's contribution is an asset to the family, the school, and later in the workplace.

MUSIC K-4: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATOR #1

Demonstrate performance and participation skills by working and creating individually and with others.

ACTIVITY: LISTEN

- With their eyes closed, students concentrate on listening to the selection "Hoedown" from Aaron Copland's Rodeo. They visualize a "movie" in their mind's eye that the music suggests.
- Students then open their eyes and immediately draw or write a description of the visualizations the music suggested to them.
- They share their drawings or writings with the class, comment on what they particularly liked, and give reasons for their preferences.

WORKPLACE READINESS SKILLS:

- 3.10 Monitor own thinking
- 3.12 Interpret data
- 4.2   Work cooperatively

THINKING SKILLS:

- musical, synthesize, create, imagine

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts (Music) 1.2, 1.4
- Visual Arts
- Language Arts Literacy (Speaking, Listening)

58

MUSIC K-4: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATOR #1

Demonstrate performance and participation skills by working and creating individually and with others.

ACTIVITY: SOUNDS FOR MUSIC

- Students brainstorm sounds from nature, e.g., birds, rain, crunching autumn leaves, wind, animals, seashore waves, etc.

- Introduce Antonio Vivaldi's "The Four Seasons," explaining that composers often use natural sounds as a basis for their compositions. Students discuss the seasons and Vivaldi's use of specific instruments and types of instruments for natural sounds.

- Students improvise sounds that represent the seasons and perform for the class.

WORKPLACE READINESS SKILLS:

- 3.1   Define problem/clarify decisions
- 3.2   Use models and observations

THINKING SKILLS:

- musical, know, apply, analyze, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts (Music) 1.3, 1.4

MUSIC K-4: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

South Hunterdon High School, Spring 1998

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc., are the ingredients from which works of art are made.

PROGRESS INDICATOR #1

Apply elements and media common to the arts to produce a work of art.

ACTIVITY: UNDERSTANDING FORM

- Students sing a known song (e.g., 'Lil Liza Jane) and identify the phrase length through movement. They show understanding of phrase length by moving arms over their heads in an arch or across their bodies or walking the phrase. Discuss spacing for safety.

- Through their identification of the phrases, students recognize where to breathe. Utilizing this information, the class performs the song.

WORKPLACE READINESS SKILLS:

- 4.2   Work cooperatively
- 5.8   Discuss rules to promote safety and health

THINKING SKILLS:

- recall, apply, analyze

LINKS TO OTHER STANDARDS & SUBJECTS:

- Dance
- Mathematics

MUSIC K-4: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps students to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #1

Explain the criteria by which they evaluate the quality of their work and the work of others.

ACTIVITY: RHYTHM

- Students identify and pat the beat of a song, (e.g., "Follow the Yellow Brick Road" from The Wizard of Oz). Lead students to identify and clap the rhythm of the song and relate to the lyrics. Students identify and demonstrate (through body movement) the upward and downward pitch movement of the song.

- As a class or through cooperative groups, students analyze, discuss, and evaluate the use of beat, rhythm, and pitch in the song to decide why the composer may have used each of these elements in a particular way.

- Students listen to a recording of Leroy Anderson's "Syncopated Clock" and identify/discuss the use of beat, rhythm, and pitch.

WORKPLACE READINESS SKILLS:
- 3.9   Identify patterns
- 3.12   Interpret data
- 3.14   Evaluate solutions

THINKING SKILLS:
- musical, know, comprehend, synthesize, apply

LINKS TO OTHER STANDARDS & SUBJECTS:
- Arts (Music) 1.1, 1.3, 1.6

61

MUSIC K-4: STANDARD 1.5

All students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATOR #1

Investigate, experience, and participate in dance, music, theater, and visual arts activities representing various historical periods and world cultures.

ACTIVITY: MUSICAL DIFFERENCES

- Students listen to the music of different cultures they may be studying, e.g., Native American and Hawaiian. They identify differences in the instruments, sound, and purposes.
- This activity can be combined with Dance 1.5 to learn the different styles of movement and purposes/influences associated with the music and related art forms, such as:
  - invoking rain or good weather for crops; greeting someone; and storytelling.

WORKPLACE READINESS SKILLS:

THINKING SKILLS:

- identify, memorize/recall, reproduce, compare, differentiate

LINKS TO OTHER STANDARDS & SUBJECTS:

- Dance
- Social Studies

MUSIC K-4: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATOR #2

Plan and execute solutions to design problems.

ACTIVITY: UNIVERSAL INSTRUMENTS

- Students learn about the four types of "universal instruments:" string, woodwind, brass, and percussion. They view/listen to the various sounds. (Other students perform, if possible).
- Next, students create their own instruments, selecting one of the four types. (String or percussion can be easily constructed of found materials.) The students:
  - identify available materials;
  - create ideas on paper and identify/solve any problems;
  - construct the instrument; and
  - create sound from the instrument.
- Students form ensembles or class orchestra and perform.
- Discuss related careers.

WORKPLACE READINESS SKILLS:

- 1.2   Describe the importance of skills and attitudes
- 1.5   Identify transferable skills
- 2.1   Understand technological systems
- 3.2   Use models and observations
- 3.4   Identify and access resources
- 3.15   Apply problem-solving skills to design projects

THINKING SKILLS:

- label, create, translate, produce, differentiate, invent

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts (Music) 1.2, 1.3
- Visual Arts (2-D, 3-D)

63

MUSIC 5-8: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhance these abilities.

PROGRESS INDICATOR #3

Communicate about the aesthetic qualities of art works through oral and written analysis using appropriate technical and evaluative terms.

ACTIVITY: EXPRESSIVE ELEMENTS

- Students listen to an instrumental piece and then:
  - Identify and illustrate the musical elements of tone, color, melody, rhythm, harmony/texture, and form;
  - Describe how the mood or feeling was established by the composition of elements;
  - Describe the kind of dance movement the piece suggests; and,
  - If the piece were going to be used as background music in a play or film, students describe what they would imagine about the story or plot.

WORKPLACE READINESS SKILLS:
- 3.2   Use models and observations
- 3.4   Identify and access resources
- 3.7   Conduct systematic observations
- 3.8   Organize, synthesize, and evaluate information
- 3.10   Monitor own thinking
- 3.12   Interpret data

THINKING SKILLS:
- recall, apply, analyze, imagine

LINKS TO OTHER STANDARDS & SUBJECTS:
- Dance, Theater

MUSIC 5-8: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATOR #2

Demonstrate technical skills in dance, music, theater, or visual arts, appropriate to students' developmental level.

ACTIVITY: SCORING EXPRESSIVE ELEMENTS

- Remove all expressive markings (dynamics, phrasing, tempo, articulation, etc.) from a piece of printed music, leaving only the signature time and key signatures. The students play or sing the modified composition.

- Discuss the possible addition, notation, and interpretation of expressive markings. Once the students understand the notation and implications of expressive markings, they assign expressive elements to appropriate points in the score (a good small-group activity). Students perform the composition they notated.

- After receiving the composer's notated score, they discuss the composer's choices of expressive devices and then perform the original composition.

- Class evaluates each student-developed interpretation, comparing/contrasting it with the original printed score. The groups edit their work and perform it for the class.

  - Students edit a melody to reflect a specific style, e.g., madrigal, swing, or march.

  - They create an original composition using signs, symbols, terms, and pitch/rhythm notation. They create and perform it with expressive notation and interpretation.

  - Students use composition software to notate their own arrangement of existing scores.

  - Students discuss career possibilities open to the composer of music.

(continued from previous page)

South Hunterdon High School,
Spring 1998

WORKPLACE READINESS SKILLS:
- 1.3 Identify career interests
- 1.9 Identify job openings
- 2.8 Use technology and other tools to produce products
- 3.2 Use models and observations
- 3.8 Organize, synthesize, and evaluate information
- 4.2 Work cooperatively
- 4.3 Evaluate own actions and accomplishments
- 4.5 Provide constructive criticism

THINKING SKILLS:
- observe, decide, synthesize, interpret, problem solve, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:
- Arts 1.2, 1.3
- Language Arts Literacy

MUSIC 5-8: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc., are the ingredients from which works of art are made.

PROGRESS INDICATOR #2

Demonstrate appropriate use of technology, tools, terminology, techniques, and media in the creation of dance, music, theater, or visual arts.

ACTIVITY: SOUNDTRACK

- Students watch a videotape of a school-produced drama, with no music. Working in small groups, students choose appropriate music (not original) to go with the drama.
- Students discuss/resolve limitations for recording the music to correlate with the drama and then record the soundtrack.
- Students explain how the music affected the intent of the drama.

WORKPLACE READINESS SKILLS:

- 1.1 Demonstrate employability skills and work habits
- 1.8 Demonstrate occupational skills
- 2.1 Understand technological systems
- 2.7 Use technology and other tools to solve problems
- 2.8 Use technology and other tools to produce products
- 3.8 Organize, synthesize, and evaluate information
- 3.13 Select and apply solutions to problem solving and decision making
- 4.2 Work cooperatively

THINKING SKILLS:

- musical, create, imagine, apply, evaluate, risk-taking

LINKS TO OTHER STANDARDS & SUBJECTS:

- Theater
- Visual Arts
- Language Arts Literacy
- Other (depending on the dramatic content)

68

MUSIC 5-8: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps students to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #2

Offer constructive critique in the evaluation of their own and others' work in dance, music, theater, or visual arts.

ACTIVITY: REFINING CRITIQUE

- As a group, students identify and list appropriate elements used as criteria to judge live and recorded musical performances. They use the computer to design a rubric.

- Using the student-created rating sheet, the class critiques live and recorded performances of various genres. Students write a critique of two contrasting musical groups: e.g., classical music, chamber orchestra, and a rock/pop musical such as "Tommy." When critiquing each musical group, students discuss the following:
  - ◆ balance/blend; ensemble; technical precision; tone color; intonation; and stage presence.

- Critique each other's vocal and instrumental musical works based on the same rating sheet used for critiquing the professional performances. They share the criticisms.

- Students respond to the question, "Why is it important to analyze the artistic process?"

WORKPLACE READINESS SKILLS:
- 1.1 Demonstrate employability skills and work habits
- 1.5 Provide constructive criticism
- 2.8 Use technology and other tools to produce products
- 3.7 Conduct systematic observation
- 4.7 Describe roles people play
- 4.11 Describe how ability, effort, and achievement are interrelated

THINKING SKILLS:
- analyze, synthesize, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:
- Language Arts Literacy

69

MUSIC 5-8: STANDARD 1.5

All students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATORS
#5, #6, & #7

Identify significant artists and artistic works in dance, music, theater, and visual arts representing various historical periods, world cultures, and social and political influences. (#5)

Understand and demonstrate a knowledge of how various artists and cultural resources preserve our cultural heritage and influence contemporary arts. (#6)

Interpret the meaning(s) expressed in works of dance, music, theater, and visual arts. (#7)

ACTIVITY: MUSIC, LYRICS, AND SOCIETY

- In small groups, students choose lyrics from a current popular music song. They read and study the lyrics, then discuss how their meaning relates to the music and to society.

- Each group arrives at consensus and produces and presents an oral report on their song to the class using a music video or audio equipment. The class critiques the presentation and offers dissenting opinions regarding the lyrics' meanings.

- Consider using one video presentation without actually viewing it. Students discuss the lyrics, then view the visual portion and discuss how this may change the viewer/listener's perception of the meaning.

- Students write their own lyrics with original music they audiotape. They discuss the lyrics of the original songs as the lyrics relate to society and culture. They incorporate dance or visual arts to the original music and lyrics. The dance movement and/or art work will correspond to the music and lyrics.

WORKPLACE READINESS SKILLS:
- 2.9 Use technology to present designs (and results of investigations)
- 3.2 Use models and observations
- 3.3 Formulate (questions and) hypotheses
- 3.4 Identify and access resources
- 3.8 Organize, synthesize, and evaluate information
- 4.2 Work cooperatively
- 4.10 Apply study skills

(continued on next page)

THINKING SKILLS:

- musical, know, comprehend, synthesize, apply

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts (Music) 1.1, 1.2, 1.3, 1.4, 1.6
- Dance
- Visual Arts
- Language Arts Literacy
- Social Studies

Long Branch High School, pit band

71

MUSIC 5-8: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATOR #3

Identify and solve design problems in space, structures, objects, sound, and/or events for home and workplace.

ACTIVITY: DANCE TALKS

- Students become music program directors for a radio station: design, plan and evaluate music and other programming for a day's worth of listening including news, commercials, etc. The students work in small groups to:

  - Select a local radio station; identify and target the listening audience;

  - Prepare a list of songs, the artist or group, album, and style;

  - Evaluate/edit/revise choices for variety in groups and styles of music;

  - Diagram or outline the daily program, including talk segments, advertisements, newscasts, public service announcements, and talk call-in shows as appropriate to the selected stations;

  - Evaluate and revise the final program outline;

  - Present the final plans to the class and perform a segment.

WORKPLACE READINESS SKILLS:

- 1.1 Demonstrate employability skills (and work habits)
- 1.8 Demonstrate occupational skills
- 3.11 Identify/evaluate alternative decisions
- 3.14 Evaluate solutions
- 3.10 Monitor own thinking
- 4.5 Identify transferable skills
- 4.11 Describe how ability, effort, and achievement are interrelated

THINKING SKILLS:
- musical, identify, decide, evaluate, logic

LINKS TO OTHER STANDARDS & SUBJECTS:
- All Music standards
- Theater
- Language Arts Literacy
- Social Studies

Long Branch High School

MUSIC 9-12: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATOR #4

Demonstrate an understanding of different aesthetic philosophies through the evaluation and analysis of artistic styles, trends, and movements in an art form.

ACTIVITY: DISTINGUISH THE ELEMENTS

- Using recorded examples from various historical periods and musical genres, students analyze the artistic styles, trends, or movements by identifying and describing the distinguishing characteristics of the elements such as: rhythm, melody, pitch, timbre, dynamics, and structure. To assist the students, a teacher or class generated analysis sheet is prepared in advance.
- Compare/contrast similarities and differences in the elements and their aesthetic effects.
- Compare/contrast musical characteristics with the characteristics of another art form from the same or different genre or period.
- Relate musical characteristics to the major historical and/or social events of the time, as well as the society in which they were created.

WORKPLACE READINESS SKILLS:
- 3.1   Define problem/clarify decisions
- 3.7   Conduct systematic observations
- 3.11   Identify/evaluate alternative decisions
- 3.12   Interpret data

THINKING SKILLS:
- audial concentration, identify, analyze, musical, compare/contrast, decide

LINKS TO OTHER STANDARDS & SUBJECTS:
- Other Art Forms, Social Studies

75

MUSIC 9-12: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATOR #4

Demonstrate originality, technical skills, and artistic expression in the creation, production, and performance of dance, music, theater, or visual arts.

ACTIVITY: THE STUDENT CONDUCTS

- Select a composition that students are familiar with. In turn, each student conductor comes to the front of the group and conducts the ensemble using her/his own considered interpretation of such musical elements as dynamics, tempo, and phrasing. The student conductor evaluates pitch as well as rhythmic and melodic accuracy, and makes corrections and adjustments where and when appropriate. Encourage students to make considered interpretive decisions, using their teacher and classmates as possible resources, before they are scheduled to conduct. Encourage students to be flexible and experiment with other possibilities.

- Critique their interpretive choices and those of others, orally or in writing, in narrative form or through use of a cooperatively designed critique form.

WORKPLACE READINESS SKILLS:

- 3.1   Define problem/clarify decisions
- 3.7   Conduct systematic observations
- 3.11   Identify/evaluate alternative decisions
- 3.12   Interpret data
- 3.13   Select and apply solutions to problem solving and decision making
- 4.2   Work cooperatively
- 4.4   Describe constructive responses to criticism
- 4.10   Apply study skills

(continued on next page)
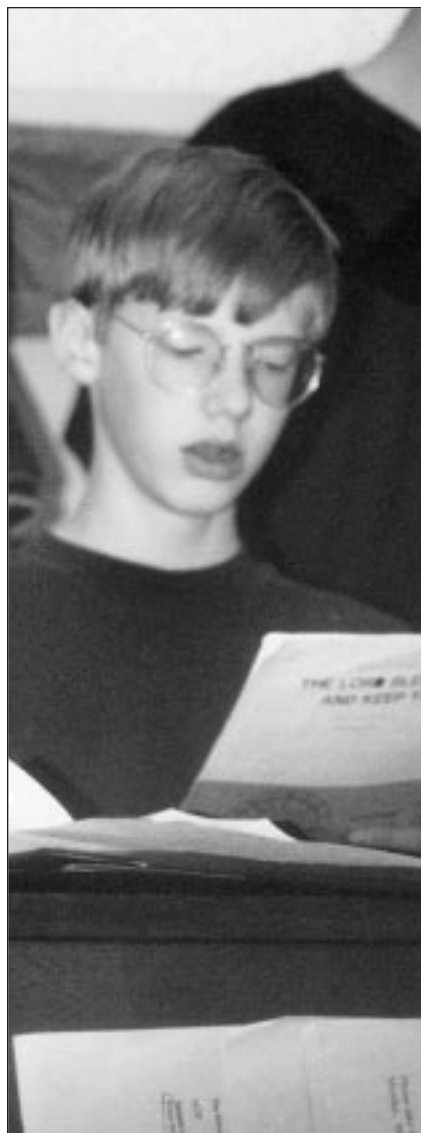
THINKING SKILLS:
- comprehend, translate, design, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:
- Other Art Forms
- Social Studies

South Hunterdon High School, Spring 1998

MUSIC 9-12: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc., are the ingredients from which works of art are made.

PROGRESS INDICATOR #3

Demonstrate an understanding of technology, methods, materials, and creative processes commonly used in dance, music, theater, or visual arts.

ACTIVITY: PRESENTATION PLAN

- Students develop a musical performance or multimedia presentation using original or existing music, visual arts, video, literature (poetry or narrative), and dance that revolve around a common theme or unifying concept.

- Students organize the materials across the artistic disciplines considering such elements as color, tone, color, line, form, rhythm, space, timing, tempo, mood, etc. Students combine materials to create a new work of art—a musical performance or multimedia presentation—that includes diverse areas of artistic endeavor. Related computer technology could include the development of Hypercard stacks, the use of graphic arts, desktop publishing software, and MIDI sequencing techniques.

- Encourage students to create and develop a sound "kaleidoscope" that includes environmental sounds, sounds of "found" and created instruments, as well as a broad palate of electronic and traditional vocal and instrumental sounds.

- If the activity is intended for public performance, include such extended activities as budget preparation, publicity, ticket sales, etc.

(continued on next page)

WORKPLACE READINESS SKILLS:
- 2.2   Select appropriate tools and technology
- 2.9   Use technology to present designs and results of investigations
- 3.1   Define problem/clarify decisions
- 3.4   Identify and access resources
- 3.8   Organize, synthesize, and evaluate information
- 3.11   Identify/evaluate alternative decisions
- 3.15   Apply problem-solving skills to design projects
- 4.1   Set short and long term goals
- 4.2   Work cooperatively

THINKING SKILLS:
- musical, synthesize, apply, imagine, logic

LINKS TO OTHER STANDARDS & SUBJECTS:
- Arts 1.2, 1.3
- Language Arts Literacy

MUSIC 5-8: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps students to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #3

Evaluate and interpret works of art orally and in writing, using appropriate terminology.

ACTIVITY: PROFESSIONAL CRITICISM

- Students read two current professional criticisms of the same artist or performance by two different critics. Students compare and contrast the criticisms. They identify personal attitudes or preferences present in these critiques.
- Students write a critique of the same artist/performance, isolating the criticism of the use of elements. In a later paragraph, students state their own attitude, opinion, and preferences related to the artist/performance.

WORKPLACE READINESS SKILLS:

- 4.3   Evaluate own actions and accomplishments
- 4.4   Describe constructive responses to criticism
- 4.5   Provide constructive criticism
- 4.11   Describe how ability, effort, and achievement interrelate

THINKING SKILLS:

- Analyze, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:

- Language Arts Literacy (Writing, Reading, Comprehension)

MUSIC 9-12: STANDARD 1.5

All students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATORS #8 & #9

Demonstrate knowledge of how artists and artistic works connect with political, social, cultural, and historical events. (#8)

Analyze and evaluate how various artists and cultural resources influence student work. (#9)

ACTIVITY: MUSIC PERIODS

- The students work in groups. Each group selects a period of art (e.g., Baroque, Impressionist, or Renaissance). Students research the styles of music that are related to the works of visual art (e.g., painting, sculpture, or architecture). Next, the students identify and obtain (or record) samples of the music and obtain reproductions of the art. Students identify the implications of technology, science, and history, in the music and the visual art.

- Using *Hypercard* or other presentation software, student groups create an audiovisual presentation based on the above research project and share it with the class.

WORKPLACE READINESS SKILLS:

- 1.1   Demonstrate employability skills and work habits
- 2.8   Use technology and other tools to produce products
- 4.2   Work cooperatively

THINKING SKILLS:

- know, apply, evaluate, create

LINKS TO OTHER STANDARDS & SUBJECTS:

- Visual Arts
- Arts 1.6
- Language Arts Literacy
- Social Studies (History)

MUSIC 9-12: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATOR #4

Identify, plan, and provide solutions to design problems in space, structures, objects, sound, and/or events in a public or private environment.

ACTIVITY: DESIGN A MUSICAL PROGRAM

- Students design a musical event from beginning to end. They plan thematic or eclectic program with a multimedia presentation: a celebration of an historical or cultural event; or to honor a person. They select the music, order of the program, the performers, rehearsal schedule, location of the concert, printed program content, target market, marketing program organization, balance of lighting, sound, recording/broadcasting, stage/performance area arrangement and management, student and equipment movement and management, etc.

- Suggested Musical Events

  CHAMBER MUSIC concert with performances by duos, trios, quartets, double quartets, etc. Small ensembles provide an opportunity for students to engage in musical decision-making with the teacher in the role of coach or mentor rather than director.

  COMMUNITY HIGHLIGHT concert is a performance with an extra-musical purpose that provides a focus for planning, music selection, location, etc.

  CONTEMPORARY MUSIC may use traditional presentations such as audience/ performance in the round; multimedia presentation on the walls or ceiling; use of recorded music with live music; use of props, live dance or drama.

  VIDEO PRESENTATION may be student designed, planned, and performed and may include commercials for the program that could be aired on the school's public announcement system, radio station, or community access channel.

(continued from previous page)

WORKPLACE READINESS SKILLS:

- 2.1 Understand technological systems
- 2.2 Select appropriate tools and technology
- 2.3 Access and use technology
- 2.5 Access communication and information systems
- 2.7 Use technology and other tools to solve problems
- 2.8 Use technology and other tools to produce products
- 3.8 Organize, synthesize, and evaluate information
- 3.15 Apply problem-solving skills to design projects
- 4.1 Set short and long term goals
- 4.2 Work cooperatively
- 4.5 Provide constructive criticism
- 4.9 Use time efficiently

THINKING SKILLS:

- observe, decide, synthesize, interpret, problem solve, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:

- Arts 1.2, 1.3
- Language Arts Literacy

Steven Lloyd and Danielle Drakes
Background: Suzanne Kriessler and Dylan Smith
Long Branch High School

THEATER

Child's play is rehearsal for "real life." The art of the play, *theater*, continues that rehearsal or preparation for adult roles. These roles are not only the ones that actors play; they include preparation for a variety of adult roles: the sound technician, the set designer, the producer, director, marketing agent, financial backers, and a cast of others. Play itself, as students' knowledge of theater expands, becomes *improvisation*, then *creative drama* and *social drama*. Rehearsal for real life is lifelong.

Children at play write their own scripts. Through study and participation in theater, they are exposed to how other children, adults, and those from other times, places, and societies have scripted their lives. They also observe the nature of adversity and how individuals overcome tragedy; the opportunities life offers or denies; and the humor in being human.

Skills very basic to many types of performances are developed through both the doing and viewing of theater such as:

- voice projection, intonation, and inflection;
- posture, poise, and body language;
- convincing and confident oral presentation;
- cooperation with a crew;
- technological potential;
- budget management;
- targeting the audience; and
- audience etiquette.

Possibly the most important knowledge students gain is how their individual performance impacts positively or negatively on the success of the group effort.

Theater works both sides of the brain. It is sequential and creative. Theater is a potential vehicle for teaching virtually all other subjects, along with incorporating all of the arts.

THEATER K-4: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATOR #1

Communicate their responses to dance, music, theater and visual arts with supporting statements based on aesthetics.

ACTIVITY: WHAT DO YOU LIKE? WHY?

- Prior to viewing a play or video, discuss the elements of a play or movie, such as: actors, props, setting, sound and lighting effects. Explain the reasons for appropriate audience etiquette. Have selected students observe specifically one artistic element while viewing (only one element so they can still follow the story.) For example, ask certain students to determine what sound effects are used or to note the music, weather or animal sounds. Other students could attend to the stage settings or the props. While viewing, each student should think about how his/her assigned element impacts the story.

- Students report on their assigned element. They discuss their reactions to the play (Did they like it or not?), giving reasons for their response.

WORKPLACE READINESS SKILLS:
- 3.1 Define problem/clarify decisions
- 3.7 Conduct systematic observations
- 3.12 Interpret data
- 4.2 Work cooperatively
- 4.5 Provide constructive criticism

THINKING SKILLS:
- Identify, recall, illustrate, classify, infer, decide, evaluate

LINKS TO OTHER STANDARDS & SUBJECTS:
- Arts 1.3, 1.4

THEATER K-4: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATOR #1

Demonstrate performance and participation skills by working and creating individually and with others.

ACTIVITY: DID YOU EVER NOTICE ABOUT MAX?

- The students act out an improvisatory prompt. In rotation, each student is given an improvisatory prompt; 'enters' and acts out the prompt (e.g., prepare breakfast, do homework, or put together a puzzle). The character is "Max."

- The other students complete a statement that begins with "Did you ever notice about Max…?" Each time a statement is made, it must refer to something that "Max" *does* (a mannerism, movement, gesture, manner of speaking, etc.).

- After three statements have been made about Max, the actor carries out the improvisatory prompt incorporating the statements made about Max. Through discussion, the rest of the class *(the audience)* evaluates whether or not these mannerisms are really reflective of Max.

WORKPLACE READINESS SKILLS:

- 3.1   Define problem/clarify decisions
- 3.13   Select and apply solutions to problem solving and decision making
- 3.14   Evaluate solutions
- 4.5   Provide constructive criticism
- 4.11   Describe how ability, effort, and achievement are interrelated

THINKING SKILLS:

- create

LINKS TO OTHER STANDARDS & SUBJECTS:

- Language Arts Literacy

87

THEATER K-4: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc., are the ingredients from which works of art are made.

PROGRESS INDICATOR #1

Apply elements and media common to the arts to produce a work of art.

ACTIVITY: WHAT ARE YOU DOING HERE?

- Using a prompt (e.g., "What are you doing here?" or "I knew you would come back"), the students work in small groups to brainstorm how to express these simple phrases in different ways if they are angry, happy, worried, sad, or suspicious. They practice varying attitude and emphasis, e.g., "I *knew* you would come back," or "I knew *you* would come back."

- Tape-record and then play back the students' efforts. We naturally alter the pitch, rhythm, loudness, and color of our voices to communicate emotion. How we change our voice on a certain word is called inflection. An actor uses these elements to communicate how a make-believe character feels.

- Students write or tell a short story showing how one of these inflections might be used to start a "plot." They explain where the story is taking place and who the characters are. They share the stories with the class.

WORKPLACE READINESS SKILLS:

- 3.2   Use models and observations
- 3.9   Identify patterns
- 3.14   Evaluate solutions
- 4.2   Work cooperatively

THINKING SKILLS:

- comprehend, analyze, synthesize, create

LINKS TO OTHER STANDARDS & SUBJECTS:

- Language Arts Literacy

THEATER K-4: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps students to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #1

Explain the criteria by which they evaluate the quality of their work and the work of others.

ACTIVITY: PRIMARY CRITIQUE

- Usually a young student's critique starts with "I like it (or don't like it) because …" The reasons given are personal preferences based on how the art work makes them feel. Students say what they like or don't like, but more importantly, why. Such statements are the beginning of analysis for critical appraisal.

- Students view a theater presentation, a video of their own presentation, or a video by other students. After viewing, they describe the plot or scenes, saying what they like and what they don't like-and explaining why. They list their reasons under two categories or headings: technical skill and use, and artistic presentation. As the lists grow, the students learn to name and evaluate other items under those categories for more sophisticated and positive criticism. Point out differences in what people notice. Emphasize audience etiquette as the behavioral basis for being able to critique a theater presentation.

- Students view a play, monologue, or a video and evaluate it using their growing list of criteria and their personal preferences. Sample critiques include the following:

  - "I like the red color. The red color was so bright it made me feel warm."
  - "The music was scary."
  - "The little boy was so brave, I liked him best."

(continued from previous page)

WORKPLACE READINESS SKILLS:
- 3.10 Monitor own thinking
- 4.5 Provide constructive criticism
- 4.6 Describe actions which demonstrate respect
- 4.11 Describe how ability, effort, and achievement are inter-related

THINKING SKILLS:
- analyze, express feelings, evaluate

"H.M.S. Pinafore"
Conerly Road Elementary School,
Franklin Township, Somerset, NJ

LINKS TO OTHER STANDARDS & SUBJECTS:
- Language Arts Literacy (Speaking)

91

THEATER K-4: STANDARD 1.5

All students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATOR #1

Investigate, experience, and participate in dance, music, theater, and visual arts activities representing various historical periods and world cultures.

ACTIVITY: DIFFERENT FACES AND PLACES

- Provide an historical/cultural background to the use of masks in a society, e.g., Eskimo, Indian, or African. Describe why and how masks were used in the ways and rituals of those who created them.

- Students design and construct masks and then create a skit in which they wear and use their masks in the same way as the native people did.

- Obtain an English translation of a fairy tale or children's story from the World Language teacher in the non-native language the children are learning. Students create and perform a skit based on the fairy tale or story, using some of the words or phrases from the non-native language.

Note: The World Language teacher can assist with the pronunciation of non-native words.

- Students videotape or audiotape and view/listen to the taped performance. Consider cultural background music.

(continued from previous page)

Suzanne Kriessler,
Lang Branch High School

WORKPLACE READINESS SKILLS:

- 3.13 Select and apply solutions to problem solving and decision making
- 4.2 Work cooperatively
- 4.7 Describe roles people play
- 4.10 Apply study skills
- 3.8 Organize, synthesize, and evaluate information
- 3.15 Apply problem-solving skills to design projects
- 2.7 Use technology and other tools to solve problems
- 2.9 Use technology to present designs and results of investigations

THINKING SKILLS:

- know, synthesize, apply

LINKS TO OTHER STANDARDS & SUBJECTS:

- Visual Arts
- Language Arts Literacy: (Speaking, Listening, Reading)
- World Languages

THEATER K-4: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATORS
#1 & #2

Identify and state needs and opportunities for design in the contexts of home, school, recreation, and play. (#1)

Plan and execute solutions to design problems. (#2)

ACTIVITY: SPACE AND HOW WE USE IT

- Students learn the basic design of the theater by visiting the school theater or auditorium. (If there is no school theater or auditorium, show visuals, diagrams, and/or photos of the various aspects of the theater.) Elicit discussion of the functions each of the following serves:
  - the lobby; the "house" or auditorium; the stage house; the trap room; the orchestra pit; the curtain; and lighting, etc.
- Using what they have learned, the students brainstorm how their classroom can be redesigned for classroom performances based on the functions the theater serves. Topics may include use of space, furniture, seating, etc. Students then execute the plausible and safe solutions.

WORKPLACE READINESS SKILLS:
- 2.10   Discuss problems related to technology
- 3.2   Use models and observations
- 3.4   Identify and access resources
- 3.11   Identify/evaluate alternative decisions
- 5.3   Demonstrate safe physical movement

THINKING SKILLS:
- observe, know, apply, create

LINKS TO OTHER STANDARDS & SUBJECTS:
- Visual Arts

94

THEATER 5-8: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATORS #2 & #3

Understand that arts elements, such as color, line, rhythm, space, form, may be combined selectively to elicit a specific aesthetic response. (#2)

Communicate about the aesthetic qualities of art works through oral and written analysis using appropriate technical and evaluative terms. (#3)

ACTIVITY: ANALYZING THE AESTHETIC ELEMENTS

- Orally or in writing, the students analyze the aspects of a play. They describe the following elements and evaluate their level of importance to the success of the play:
  - theme/plot; characters/setting; structure/form; movement/pace; conflict/resolution; and interpretation.
- Students do a Siskel and Ebert review of the play or write a review for the "arts and entertainment" section of a newspaper.
- Create a "telephone" monologue telling a friend about the play.
- Students write a synopsis of several reviews in which they state their agreement/disagreement with the issues.

WORKPLACE READINESS SKILLS:
- 1.1   Demonstrate employability skills and work habits
- 1.5   Identify transferable skills
- 1.8   Demonstrate occupational skills

THINKING SKILLS:
- analyze, compare/contrast, evaluate, summarize

LINKS TO OTHER STANDARDS & SUBJECTS:
- Language Arts Literacy (Speaking, Writing, Reading)

95

THEATER 5-8: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATOR #3

Create, produce, or perform works of dance, music, theater, or visual arts, individually and with others.

ACTIVITY: CREATE A CHARACTER

- Students select an object from a collection of natural objects (e.g., a smelly old onion, a sharply pointed chestnut casing, Queen Anne's Lace, a rose, or a seashell). They prepare a list of adjectives describing their object's qualities. Imagine that these adjectives described a person. What would their personality be like? What would be their age and gender? How would they dress, walk, and talk? What do they do?

  Students draw the character.

- Imagine their character was telling them about a significant event in their life. Students write down the conversation of what the character might tell them.

- Students become their character and have a dialogue with another student using voice characterization. Students tell each other their significant event stories (taking a minute each). The partners provide positive criticism to each other.

- Each student then performs his/her significant story as a monologue before the entire class. Afterward, the class assesses how the monologue relates to the written piece.

Gloucester County Institute of Technology

An historical theatrical production

WORKPLACE READINESS SKILLS:

- 3.7   Conduct systematic observations
- 3.8   Organize, synthesize, and evaluate information
- 3.9   Identify patterns
- 3.12   Interpret data
- 3.13   Select and apply solutions to problem solving and decision making
- 4.4   Describe constructive responses to criticism
- 4.5   Provide constructive criticism

THINKING SKILLS:

- knowledge, comprehension, transfer, decide, apply, evaluate, creative

LINKS TO OTHER STANDARDS & SUBJECTS:

- Language Arts Literacy (Speaking, Writing)
- Social Studies (Psychology)

97

THEATER 5-8: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc., are the ingredients from which works of art are made.

PROGRESS INDICATOR #2

Demonstrate appropriate use of technology, tools, terminology, techniques, and media in the creation of dance, music, theater, or visual arts.

ACTIVITY: CLAP IT

- Students memorize and use CLAP IT! Brainstorming, students select an act from a play for which they will design a stage set using the **C-L-A-P** method:
  - **C**ollect information
  - Look at your **L**imitations
  - Consider your **A**udience
  - Develop a **P**lan
- Students **collect information** about what items must be on stage (i.e., items mentioned in the text or discovered through researching the historical period).
- Brainstorm what their **limitations** are: size of space, time deadline, budget, materials, etc.
- Determine what they want the **audience** to know about the play through the set design.
- Singly or in small groups, students **plan** a set design for the chosen act.

WORKPLACE READINESS SKILLS:

- 3.4   Identify and access resources
- 3.7   Conduct systematic observations
- 3.8   Organize, synthesize, and evaluate information
- 3.12 Interpret data
- 3.15 Apply problem-solving skills to design problems
- 4.2   Work cooperatively

THINKING SKILLS:

- comprehension, application, analysis, synthesis, evaluation

LINKS TO OTHER STANDARDS & SUBJECTS:

- Visual Arts, Mathematics

98

THEATER 5-8: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps student to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #2

Offer constructive critique in the evaluation of their own and others' work in dance, music, theater, or visual arts.

ACTIVITY: INTERMEDIATE CRITIQUE

- Students offer *useful* criticism in both written and oral form of their own work, the work of other students, and works of theater with which they come in contact. To produce useful criticism that has value to the listener, students do the following:

- Avoid value based upon familiarity and leave personal preference behind. Define the playwright's intent.

- Evaluate the use of theater elements in support of the intent, what worked, and what did not.

- Recommend changes that will lead to improvement (*constructive criticism*).

- Students enter their style preferences in a journal, poem, essay, etc., to assist in development of a personal style.

WORKPLACE READINESS SKILLS:
- 3.2   Use models and observations
- 3.7   Conduct systematic observations
- 3.11   Identify/evaluate alternative decisions
- 4.3   Evaluate own actions and accomplishments

THINKING SKILLS:
- observe, analyze, evaluate, decide

LINKS TO OTHER STANDARDS & SUBJECTS:
- An analysis/criticism of a theater piece may involve any subject area and any of the arts disciplines depending on the presentation.

99

THEATER 5-8: STANDARD 1.5

All students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATORS
#5, #6, & #7

Identify significant artists and artistic works in dance, music, theater, and visual arts representing various historical periods, world cultures, and social and political influences. (#5)

Understand and demonstrate a knowledge of how various artists and cultural resources preserve our cultural heritage and influence contemporary arts. (#6)

Interpret the meaning(s) expressed in works of dance, music, theater, and visual arts. (#7)

ACTIVITY: PLAY FROM THE INSIDE-OUT

- Students choose a significant speech dealing with an important social or historical event. If possible, they view a film/movie of the speech presentation and/or the speaker.

- Research the historical period through media centers, libraries, cultural/historical museums, other community resources, or the Internet. Then select props appropriate to the historical period, including photos, painting reproductions, and political cartoons.

- Students memorize their speech and perform it as a monologue (acting the role of the speaker).

- Students produce a video on a selected socially or historically important speaker/speech. Working in groups, they develop the script. To create background to enhance the video, they research and compile a "catalog" of photo reprints, pictures, and newspaper articles of the area, the era, and its fashion; props; and music. Advise them to identify and give credit to the artists whose works are used.

WORKPLACE READINESS SKILLS:
- 2.1 Understand technological systems
- 2.7 Use technology and other tools to solve problems
- 3.2 Use models and observations
- 3.4 Identify and access resources
- 3.5 Use library media center
- 3.13 Select and apply solutions to problem solving and decision making

THINKING SKILLS:
- comprehend, apply, analyze, synthesize, create

LINKS TO OTHER STANDARDS & SUBJECTS:
- Visual Arts, Language Arts Literacy, Social Studies (History)

THEATER 5-8: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATOR #3

Identify and solve design problems in space, structures, objects, sound, and/or events for home and workplace.

ACTIVITY: RADIO STATION

- Students work in small groups to create a 30-minute radio program on tape. They combine musical selections, public service announcements, and commercials with the connecting narrative. They consider air time (time of day) and target audience. After familiarizing themselves with this activity, students create a workspace in the school conducive to successful achievement.

- At this stage of their development, students need to emulate work skills and habits that will be necessary in the workplace.

WORKPLACE READINESS SKILLS:

- 1.8 Demonstrate occupational skills
- 2.1 Understand technological systems
- 2.8 Use technology and other tools to produce products
- 3.5 Use library media center

THINKING SKILLS:

- apply, synthesize, create

LINKS TO OTHER STANDARDS & SUBJECTS:

- Music
- Language Arts Literacy
- Social Studies

THEATER 9-12: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATOR #4

Demonstrate an understanding of different aesthetic philosophies through the evaluation and analysis of artistic styles, trends, and movements in an art form.

ACTIVITY: AESTHETICALLY DIFFERENT

- Identify and compare two plays, or two versions of the same play, e.g. compare a Greek play to Shakespeare or a 21st century piece, or Shakespeare's "Romeo and Juliet" with West Side Story." Alternately, students identify two versions of the same play that exhibit differing philosophies.
- Analyze and compare the two plays viewed as to speech, pace, settings, time, use of color, shape/form lighting, sound effects, costumes, mood, etc.
- Students categorize these observations into similarities and differences. After drawing conclusions, the students present their analysis orally or in writing.

WORKPLACE READINESS SKILLS:
- 3.1   Define problem/clarify decisions
- 3.7   Conduct systematic observations
- 3.8   Organize, synthesize, and evaluate information
- 3.12 Interpret data

THINKING SKILLS:
- know, comprehend, compare/contrast, analyze, evaluate, conclude

LINKS TO OTHER STANDARDS & SUBJECTS:
- Music (Sound)
- Visual Arts
- Language Arts Literacy (Speaking)

102

THEATER 9-12: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATOR #4

Demonstrate originality, technical skills, and artistic expression in the creation, production, and performance of dance, music, theater, or visual arts.

ACTIVITY: READING VISUAL PROMPTS

- Students do background research on a well-known, contemporary, prominent person through biographies, newspaper articles, television clips, etc. They study the person's:
  - **Body:** Posture, movement, rhythms, pace, gestures, poise;
  - **Face:** Expression, use of facial features/gestures, tilt of head, etc.; and
  - **Voice:** Pitch, dynamics, pace (the music of the voice as well as the words).
- Each student writes a synopsis of the elements an actor would use to characterize the celebrity and then writes a brief monologue appropriate to that individual, using quotes from him or her (if possible). Students rehearse with partners in actor/coach roles.
- Each student performs his/her monologue for the class, using as many props as possible that identify with the character. (If appropriate, a student may pair with a compatible character for a dialogue.) The class attempts to identify each prominent individual.

WORKPLACE READINESS SKILLS:
- 2.5   Access communication and information systems
- 2.6   Access information
- 3.1   Define problem/ clarify decisions
- 3.4   Identify and access resources
- 4.2   Work cooperatively

THINKING SKILLS:
- identify, memorize, recall, create, demonstrate, compose

LINKS TO OTHER STANDARDS & SUBJECTS:
- Language Arts Literacy (Speaking, Writing, Reading)
- Social Studies (Psychology)

THEATER 9-12: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc., are the ingredients from which works of art are made.

PROGRESS INDICATOR #3

Demonstrate an understanding of technology, methods, materials, and creative processes commonly used in dance, music, theater, or visual arts.

ACTIVITY: THE PRODUCTION

- Working in teams of five or six, students write a scene that subtly utilizes issues in a current news event. First, they determine the time, place, etc., for their scene and utilize appropriate tools, arts elements, and media to give force to the scene. Students use technological tools such as the computer to draft the script or to design lighting, music, sound effects, visual effects, costumes, props, etc.

- Each group will design and publish their own "organizational chart" and "program" outlining their individual (or multiple) role(s) within the group: director, actor(s), technicians, etc.

- As each group performs, the rest of the class (the audience) evaluates the production. Using predetermined criteria regarding content and technical and artistic efforts, the audience also rates each participant's contribution and makes positive recommendations for improvement.

- Students rate and record in their resume, in order of importance, the transferability of the skills applicable to future work requirements in their selected fields of interest. They write an appraisal of the efforts of their group: how they allocated and used their time and talents.

Theatrical production at
Gloucester County Institute of Technology

WORKPLACE READINESS SKILLS:
- 1.1 Demonstrate employability skills and work habits
- 1.3 Identify career interests
- 1.10 Prepare a resume and complete job applications
- 2.1 Understand technological systems
- 2.8 Use technology and other tools to produce products
- 3.1 Define problem/clarify decisions
- 3.14 Evaluate solutions
- 4.2 Work cooperatively
- 5.4 Demonstrate safe use of equipment or tools

THINKING SKILLS:
- flexibility, elaborate, imagine, problem-solve, opine

LINKS TO OTHER STANDARDS & SUBJECTS:
- Music
- Visual Arts
- Language Arts Literacy (Speaking, Writing, Reading)
- Social Studies
- Others (depending on the topic selected)

THEATER 9-12: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps students to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #3

Evaluate and interpret works of art orally and in writing, using appropriate terminology.

ACTIVITY: ADVANCED CRITIQUE

- Students summarize, compare, and contrast at least two theater works from either two different artistic styles/genres or two different social or historical eras. They include commentary on how they would change an aspect of the theatrical works.

- The students brainstorm examples of how they will transfer this process of critique to the workplace in various careers. The ability to evaluate the work of others and to objectively assess one's own ideas is important to later success in the workplace. All places of business strive to do better or they will fail in the marketplace. Theater organizations are no different. Those who can improve upon the operations of the business and their part in it become valued employees.

WORKPLACE READINESS SKILLS:

- 1.1   Demonstrate employability skills and work habits
- 1.2   Describe the importance of skills and attitudes
- 1.5   Identify transferable skills
- 1.7   Describe the importance of academic and occupational skills
- 1.8   Demonstrate occupational skills
- 3.1   Define problem/clarify decisions
- 3.8   Organize, synthesize, and evaluate information
- 3.15   Apply problem-solving skills to design projects
- 4.5   Provide constructive criticism

THINKING SKILLS:

- Comprehension, application, analysis, synthesis, evaluation

LINKS TO OTHER STANDARDS & SUBJECTS:

- Language Arts Literacy

THEATER 9-12: STANDARD 1.5

All students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATORS
#8, #9, & #10

Demonstrate knowledge of how artists and artistic works connect with political, social, cultural, and historical events. (#8)

Analyze and evaluate how various artists and cultural resources influence student work. (#9)

Create works of art that communicate personal opinions, thoughts, and ideas. (#10)

ACTIVITY: UNIVERSAL THEMES

- Identify an artist or a theatrical work that connects with a political, social, cultural, or historical event/issue. Examples include the following: scientific discoveries or inventions and their social impact; the women's movement; and two people of diverse cultures meeting. Analyze and state the artist's or work's viewpoint regarding the event/issue and then present their analysis orally or in written form.
- Using a word-processing system, students write a scene that communicates their personal opinion or ideas concerning an event/issue that they feel strongly about. These opinions may be subtly or strongly expressed in the scene. Instruct the students to number the lines and pages for easier referencing. Remind them that a first draft is seldom accepted and rewrites may be necessary.
- Write a brief statement concerning how another playwright, research, critique of your work may have influenced the way the scene was written.
- Students perform their edited version of the scene for the class.

WORKPLACE READINESS SKILLS:
- 2.8   Use technology and other tools to produce products
- 3.4   Identify and access resources
- 3.5   Use library media center
- 3.11   Identify/evaluate alternative decisions
- 4.2   Work cooperatively
- 4.4   Describe constructive responses to criticism

THINKING SKILLS:
- identify, decide, evaluate, analyze, create, express, risk-taking

LINKS TO OTHER STANDARDS & SUBJECTS:
- Language Arts Literacy (Speaking, Writing, Reading)
- Social Studies (History)

107

THEATER 9-12 STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATOR #4

Identify, plan, and provide solutions to design problems of space, structures, objects, sound, and/or events in a public or private environment.

ACTIVITY: TOTAL DESIGN

- Students choose a play production currently done at a chosen grade level.

- They identify all the design tasks associated with this production (e.g., playbill, sets, costumes, and lights). They create and submit resumes to apply for design functions such as the following:

  - Director
  - Designers
  - Crew
  - Public Relations
  - Dressers
  - Managers
  - Makeup
  - Performers

- Several experienced theater students review the computer-generated resumes/portfolios and "hire" for these functions and audition for roles. All students will be given a role based on abilities specified in the resume and experience.

- Members of this company work cooperatively to produce the play. They observe all safety precautions.

(continued from previous page)

Gloucester County Institute of Technology

An historical theatrical production

WORKPLACE READINESS SKILLS:
- 1.1   Demonstrate employability skills and work habits
- 1.7   Describe the importance of academic and occupational skills
- 2.2   Select appropriate tools and technology
- 2.3   Access and use technology
- 2.7   Use technology and other tools to solve problems
- 2.9   Use technology to present designs and results of investigations
- 3.1   Define problem/clarify decisions
- 4.1   Set short and long term goals
- 4.2   Work cooperatively
- 4.7   Describe roles people play
- 4.9   Use time efficiently
- 5.1-5.9 All safety standards: prevention, movement, equipment, devices, hazards procedures, rules, first aid

THINKING SKILLS:
- comprehend, analyze, apply, synthesize

LINKS TO OTHER STANDARDS & SUBJECTS:
- Visual Arts
- Mathematics
- Science
- Technology

109

HOW DOES AN ARTIST WORK?

ARTISTS OFTEN BEGIN A WORK WITHOUT KNOWING HOW IT WILL END. THEIR IDEAS DEVELOP AS THEY WORK. SOMETIMES A CHANCE ENCOUNTER WITH STONES OR DRIFTWOOD ON A BEACH, OR A CLOUD FORMATION MAY GIVE THE ARTIST AN IDEA FOR A NEW WORK. THE RANDOM SCRIBBLED LINES ON A PIECE OF PAPER DEVELOP INTO A DRAWING. ART IS AN IMPORTANT PART OF OUR TOTAL EDUCATION!

Newton State School, Newark, NJ

Keason Johnson

VISUAL ARTS

Vision and Visionaries wanted! There has been a major shift in the world from a preponderance of print to visual communication: television, web sites, video, teleconferencing, etc. The American public that used to see an occasional movie at the local theater has nightly television viewing in the home. Whole industries have grown up with the shift to more visual communication. We came into this world as visual thinkers—thinking in pictures or images. Our dreams are just another mode of visual thinking. Visualization is our primary means for processing thought. Electronic visual processing has the capability of creating what is called "virtual reality," which must be distinguished from the real. This is an increasingly visually oriented world calling for a workforce of visually educated, dimensional thinkers in nonart as well as art careers. Businesses rely heavily on visual communication: logos, advertising, packaging, product design, etc. Visual cognitive myopia is no longer an option. There is a necessary focus on the students' use of metacognition and the higher-order thinking skills to know, understand, and use their full brain/mind potential. Performance in any area of life is strengthened through visual acuity and visualization techniques. Visual practice is used in business the same as Olympic athletes use it to improve performance.

Accept the technological challenge! There are few tasks that are not done by some form of technology. We can prepare the students for personal living and the workplace of today only by relying on technology to access the enormous amount of information available and accessible—*if we know how*. We can only envision the workplace 10, 20, 30 years from now. The transmittal of knowledge is no longer an adequate education. Students must learn to use and understand technology in a variety of personal and professional situations. Visual arts educators must provide exposure to technology and its possibilities. Changing technology has historically imprinted the visual arts as new materials and techniques become possible—new media, new tools, new architectural designs (from thatched roofs and primitive brick-making to molded steel and glass structures).

Maple Avenue School, Newark, NJ

Alexander DeJoie

The Crosswalk

VISUAL ARTS

(continued)

'See' what we mean. Learning cannot take place in a vacuum. Students need to "see" that art is pervasive in the lives of everyone. There is a new requirement in arts education for children: learning about design and how it impacts our lives. New products can be invented; and old items and processes (including our cities and towns) improved functionally or aesthetically. Interdisciplinary experiences in the arts provide linkages to learning in context. Incorporating linkages into the students' fine art and design experiences will enable students to understand why art is practiced in any era, in any place on the globe and what thought processes, ideas, philosophies, and messages it sends. For more help on the design standard, see Chapter 4, which follows the visual arts activities. While mentioned last, it is probably foremost in importance that students learn to express themselves in as many ways as possible—to learn what they think, see who they are, and envision what they would like to be.

Chancellor Avenue Annex, Newark Public Schools, Newark, NJ

Amir Saunders

113

VISUAL ARTS K-4: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATOR #1

Communicate their responses to dance, music, theater and visual arts with supporting statements based on aesthetics.

ACTIVITY: ART SUPERLATIVES

- Display a variety of works of art. Consider that art can be beautiful, expressive, functional, etc.
- Working in small groups, students discuss each artwork, comparing it to the criteria listed below. Provide each group with a set of "awards ribbons" labeled as follows:
  - Most Beautiful;
  - Most Useful;
  - Most Realistic;
  - Most Original;
  - Most Expressive;
  - Best Composition;
  - Took the Longest to Make; and
  - Imitates Nature.
- Each group decides which artwork gets which award. Each group member is responsible for taping the appropriate award next to an artwork and giving a supporting reason for that award. Disparity in choices can be further evaluated but need not be resolved.

Permission to use the above activity granted by Professors Eldon Katter and Mary Erickson, Kutztown University, Kutztown, PA.

Montclair State University,

Spring 1998

WORKPLACE READINESS SKILLS:
- 3.1 Define problem/clarify decisions
- 3.3 Formulate questions and hypotheses
- 3.8 Organize, synthesize, and evaluate information
- 3.10 Monitor own thinking
- 3.14 Evaluate solutions
- 4.2 Work cooperatively

THINKING SKILLS:
- analyze, decide, recommend

LINKS TO OTHER STANDARDS & SUBJECTS:
- Language Arts Literacy (Speaking)

By permission of
Eldon Katter/Mary Erickson, professors
Kutztown University, Kutztown, PA

VISUAL ARTS K-4: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATOR #1

Demonstrate performance and participation skills by working and creating individually and with others.

ACTIVITY: A DAY AT THE BEACH

- Students listen to selections of Impressionist music (e.g., Debussy, Holst, Grite, Grieg) and observe works of Impressionist artists (e.g., Van Gogh or Monet).

- Demonstrate dexterity and rhythm through a variety of movements and brush strokes with a large brush. Allow student practice time. Then, on a large sheet of paper the size of a beach towel, students paint in the colors and movements the music suggests to them. Students may fringe the edge of the paper to create a "beach towel" effect.

- Distribute a second large sheet of paper, which students will use to create a cutout of a human figure. Working in pairs, students trace their own bodies on this paper as if lying on a beach towel. Students first observe details of shape, clothing, facial features, hair shape, etc., then execute with colored media. (Suggested motivator: read aloud the book Tar Beach by Faith Ringgold.) Allow creativity of added items, e.g., jewelry, a pair of flip-flops on the towel, a bottle of sun block, or beach ball.

- Students work with the teacher to plan and arrange an exhibition of the class's results. (This activity may be combined with the "Go Fish" visual arts activity suggested for Standard 1.3.) Invite students to bring in items to add to the exhibition, such as beach umbrellas or a real beach ball.

Montclair State University,

Spring 1998

WORKPLACE READINESS SKILLS:

- 1.8   Demonstrate occupational skills
- 4.2   Work cooperatively

THINKING SKILLS:

- translate, apply, create, plan, synthesize

LINKS TO OTHER STANDARDS & SUBJECTS:

- Music
- Language Arts Literacy
- Science (physical proportions)

VISUAL ARTS K-4: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc., are the ingredients from which works of art are made.

PROGRESS INDICATOR #1

Apply elements and media common to the arts to produce a work of art.

ACTIVITY: GO FISH!

■ Students select the type of fish they want to create and its size: large, medium, or small. They create the outline on paper by drawing it by hand or using computer software. This activity may be tied to a science lesson.

■ They design the fish using hot, warm, cool, or cold color combinations and lines, patterns, and shapes. Media preferences might be iridescent, glow colors, or wax resist. Students discuss reasons for their choices. See the work of Paul Klee.

■ The class, using the elements of composition, designs an underwater environment (including schools of fish, shells, etc.) Combine with the exhibition of the Standard 1.2 visual arts activity entitled "A Day at the Beach."

■ Using a computer, students create an invitation announcing the exhibition to send to guests. Decide who should receive the invitations. Host an "Opening".

WORKPLACE READINESS SKILLS:
■ 2.7 Use technology and other tools to solve problems
■ 2.8 Use technology and other tools to produce products
■ 3.2 Use models and observations
■ 3.8 Organize, synthesize, and evaluate information
■ 3.15 Apply problem-solving skills to design projects
■ 4.2 Work cooperatively
■ 4.10 Apply study skills

THINKING SKILLS:
■ observe, decide, research

LINKS TO OTHER STANDARDS & SUBJECTS:
■ Science, Language Arts Literacy

VISUAL ARTS K-4: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps students to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #1

Explain the criteria by which they evaluate the quality of their work and the work of others.

ACTIVITY: CREATE A GALLERY

- Each student chooses a work from a selection of reproductions/photos or student artwork of various media. The students categorize the works as landscape, seascape, portrait, abstraction, etc., and arrange them in their classroom "gallery."

- The class holds an auction. Using play money, the students bid and "purchase" one of the artworks. Following the auction, the students discuss why they liked their particular purchase and how much they "paid."

- Students explore the various career functions of selecting, collecting, exhibiting, and being a gallery owner, docent, etc.

WORKPLACE READINESS SKILLS:
- 1.12 Demonstrate consumer and other financial skills
- 3.8 Organize, synthesize, and evaluate information
- 3.9 Identify patterns
- 3.10 Monitor own thinking
- 3.12 Interpret data
- 4.4 Describe constructive responses to criticism
- 4.5 Provide constructive criticism
- 4.11 Describe how ability, effort, and achievement are interrelated

THINKING SKILLS:
- analyze, decide, recommend

LINKS TO OTHER STANDARDS & SUBJECTS:
- Language Arts Literacy (Speaking)
- Mathematics

VISUAL ARTS K-4: STANDARD 1.5

Students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATOR

#1 & #4

Investigate, experience, and participate in dance, music, theater, and visual arts activities representing various historical periods and world cultures. (#1)

Use their senses, imagination, and memory to express ideas and feelings in dance, music, theater, and visual arts. (#4)

ACTIVITY: MASKS AND PUPPETS

- Students investigate the influences in the life of the Eskimo: cold weather, snow, scarcity of vegetation, reliance on animals for food/warmth, limited resources, respect for the environment. They also view photos, etc., of the daily life of Eskimos (also referred to as the Innuit).
- Display reproductions of Eskimo masks that have movable parts. Discuss why/how they were made and the nature (and scarcity) of the materials available for their artistic efforts.
- Students brainstorm ideas for 3-minute puppet shows based on Eskimo life. They create cardboard-and-stick puppets of Eskimo families with movable appendages. Discuss with them the materials they have to work with. Brainstorm ideas on how to replicate the faces, parkas, mukluks, and other features (e.g., using copy machines, enlargers, tracings, drawings, or collage).
- Create and perform 3-minute skits. Support the skits with Eskimo music.

WORKPLACE READINESS SKILLS:

- 2.7   Use technology and other tools to solve problems
- 2.8   Use technology and other tools to produce products
- 3.2   Use models and observations
- 3.8   Organize, synthesize, and evaluate information
- 3.15 Apply problem-solving skills to design projects
- 4.10 Apply study skills
- 4.2   Work cooperatively

THINKING SKILLS:

- know, apply, create, decide

LINKS TO OTHER STANDARDS & SUBJECTS:

- Language Arts Literacy
- Science
- Social Studies (geography)

120

VISUAL ARTS K-4: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATOR #2

Plan and execute solutions to design problems.

ACTIVITY: BOX CARS

- Students will design a vehicle. Consider the varied uses of vehicles, such as automobiles, boats (all kinds), buses, planes, trains, trucks, futuristic vehicles, etc. They also discuss bumper cars, all-terrain vehicles, rafts, hot-air balloons, etc. Bring in model or toy vehicles to display. Students learn that "Form follows function" so they must decide:
  - What will their vehicle be used for?
  - Who and how many will use it? How old are they?
  - What does the vehicle need?
  - What will make it safe? (Develop through discussion.)
  - How will the exterior be designed?
- Students select from a variety of boxes, such as shoe boxes, cereal boxes, egg cartons, and appliance cartons (for group project). They also select from various media.

WORKPLACE READINESS SKILLS:
- 3.1 Define problem/clarify decisions
- 3.8 Organize, synthesize, and evaluate information
- 3.12 Interpret data
- 3.15 Apply problem-solving skills to design projects
- 5.1 Explain injury prevention
- 5.6, 5.7, 5.8 Identify common hazards, safety procedures, and rules

THINKING SKILLS:
- observe, decide, problem-solve, define, create

LINKS TO OTHER STANDARDS & SUBJECTS:
- Science

121

Brunswick Acres School,
Kendall Park

VISUAL ARTS 5-8: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATORS
#2 & #3

Understand that arts elements, such as color, line, rhythm, space, form, may be combined selectively to elicit a specific aesthetic response. (#2)

Communicate about the aesthetic qualities of art works through oral and written analysis using appropriate technical and evaluative terms. (#3)

ACTIVITY: ARTS ELEMENTS

- Students analyze the elements of art in two and three-dimensional art forms including their own work and the works of other students/artists.

- Orally or in writing, compare and contrast the varied use and results obtained by arts elements in two disparate art works. They consider different artists or styles of art for comparison. They describe how the elements are used to support the artist's intent or the specific effect achieved. They consider realistic, abstract, and/or nonrepresentational art forms.

WORKPLACE READINESS SKILLS:
- 3.1 Define problem/clarify decisions
- 3.2 Use models and observations
- 3.12 Interpret data
- 3.7 Conduct systematic observations
- 4.3 Evaluate accomplishments

THINKING SKILLS:
- decide, recommend

LINKS TO OTHER STANDARDS & SUBJECTS:
- Language Arts Literacy (speaking)

123

VISUAL ARTS 5-8: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATORS
#2 & #3

Demonstrate technical skills in dance, music, theater, or visual arts, appropriate to students' developmental level. (#2)

Create, produce, or perform works of dance, music, theater, or visual arts, individually and with others. (#3)

ACTIVITY: CHIAROSCURO

- Students observe works by Caravaggio, de Chirico, Rembrandt, Vermeer, Raphael, and Velazquez, with attention to rendering of form and light/dark areas. Use a student-model and a collection of props, e.g. hats, glasses, cloak etc. to create interest in the pose. The students render the subject in at least three tones, black to white utilizing black or gray paper and/or white/black/gray chalk, or pastels. Darken the room or use a dark area of the school such as the stage. Add lighting to create highlights.

- The students bring a white object to school; e.g., a flower, a shell, a white china cup, fabric, a white onion, etc., that can be added to a class-created still life. Encourage creative selection. Begin with one student who places the first object on a white surface, cloth or paper. One at a time, the students proceed to add their object, perhaps rearranging the others until all have placed their contribution to the still life. Develop through discussion, the differences in the whiteness of the objects. Some will be dove gray, pure white, ivory, off-white, etc. Determine if any part of the still life should be rearranged for balance, positive/negative, etc.

- Students will render the tones of the still life or a portion of it using white, light gray or off-white paper. Compare the drawings for three-dimensionality, space, form, and color as well as the angle of the student's perception.

WORKPLACE READINESS SKILLS:
- 3.2   Use models and observations
- 3.7   Conduct systematic observations
- 3.8   Organize, synthesize, and evaluate information
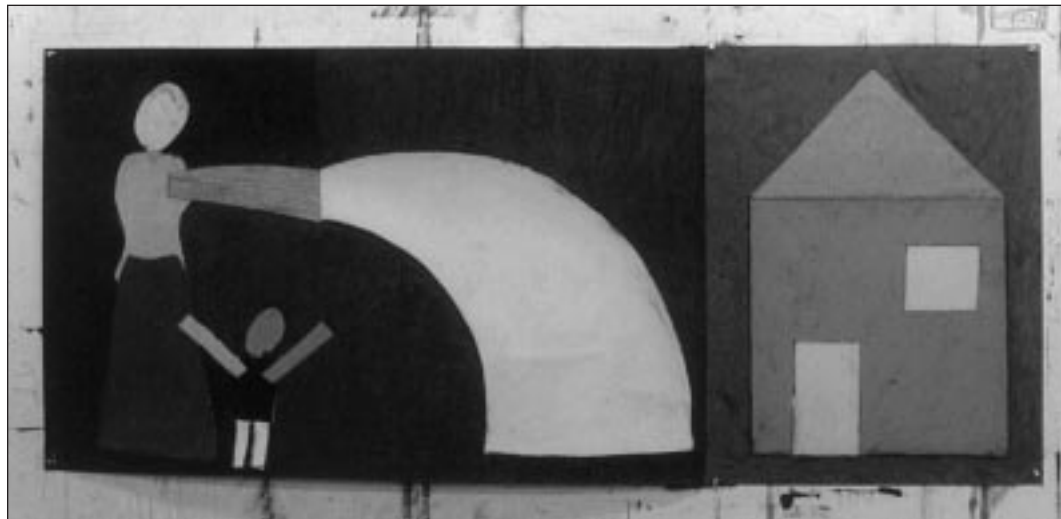- 4.5   Provide constructive criticism

THINKING SKILLS:
- observe, perceive, transfer, select

LINKS TO OTHER STANDARDS & SUBJECTS:
- Science (effects of light on color)

Montclair State University, Spring 1998

VISUAL ARTS 5-8: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc. are the ingredients from which works of art are made.

PROGRESS INDICATOR #1

Demonstrate appropriate use of technology, tools, terminology, techniques and media in the creation of dance, music, theater, and visual arts.

ACTIVITY: FOOD FOR THOUGHT

- Food is often the inspiration for artistic effort. Presentation of "haute cuisine" is a commercial aspect of art akin to sculpture with color. Some contemporary artists have used sculpture to represent plain or fast food; others have provided comic relief with food as subject (a la Claes Oldenberg's work)—what one might call the "blue plate specials."

- Using technology and media, the students research a selected "food" theme as a subject for representation in clay. The assemblage of forms requires a wide variety of skills in hand building techniques and use of tools. The plate or platter can be wheel thrown. Alternately, another medium or process can be used for plates. For a successful product, timing and security of the work in progress must be self-monitored. Use glazes or mix paints to replicate the food colors on the kiln-fired clay.

- Alternatively, students try "wacky sandwiches" filled with unexpected items such as a frog, flowers, or pencils.

- The class creates a display in the cafeteria with "menu," place mats, and settings.

Egg Harbor Township,
Students operating an in school
T.V. studio.

WORKPLACE READINESS SKILLS:
- 2.7 Use technology and other tools to solve problems
- 2.8 Use technology and other tools to produce products
- 3.2 Use models and observations
- 3.8 Organize, synthesize, and evaluate information
- 3.15 Apply problem-solving skills to design projects
- 4.10 Apply study skills
- 4.1 Set short and long term goals
- 4.9 Use time efficiently
- 5.4 Demonstrate safe use of equipment or tools
- 5.5 Identify and demonstrate use of safety and protective devices

THINKING SKILLS:
- observe, decide, evaluate, synthesize, create

LINKS TO OTHER STANDARDS & SUBJECTS:
- Science

VISUAL ARTS 5-8: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps students to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #2

Offer constructive critique in the evaluation of their own and others' work in dance, music, theater, or visual arts.

ACTIVITY: ART CRITIC

- Each student reports to the class, in the role of a professional art critic, on works of art that she/he has viewed at an art event: a student or community show, an ethnic/cultural festival, a museum, etc. Integrate art vocabulary. A good review includes the following criteria: a reproduction or photograph of the work, the handling of the elements of art, technical skill and technique, successful representation of the intent. Presentations should be timed.

- A videotape or audiotape of the review, allows for a "playback" and critique of the review.

WORKPLACE READINESS SKILLS:

- 1.1   Demonstrate employability skills and work habits
- 1.5   Identify transferable skills
- 2.3   Access and use technology
- 2.6   Access information
- 3.1   Define problem/clarify decisions
- 3.4   Identify and access resources
- 3.8   Organize, synthesize, and evaluate information
- 4.7   Describe roles people play
- 4.9   Use time efficiently

THINKING SKILLS:

- know, comprehend, analyze, synthesize, apply, imagine

LINKS TO OTHER STANDARDS & SUBJECTS:

- Language Arts Literacy (speaking)

VISUAL ARTS 5-8: STANDARD 1.5

All students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATOR #6

Understand and demonstrate a knowledge of how various artists and cultural resources preserve our cultural heritage and influence contemporary arts.

ACTIVITY: COSTUME MUSEUM

- Working in small groups, students select from a varied group of historical periods e.g., Victorian, the 1960s, Renaissance, or Medieval, to identify a fashion style or outfit from the period (for male or female). Each group researches the costume/style and reports on the social class, mores, and events of the time, etc., and how they contribute to style and design.

- Each group constructs a "boardwalk" (faceless, with oval cutout), life-size, standing image wearing the period costume, hairstyle, etc. Brainstorm solutions to design problems. For example, discuss the use of technology in re-creating the details of the costumes: overhead enlargements, copy machine for repetitive pattern, computer-generated parts, addition of collage materials, etc. The images can be used to produce photographs of students in the costumes by adding their faces to these constructions. Use heavy appliance-box cardboard or lightweight wood.

- Display the above as a Costume Museum. Discuss museum-related careers such as fashion/costume designer, fashion historian, historical films consultant, museum docent, and photographer. If added to, annually, the museum will grow to serve other educational needs. Display the exhibits in other schools or in the community.

Egg Harbor Township Middle School,
Anchors on their own T.V. show (cable).

WORKPLACE READINESS SKILLS:
- 1.3 Identify career interests
- 1.5 Identify transferable skills
- 2.7 Use technology and other tools to solve problems
- 2.8 Use technology and other tools to produce products
- 3.2 Use models and observations
- 3.8 Organize, synthesize, and evaluate information
- 3.15 Apply problem-solving skills to design projects
- 4.10 Apply study skills
- 4.2 Work cooperatively

THINKING SKILLS:
- know, apply, decide, create

LINKS TO OTHER STANDARDS & SUBJECTS:
- Arts 1.3
- Social Studies

VISUAL ARTS 5-8: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATOR #1

Identify and solve design problems in space, structures, objects, sound, and/or events for home and workplace.

ACTIVITY: LANDSCAPE

- Before designing a 3-D model of their ideal backyard, students consider the site and its size, terrain, orientation to sun/shade, uses, and what should be included: pool, deck, gazebo, fencing, lighting, and/or sports or game courts. Students determine local laws relating to such items as permits and approvals, and safety requirements. They identify plantings, flower gardens, etc. They prepare several sketches. Their final plan on paper includes notations as to what permits and approvals are required.

- Finally, the students construct a 3-D model to scale using a variety of materials. Identify software, magazines, and community resources that would assist in this project.

WORKPLACE READINESS SKILLS:
- 3.1   Define problem/clarify decisions
- 3.8   Organize, synthesize, and evaluate information
- 3.12   Interpret data
- 3.15   Apply problem-solving skills to design projects
- 5.1   Explain injury prevention
- 5.6, 5.7, 5.8 Identify common hazards, safety procedures, and rules

THINKING SKILLS:
- research, observe, decide, problem solve, create

LINKS TO OTHER STANDARDS & SUBJECTS:
- Science
- Social Studies

132

VISUAL ARTS 9-12: STANDARD 1.1

All students will acquire knowledge and skills that increase aesthetic awareness in dance, music, theater, and visual arts.

DESCRIPTIVE STATEMENT

The arts strengthen our appreciation of the world as well as our ability to be creative and inventive decision-makers. The acquisition of knowledge and skills that contribute to aesthetic awareness of dance, music, theater, and visual arts enhances these abilities.

PROGRESS INDICATOR #1

Demonstrate an understanding of different aesthetic philosophies through the evaluation and analysis of artistic styles, trends, and movements in an art form.

ACTIVITY: ART MANIFESTO

- Before creating a "public work of art," students survey a sampling of community members to determine their beliefs/feelings toward a sampling of subjects and aesthetic qualities for a community work of art. They also ask them what purpose the art work should serve, where it should be exhibited, and therefore what size it should be. Students write an art manifesto (a public declaration of intentions, opinions, objectives, or motives) that reflects the artists' and the community's aesthetic view/philosophy/aesthetic values.

- They use the survey results to design the art work (2-D or 3-D). Upon completion of the design replica, they determine if the artistic elements created the predetermined aesthetic qualities and effect.

WORKPLACE READINESS SKILLS:
- 3.1 Define problem/clarify decisions
- 3.2 Use models and observations
- 3.7 Conduct systematic observations
- 3.12 Interpret data
- 4.3 Evaluate own actions and accomplishments

THINKING SKILLS:
- analyze, decide, recommend

LINKS TO OTHER STANDARDS & SUBJECTS:
- Language Arts Literacy (speaking, writing, interviewing)

133

VISUAL ARTS 9-12: STANDARD 1.2

All students will refine perceptual, physical, and technical skills through creating dance, music, theater, and/or visual arts.

DESCRIPTIVE STATEMENT

Through an education in the arts, students enhance their perceptual, physical, and technical skills and learn that pertinent techniques and technologies apply to the successful completion of tasks. The development of sensory acuity (perceptual skills) enables students to perceive and acknowledge various viewpoints. Appropriate physical movements, dexterity, and rhythm pertain to such activities as brush strokes in painting, dance movement, fingering of musical instruments, etc.

PROGRESS INDICATOR #4

Demonstrate originality, technical skills, and artistic expression in the creation, production, and performance of dance, music, theater, or visual arts.

VISUAL ARTS ACTIVITY: CREATIVITY AND ABSTRACTION

- In this activity, each student produces a series of works related to one subject.
- The first assignment in the series is the completion of a creative, realistic rendering of a subject. The students should make any further decisions regarding how this task is accomplished. (It's the marriage of realism and creativity, plus the decision-making process that the students must struggle with.)
- The second in the series should abstract the form of the subject in some way-its line, shape, colors, its place or experience in its existence.
- The third abstraction should give the appearance of being nonrepresentational.

WORKPLACE READINESS SKILLS:

- 3.2   Use models and observations
- 3.7   Conduct systematic observations
- 3.8   Organize, synthesize, and evaluate information
- 3.12 Interpret data

THINKING SKILLS:

- observe, perceive, create, select

LINKS TO OTHER STANDARDS & SUBJECTS:

- Depends on student's choice of subject. See related vignettes on next page.

EXAMPLE:

Students, given an apple as their subject, produced boring compositions of red whole apples—as were handed to them. They were told their drawings did not fulfill the "creative" part of the assignment. In return they complained that the teacher was not telling them what she wanted them to do. "No," said the teacher,"you are not doing what I asked you to do." One student, in frustration, took a bite from the apple. "Aha!" said the teacher. "Ah!" said the student as he erased the rounded edge and penciled teeth marks on the drawing. The others caught on and produced realistic renderings of apples: with curled peel, disassembled and reorganized, and cut crosswise with the interior structural design showing. Some were later baked with the crosscut design on the top crust, candied and placed in a student-designed display box. Illustrations could include the mythologies of Johnny Appleseed, the symbol of the matriarchal religions, the poisoned apple of the wicked witch, sculpted from clay with the serpent plunging out and entitled, "The Garden of Eden."

EXAMPLE:

A student's rendering of a pheasant as subject produced the iridescent colors. While contemplating the beauty of the bird's feathers, the student realized that this bird's beautiful feathers did not compensate for its awkward shape and poor flying capability. The first abstraction produced was a collage that expressed the fragility of this bird's existence. Weather, the hunter, and forest fire made it vulnerable. Burnt paper was part of the media used to express the violence in nature that threatens its life. Another abstraction was a large, strong bird soaring over city and countryside with the words, "I'd rather have strong wings than fine feathers." The final work was a linear, abstract expression of "Flight on Wing and Wind."

135

VISUAL ARTS 9-12: STANDARD 1.3

All students will utilize arts elements and arts media to produce artistic products and performances.

DESCRIPTIVE STATEMENT

In order to understand the arts, students must discover the common elements and properties of dance, music, theater, and visual arts. These arts elements, such as color, line, form, rhythm, space, timing, movement, mood, etc. are the ingredients from which works of art are made.

PROGRESS INDICATOR #3

Demonstrate an understanding of technology, methods, materials and creative processes commonly used in visual arts.

ACTIVITY: PORTRAITS WITH FEELING

- Using a mirror to draw a self-portrait, or a partner/model, students complete a series of portraits depicting several emotional states in facial drawings. These various emotional expressions may be subtle or strong. Use several facial angles. See page 5 for helpful hints on learning to do portraiture.

- Students select one of the portraits and abstractly apply a color (e.g., some associate red and black with anger, yellow might be chosen to represent a glowing happiness, etc.). Selections and volume of color are personal choices.

- Students select a second portrait portraying a different emotion. They add a body to the drawing that depicts, through body language, the same emotional state as the face. (The body might be done cartoon-like.)

- Students exhibit their work and compare/contrast the same emotions and dissimilar ones for the use of line, color, space, etc.

WORKPLACE READINESS SKILLS:

- 3.2   Use models and observations
- 3.9   Identify patterns
- 3.11   Identify/evaluate solutions
- 4.2   Work cooperatively

THINKING SKILLS:

- concentration/focus, attention to detail, hand/eye coordination, select, solve problems

LINKS TO OTHER STANDARDS & SUBJECTS:

- Social Studies (psychology)

137

VISUAL ARTS 9-12: STANDARD 1.4

All students will demonstrate knowledge of the process of critique.

DESCRIPTIVE STATEMENT

Art criticism assists in the development of critical thinking skills of observation, description, analysis, interpretation, and evaluation. Students engage in and evaluate multisensory learning experiences as both participants and observers. The process of critique helps students to develop a sense of aesthetics and leads to artistic and personal growth.

PROGRESS INDICATOR #3

Evaluate and interpret works of art orally and in writing, using appropriate terminology.

ACTIVITY: EVALUATING THE CRITICS

- Students view the works of a specific artist and analyze the use and composition of the elements, technique, technology, and intent of the artist. In the analysis, they include the individual influences that impacted the work of the artist.

- Students, using the Internet, library, and/or media center, review published professional criticisms of the artist's work. They express their own agreements and/or disagreements with the view of the professional critics and identify any biases/inflammatory language in the professional criticisms.

- Based upon the students' critiques, the class isolates the factors analyzed and develops a rubric (using word-processing tools) for analyzing and critiquing their own work. For example the students isolate the elements by discussing the use of positive/negative space, color, texture, technical skill, technology, composition, visual perspective, etc.

WORKPLACE READINESS SKILLS:
- 1.1 Demonstrate employability skills and work habits
- 2.8 Use technology and other tools to produce products
- 3.2 Use models and observations
- 3.5 Use library media center
- 3.10 Monitor own thinking

THINKING SKILLS:
- comprehend, analyze, compare/contrast, synthesize, apply

LINKS TO OTHER STANDARDS & SUBJECTS:
- Language Arts Literacy (writing, reading)

138

VISUAL ARTS 9-12: STANDARD 1.5

All students will identify the various historical, social, and cultural influences and traditions which have generated artistic accomplishments throughout the ages, and which continue to shape contemporary arts.

DESCRIPTIVE STATEMENT

The history of the world is told through the arts. By being able to identify historical, social, and cultural influences related to the arts, students will have a better and more complete understanding of humankind past, present, and future and of the arts as forms of human expression.

PROGRESS INDICATOR #8

Demonstrate knowledge of how artists and artistic works connect with political, social, cultural, and historical events.

ACTIVITY: GENOCIDE & ARTISTIC EXPRESSION

- Students select and research the historical events of genocide, such as the European witch hunts, slavery, the Holocaust, Bosnia and "ethnic cleansing."

- Students prepare oral or written reports that include applicable economic and political causes and identify the "players" involved. The students include artistic representations (e.g., film, news film clips) of the event by artists of note and at least one of their own related art works. Students utilize the Internet, a library, a museum to collect information; the computer to prepare the art and a written draft; and other technology to reproduce the art/photos.

- The class exhibits the art works/reproductions as an historical time line.

WORKPLACE READINESS SKILLS:

- 2.5 Access information and communication systems
- 2.7 Use technology and other tools to solve problems
- 2.8 Use technology and other tools to produce products
- 3.2 Use models and observations
- 3.4 Identify and access resources
- 3.5 Use library media center
- 3.8 Organize, synthesize, and evaluate information
- 4.2 Work cooperatively
- 4.10 Apply study skills

THINKING SKILLS:

- know, apply, select, decide, create

LINKS TO OTHER STANDARDS & SUBJECTS:

- Social Studies

139

VISUAL ARTS 9-12: STANDARD 1.6

All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

DESCRIPTIVE STATEMENT

The development of knowledge and skills in design produces the power to create or to enhance the economy and the quality of life. All inventions, everything made by human hands, require design skills: fabric and clothing, landscapes and interiors, residential and corporate architecture, product and package design, video and print graphics. Neighborhood and city planning can be aesthetically improved with skills in the design of space and form. Staging is essential to the planning of successful events, whether personal, business, or community. Elements of design affect nearly all aspects of daily living.

PROGRESS INDICATOR #4

Identify, plan, and provide solutions to design problems of space, structures, objects, sound, and/or events in a public or private environment.

ACTIVITY: INTERIOR DESIGN

- When redesigning a room in their home to make better use of space, provide more storage, and/or modernize, students begin with an in-scale floor plan. Using CAD if available, they choose a color plan starting with the larger area (floor/walls) and select the following items from magazines, other sources, their own samples, or models:
  - the furnishings;
  - fabric samples;
  - lighting; and
  - window treatments.

- Students create 2-D representations of the newly designed room with measurement notations to ensure safe/comfortable movement. They include swatches in their presentation.

- Students estimate the budget required to cover the cost of the renovation/redecorating. They provide a basis for the costs listed.

- Students define the reasons for keeping certain features and disposing of others. They identify changes made to the electrical, plumbing, and heat/air systems.

(continued from previous page)

WORKPLACE READINESS SKILLS:
- 1.12   Demonstrate consumer and other financial skills
- 2.0   Understand technological systems
- 3.1   Define problem/clarify decisions
- 3.7   Conduct systematic observations
- 3.8   Organize, synthesize, and evaluate information
- 3.11   Identify/evaluate alternative decisions
- 3.12   Interpret data
- 3.13   Select and apply solutions to problem solving and decision making
- 3.15   Apply problem-solving skills to design projects
- 5.3   Demonstrate safe physical movement

THINKING SKILLS:
- research, observe, decide, problem-solve, create

LINKS TO OTHER STANDARDS & SUBJECTS:
- Mathematics

Lacey students in the background of the set of "Snake Eyes" in Atlantic City, NJ

DESIGN –
THE ART OF
WORK

DESIGN –
THE ART OF WORK

Design is purposeful and applied art. Designed things, events, and situations serve various purposes while using the vocabularies of art: material, color, texture, movement, rhythm, balance, etc.

"Designing," says Herbert Simon of Carnegie Mellon, "is devising courses of action aimed at changing existing situations into preferred ones." We design or "devise courses of action" in different ways.

According to Howard Gardner's "Multiple Intelligences," we design linguistically when we design a composition or poem; we design musically when we compose music; we design kinesthetically when we choreograph movement for a dance, parade, or football play.

Visual/spatial design is the most recognized form of design. This is the domain of artifacts, which can be as small as jewelry or as large as buildings or cities.

Purists may decry design's "commercial" nature, but this is why design is a significant art form. Its essence is not in museums, but in your home, the city's streets, everywhere. It's the art of the everyday world. It beautifies our environment, and makes it more functional and efficient.

Every person, every moment, everywhere is in the presence of design. Just breathing, we can inhale designed scents of candles, perfume, etc.

Before students begin to design, they need to have a task to accomplish using music, dance, theater, or visual arts. In music, they can compose a march, an advertisement, or birthday party. Ask them in how many ways and for what reasons such compositions differ.

Design infuses meaning and aesthetic sensibility into daily life, making the ordinary extraordinary.

9. **REDESIGN AND IMPLEMENT:**
The evaluated solution may be reworked and retested-especially if the product is to be produced in quantity or put to actual use. The appearance of the product takes on greater importance.

1. **ANALYZE AND INVESTIGATE:**
Start with an examination of the task. Examine the need, opportunity, or problem. Whose needs will be served by the design project?

2. **FRAME A DESIGN BRIEF:**
Prepare a statement describing what the design/redesign should do and what constraints are imposed. This will keep the process on track.

3. **GATHER INFORMATION:**
Identify the influencing factors. What are the sizes, stresses, appearance, use, safety, ergonomic factors, cost, etc., that must be addressed to achieve a viable solution?

THE DESIGN PROBLEM-SOLVING PROCESS

4. **GENERATE ALTERNATIVE SOLUTIONS:**
In technological problems there are no right or wrong answers—only good or bad solutions. To avoid bad solutions, the designer needs to look at many alternatives. This step calls for flexibility and creativity.

8. **TEST AND EVALUATE:**
Test the solution against the requirements in the design brief and against the original task or problem. Address the need for improvements.

7. **CREATE A PROTOTYPE:**
Construct the product. Appearance now becomes important to "sell'" the design idea or product.

6. **DEVELOP THE SOLUTION:**
This step includes technical planning of procedures and resource planning. Develop models, sketches, and plans.

5. **CHOOSE THE SOLUTION:**
Choose from the alternatives the one solution that best satisfies the demands of the situation and the design brief. The designer should be able to defend the choice.
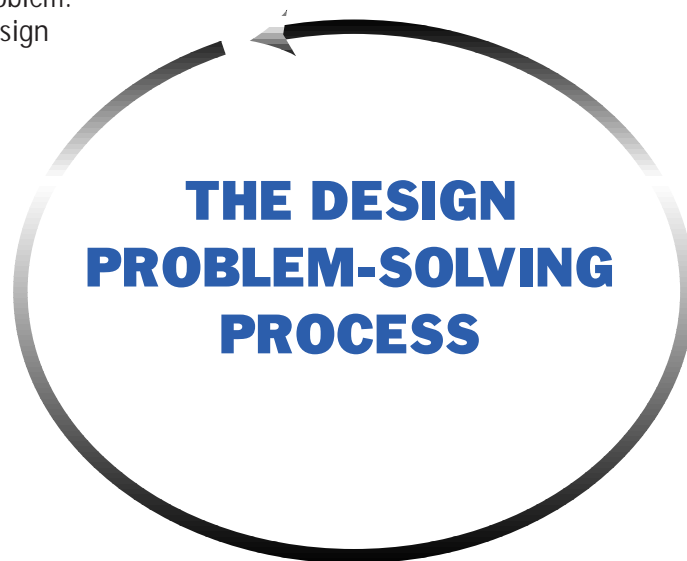
145

Table 4.1

Aspects of Design

The various aspects of design provide a plethora of ideas for student activities.

DESIGN AWARENESS	DESIGN HISTORY	IDENTIFY PROBLEMS & OPPORTUNITIES	SOLVE PROBLEMS	DESIGN A PRODUCT
Adopt an unsightly site. Measure and develop a plan for re-creating it. What materials would you need? Cost it out.	Trace the history of the camera from inception to today. Report on scientific changes that evolved its design and capabilities.	Use your journal to list annoyances that you repeatedly encounter. Brainstorm solutions.	You need the sound of ocean waves as a sound effect for a play. You aren't near the ocean. List possible solutions and test them out.	Design a piece of jewelry that incorporates a symbol you design to represent an aspect of your character or personality.
Create a catalog of different designs of appliances, chairs, windows, home entries, or other items/products.	Report on social changes that were produced by the automobile. Discuss design changes from its invention.	Write instructions for completing an art-related computer function. Have another student follow the instructions. Do you need to change the instructions?	Create a faux surface, e.g., make one surface appear to be something else: wood, cork, marble…	Create a prototype of a chair or other piece of furniture by manipulating found materials: cardboard, plastic, wood, paper-mache, etc.
Without looking, draw from memory the section of the classroom that is behind you. Then turn around and evaluate your accuracy.	Design a concert of music related to patriotism, U.S. history, or politics.	Someone tells you there is a "red herring" in a movie you saw. What do they mean? How does the red herring function?	Prepare several design ideas for creating an article of clothing from white and/or black trash bags. Generate ideas for accessories from found objects.	Create an article of clothing based on the design project directly to the left of this one. Accessorize. Hold a class fashion show.
Tour your school neighborhood. What would you like to change? How would you go about it?	Describe how the setting, props, fashion, and manners displayed in the play "1776" are different from today. How would a 1940s play be different?	Watch a movie (segment) three times. 1st just watch it. 2nd focus on the photography/special effects. 3rd listen to the sound.	You want to do a painting, but have no brushes. What 10 other things can you use to apply paint? Try them out. Which gave good results? Which didn't? Why?	Design and produce a percussion or strings instrument. Demonstrate by producing rhythmic sounds.

Table 4.2

Design Possibilities from the Environment

Broad themes extend the selection of opportunities for lessons in design.

Videotape or photograph a landmark building. Research its style, history, purpose, and construction materials.	Tape sounds in your environment. Use them in a musical composition. Identify musical pieces that do the same.	Study samples or photos of Ikebana (Japanese flower arranging). Students create their own Ikebana using weeds, wildflowers, etc.	Create a mini-landscape with a variety of natural textures and plants. Include a walkway, stone or wood fence, etc.	Draw a rose (or other flower) from four angles. Combine to create a composition or use a single drawing to create a pattern.	Adapt patterns and textures in nature for use in fabric or clothing design.
Adopt an unsightly site. Measure and develop a plan for re-creating it. What materials would you need. Cost it out.	Design a walking tour of interesting or historic places to see in your town.	Research "Fallingwater" and pool information for a presentation of this Frank Lloyd Wright design.	Collect pictures or models of boats and describe their functions related to the design. Design a boat.	Analyze the design features of English gardens and Japanese gardens.	Collect samples of natural fabrics/fibres. Contrast with synthetic fabric/fibres.
You have to design the interior of a yacht salon. What design problems exist? What kind of materials would you use?	Half of the students design a home for Alaska. The others design a home for Hawaii. What factors determine the design?	As a class project, design and build a prototype of a theater, restaurant, or shopping district for your town.	Visit Northlandz in Flemington, NJ (model trains/villages). Note the style differences in the eras represented.	Create a weaving, woven basket or macrame with reeds, grass, and other natural objects	Discuss the various uses of animal skins/feathers in fashion history. Provide illustrations.
You want to schedule a "play in the park." What elements must be considered to safely schedule this event?	Imagine the view from a window in your home or school is a painting and the window frame is the picture frame. Draw the "painting."	Design an "environment" for a retail store. Present the idea to the "owners." Produce several sketches.	Design a poster or postage stamp in support of preservation of natural resources or endangered species.	Design a stage set prototype of a cabin in a winter setting.	Choreograph a dance based on a weather change.
Visit a corporate park such as the Carnegie Center in Princeton. What purposes are served by the design of the open space?	Watch the movie "The Bear," and discuss its environmental message.	Research color theory and the psychological and physiological effects of color on humans. Include chromotherapy.	Visit "Grounds for Sculpture, " Hamilton, NJ. Report on landscape/stone and wood sculpture design.	Study kite designs and what enables them to fly. Create a kite and test it.	Describe the Bauhaus philosophy of design as it applies to interior environments.

Table 4.1
Aspects of Design

Potential design activities based on the theme "shelter."

List possible meanings of the word *shelter.* List places that might serve as shelter.	Create a replica of a shelter for: insects, birds, animals, people. Describe how the space and construction function.	Examine pictures of homes from various parts of the world. Create a replica. Identify its locale, historical period, design.	Research how technology and social change have influenced the structure of homes in the U.S. since the 1600s.	Preview an architect's blueprint and describe in words the floor plan and features of the house.
Use CAD to design an ideal 21st-century interior. Print and save design.	Divide class into architectural teams. Each student designs an interior for an individual with disabilities, e.g., who is blind, or deaf/hard of hearing.	Construct a foam board or cardboard (tabletop) facade in scale for a home of a specific style, Victorian, Italianate, American Foursquare, etc.	Discuss what makes a home more than a shelter.	Research various styles of furnishings: art deco, French Country, Early American, Modern, etc. Determine the primary characteristics and historical period of each.
Design a home for a different geographic site: near water, in snow country, etc.	Study multiple dwelling designs through ages or cultures.	Videotape a landmark. Research its style, history, construction materials, design.	Learn about modular design and create a living complex using modular construction.	Design a playhouse, store, or room from an appliance carton. Assemble several boxes to create a "complex" of rooms.
Develop a catalog of pictures (cut from magazines, etc.) of various porches, decks, window designs, window treatments, etc.	Design a pattern for a stencil. Use the stencil to create wallpaper, wall strips, curtain pattern, etc.	Research "Fallingwater." Pool the class's information and create a group consensus on this Frank Lloyd Wright design.	Collect pictures/models of yachts/ships. Identify design differences from land shelters.	Describe how technology has changed the shape of skyscrapers. Identify several famous skyscrapers by their shape.
Research the philosophy of Feng Shui.	Compare the interiors of a Japanese style home to an American home.	Create a mini-landscape using a variety of textures, plantings, bridges, a walkway, and a stone or wood fence.	Design furnishings for a boat. What materials can or can't you utilize? Design a houseboat.	Design a shelter for your pet.

5

INSTRUCTIONAL ADAPTATIONS FOR STUDENTS WITH DIVERSE NEEDS

INTRODUCTION TO INSTRUCTIONAL ADAPTATIONS FOR STUDENTS WITH DIVERSE NEEDS

In the interest of compliance with the Disabilities Act Amendments of 1997 and Section 504 of the Rehabilitation Act of 1973, adaptations for students with disabilities are suggested in this section.

In the interest of compliance with the "Implementation Issues" supporting the New Jersey Core Curriculum Content Standards adopted by the State Board of Education in May 1996, adaptations for exceptionally able (gifted) students are also included.

In the interest of serving the needs of students with limited English proficiency (LEP), adaptations for these students are also suggested in this section.

Instructional Adaptations for Students with Disabilities

The New Jersey Core Curriculum Content Standards and related curriculum frameworks are the focus of curriculum and instruction for all pupils. This population includes students with disabilities. In order to provide pupils with disabilities meaningful access to curriculum and instruction based on the content standards, adaptations may be required. The adaptations are not intended to compromise the content standards. Instead, adaptations provide students with disabilities the opportunity to maximize their strengths and compensate for their learning differences.
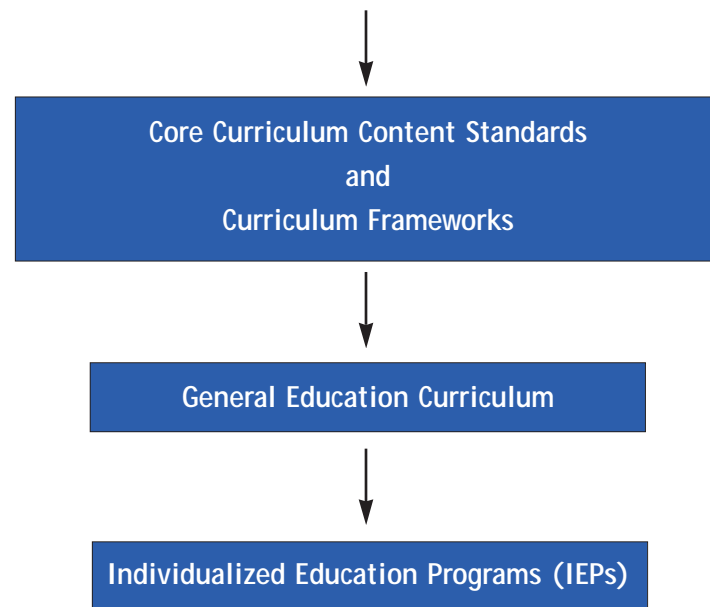
Core Curriculum Content Standards
and
Curriculum Frameworks

General Education Curriculum

Individualized Education Programs (IEPs)

Figure 5.1 - *Relationship between the Standards and Frameworks, the General Education Curriculum, and IEPs*

Because students with disabilities are expected to participate in the general education curriculum, their individual education programs reflect the core content standards and the local school district's general education curriculum (see Figure 5.1).

152

Adaptations for Students with Disabilities

The Federal Requirements: The *Individuals with Disabilities Education Act (I.D.E.A.)* amendments of 1997 and *Section 504 of the Rehabilitation Act of 1973* guarantee students with disabilities the right to general education **program adaptations as specified in their Individual Education Programs (IEPs) or 504 plans**. The intent of these acts is to provide these students access to the general education program and curriculum.

The term **adaptation**, **in the context of the Visual and Performing Arts Framework**, is defined as: "any adjustment or modification to the general education program enabling students with disabilities to participate in and benefit from learning activities and experiences based on the core curriculum content standards and demonstrate understanding and application of the content standards." These modifications may be those identified as *best practice.*

Participation in and benefit from Visual and Performing Arts: Students with disabilities demonstrate a broad range of learning, cognitive, communication, physical, sensory, and social/emotional differences that may necessitate adaptations to the general education program. Each pupil manifests his or her learning abilities, learning style, and learning preferences in a unique way. Consequently, the type of adaptations needed and the program in which the adaptations will be implemented are determined individually within the IEP or 504 planning processes.

Dance, music, theater, and visual arts require different forms of participation. The adaptations for the arts classroom are instructional as well as physical. Some adaptations may structure students' learning in an explicit and systematic way, including presenting and organizing instruction. An example of instructional adaptation may be placing greater emphasis on foundation skills. Examples of physical demands include dexterity, flexibility, use of a variety of tools and materials, and safety considerations. For these reasons, it is essential that the arts teacher understand the nature of the student's disability and access the individual education program.

Success for all is the goal. The following pages provide the types of adaptations that may be required and best-practice strategies that are generally applicable to the heightening of the special education student's access to the classroom, and to learning and success.

Students with Disabilities

Classroom Organization

Students with disabilities may require specific adaptations in the classroom in order for them to participate. Participation is enhanced by classroom organization and an environment that will maximize the students':

- attention
- comfort
- interaction
- peer/adult communication
- independence
- mobility

Examples:

Instructional Groups
- Cooperative groups
- Peer partners
- Buddy system
- Teams
- Common interest

Individual Support
- Assist physically
- Clarify
- Prompt/cue
- Gesture/signal
- Interpret
- Reinforce
- Highlight
- Organize
- Focus

Students with Disabilities

Classroom Organization *(continued)*

Examples:

Environmental Conditions

- Ventilation
- Temperature
- Sound
- Lighting
- Conference area
- Storage accessibility
- Labeled bins/cabinets

Safety

- Clear pathways
- Posted rules
- Labeling
- Distribution (materials)
- Directions
- Demonstrations
- Role assignments
- Timekeeping
- Health/chemical
- Equipment storage/use
- Prep/cleanup
- Emotional

Adaptive Equipment

- Pump bottles
- Revolving utensil holder
- Books on tape
- Directions on tape
- Tape Recorder
- Mallets/tools with foam handle
- Voice-activated recorder
- Personal computer
- PC Software, e.g., *Ultimate Reader (reads texts aloud on Internet)*
- Typography books (bas relief)
- Speech synthesizer
- Communication board
- Lap/drawing board
- Closed-captioned videos/monitor
- Braille
- Large print
- Low-vision equipment
- Talking watch/clock
- Calculator
- FM system

Instructional Presentation

Students with disabilities may require instructional presentations that will enable them to acquire, comprehend, recall, and apply to a variety of activities and content. In addition, instructional presentation adaptations can enhance a student's attention and ability to focus on instruction. The primary purpose of these adaptations is to provide special education students with teacher-initiated and teacher-directed interventions that prepare students for learning and engage students in the learning process *(Instructional Preparation)*; structure and organize information *(Instructional Prompts)*; and foster understanding of new concepts and processes *(Instructional Applications)* during classroom activities.

PREPARATION		PROMPTS		APPLICATION	
Examples	*Purpose*	*Examples*	*Purpose*	*Examples*	*Purpose*
■ Relate to personal experience	■ Increase interest	■ Graphic organizers	■ Organize information	■ Hands-on activities	■ Simplify abstractions
■ Preview materials	■ Understand objectives/goals	■ Semantic organizers	■ Understand whole/part relations	■ Constructions	■ Give concrete examples
■ Use organizing tools	■ Grasp key concepts	■ Outlines	■ Associate and connect cues	■ Dramatization	■ Elaborate
■ Brainstorm/web	■ Recall	■ Mnemonics		■ Props/manipulatives	■ Connect
■ Use questioning techniques	■ Use prior knowledge	■ Analogies	■ Grasp essential concepts	■ Illustrations	■ Associate
■ Predict	■ Focus	■ Imagery	■ Classify	■ Flow charts	■ Relate to experience
■ Preteach vocabulary		■ Color coding	■ Compare	■ Field trips	■ Generalize
■ Review strategy		■ Highlight/underline	■ Recall	■ Guest speakers	■ Use multiple modalities
■ Demonstrate		■ Segment techniques and task analysis	■ Summarize	■ Interviews/surveys	
■ Illustrate		■ Key words/labels		■ Life applications	
■ Use models		■ Repeat/clarify directions		■ Process modeling	
■ Provide mini-lesson		■ Use cue cards, chalkboard, pictures overhead		■ Think aloud	
		■ Movement cues		■ Games/puzzles	
				■ Simulations	

Instructional Monitoring

Frequent monitoring of the performance and progress of students with disabilities is essential to ensure that students are, in fact, understanding and benefiting from learning activities. Monitoring provides teachers with a means of obtaining information about students and their ability to participate effectively in activities. Monitoring also provides a means for teachers to determine when and how to adjust instruction and provides supports to promote student development. Equally important is student self-monitoring, self-evaluation, and self-management to promote student self-reflection and self-direction regarding task demands, goal attainment, and performance accuracy.

MONITORING	
Examples	*Purpose*
■ Goal setting	■ Periodic check for understanding
■ Anecdotal recording	■ Progress checks
■ Progress graphs	■ Redirect attention
■ Checklists/rubrics	■ Direct on-task behavior
■ Timelines	■ Promote participation
■ Journal entries	■ Student goal setting
■ Portfolios	■ Reinforcement
■ Videos	■ Manage student behavior
■ Audio tapes	■ Self critique
■ Conferences	
■ Peer/critiques	
■ Student contracts	
■ Systematic assessment	

157

Student Response

Students with disabilities may require specific adaptations in order to demonstrate acquisition, recall, understanding, and application of visual and performing arts content and related processes in a variety of situations and materials while they are developing proficiencies in these areas. The primary purpose of student performance responses is to provide students with disabilities a means of demonstrating progress toward the lesson objectives related to the Visual and Performing Arts Curriculum Framework activities.

RESPONSE PROCEDURES	RESPONSE FORMATS	
Examples	*Through the Arts*	*Standard*
■ Extend time ■ Provide practice exercises ■ Interpret/interpreter ■ Use preferred response mode *(written, dictated, or oral)*	■ Draw/paint ■ Keep beat with feet ■ Tonal/rhythmic ■ Pantomime ■ Improvisation ■ Imitation ■ Sing ■ Dance ■ Act/body language ■ Expressive voice ■ Performance ■ Complete project	■ Offer oral/written options ■ Maintain eye contact ■ Demonstrate ■ Peer-teach ■ Discuss ■ Make observations ■ Provide choices to students

5 INSTRUCTIONAL ADAPTATIONS FOR EXCEPTIONALLY ABLE STUDENTS

Gifted and Talented

Introduction to Exceptionally Able Students

This section offers assistance to schools for developing adaptations for exceptionally able students. The *New Jersey Core Curriculum Content Standards* were adopted by the State Board of Education in May 1996. Required adaptations for exceptionally able students are supported by the section titled, "Implementation Issues," which states that "we must provide all students with appropriate challenges so that the raised expectations for all students do not result in lowered expectations for the exceptionally able."

Additionally, New Jersey Administrative Code, NJAC 6.8-2.5(a)4 requires that "the district make provisions for identifying pupils with gifted and talented abilities and for providing them with an educational program and services."

Documentation Activities are also required: These would include written identification process; lesson plans; classroom observations; and staff interviews.

Suggestions are offered in the following categories:

1. **Identification process**

2. **Adaptation strategies**

3. **Educational planning**

Process for Identification of Exceptionally Able Students

The exceptionally able/gifted students are those who:

- Demonstrate a high degree of intellectual, creative, and/or artistic ability(ies);
- Possess exceptional leadership skills;
- Excel in specific fields;
- Function above grade level; and
- Need accommodation or special instruction and/or services to achieve at levels commensurate with a challenge to his/her abilities.

Characteristics of exceptionally able students include, but are not limited to, the following:

- Ability to grasp concepts rapidly and/or intuitively;
- Intense curiosity about principles and how things work;
- Ability to generate theories and hypotheses and pursue methods of inquiry;
- Produce products that express insight, creativity, and/or excellence; and
- Pose questions beyond those presented in the *Core Curriculum Content Standards.*

The process of identification is ongoing: Students are continuously entering and exiting school districts. Fluidity should be maintained as students' needs change each year. Identification and appropriate educational challenges should be initiated in kindergarten and reviewed annually through Grade 12. Identification practices should be in place at the time of school enrollment. When a separate or pullout program is maintained, selection of nominees should be determined by a committee of at least three to five individuals to maintain a fair and democratic process.

The identification process should reasonably identify 3% to 5% of the school population through multiple criteria:

- Aptitude discovered through testing, special projects, teacher observation, student interest, and motivation, state or national standardized assessments;
- Teacher recommendation; and
- Self, peer, and/or parent nomination.

Adaptations for Exceptionally Able Students

Curricular adaptations, also referred to as *differentiating the curriculum*, refers to appropriate adjustments to content, teaching strategies, expectations of student mastery, and scope and sequence.

Adaptation strategies include the following:

- interdisciplinary and problem-based assignments with planned scope and sequence;
- advanced, accelerated, or compacted content;
- abstract and advanced higher-level thinking;
- allowance for individual student interests;
- assignments geared to development in areas of affect, creativity, cognition, and research skills;
- complex, in-depth assignments;
- diverse enrichment that broadens learning;
- variety in types of resources;
- community involvement;
- cultural diversity; and
- internship, mentorship, and other forms of apprenticeship.

Adaptation categories include the following:

- acceleration;
- enrichment; and
- grouping.

The next several pages identify a variety of adaptive efforts within these categories.

ACCELERATION involves grade-skipping or changing the rate of presentation of the general curriculum to enable the student to complete the program in less time than usual. Prescribed seat-time is not necessary for achievement of the standards. Acceleration can occur in any subject area. Middle school students should be able to take high school courses; high school students take college courses with appropriate credit accrued. Some provision must be made for continued acceleration or high-level enrichment. Unless the student has a pre-identified problem, social or emotional development should not inhibit acceleration.

- **FLEXIBLE PACING:** Assignment to classes should be based on the ability to be challenged and handle the work, not age discriminatory.

- **CONTENT ACCELERATION:** Superior performance in some areas may be addressed with placement in a higher grade level for the areas warranting it.

- **EARLY ENTRANCE TO SCHOOL:** Eligibility should be evaluated in terms of the following: (1) degree of advancement in relation to peers; (2) number of areas of advanced achievement; (3) the student's self-concept. (The percentage of students attending one to three years of preschool has increased dramatically and should be considered.)

- **MULTI-AGE CLASSES:** Classes in which two or more grade levels are combined. Students can accelerate through self-pacing.

- **COMPACTING (also known as telescoping):** Refers to a form of acceleration in which part of the curriculum is covered in a shorter period of time than is usual. Previously mastered content material is determined through pre-evaluation and eliminated.

- **COLLEGE COURSE WORK:** Qualified students take college courses for college credit while completing high school requirements (concurrent enrollment). College courses may be taken in the summer.

- **EARLY COLLEGE ADMISSION:** Once the standards for high school are met, early admission to college is an option. Students may leave high school early and enter college.

- **ADVANCED PLACEMENT:** The advanced placement program, administered by the College Entrance Examination Board, enables high school students to obtain both high school and college credit for demanding course work offered as part of the school curriculum.

ENRICHMENT is another way to meet the differentiated needs of exceptionally able students. Well-articulated assignments that require higher cognitive processing, in-depth content, and alternate modes of communication can be effective and stimulating.

- **ALTERNATE LEARNING ACTIVITIES/UNITS:** Opportunities to pursue alternate activities permit students to engage in new learning and avoid the boredom of repeating instruction or unnecessary practice in skills already mastered.

- **INDEPENDENT STUDY:** Students conduct carefully planned, self-directed research projects carefully monitored by the teacher. Prerequisites include instruction in field-based and library research skills, the scientific method, and other authentic types of inquiry.

- **ADVANCED THINKING PROCESSES:** Assignments in all curriculum areas should emphasize higher-level thinking skills such as synthesis, analysis, and evaluation.

- **GUEST SPEAKERS:** University faculty, parents, business and industry leaders, or other teachers in specific areas can provide information on topics beyond the teacher's expertise.

- **MENTORS/INTERNSHIPS:** Both mentors and internships allow students to interact with adult experts in fields of mutual interest and increase awareness of potential careers. Mentors act as role models.

- **ALTERNATE RESOURCES:** This category may include materials from a higher grade level or access to business, university, and community resources such as laboratories, libraries, and computer facilities.

- **EXCHANGE PROGRAMS:** Students attend schools in a different community or country to enrich educational experiences.

GROUPING involves placing students of like ability together in homogeneous arrangements such as special classes or clustering in the same classroom. Grouping allows for more appropriate, rapid, and advanced instruction and challenges students without isolating them.

- **SELF-CONTAINED CLASSES:** These classes enable exceptional students to be challenged in every area throughout the day and week, to be stimulated by their intellectual peers, and to have guidance from teachers with experience in a sequential, integrated curriculum for the exceptionally able.

- **PULLOUT PROGRAMS:** These programs combine regular class integration and homogeneous grouping on a part-time, regular basis. Pullout programs require careful coordination and communication between the teachers of both classes.

- **CLUSTER GROUPING IN THE REGULAR CLASSROOM:** This type of grouping permits homogeneous and heterogeneous grouping according to interests and achievement.

- **CLUSTER SCHEDULING:** Schedules are arranged so that exceptionally able students can take their required core courses together to enhance rapid pacing, less drill, greater depth and breadth.

- **HONORS AND ENRICHED CLASSES:** These classes provide opportunities for practicing higher level thinking skills, creativity, and exploration of in-depth course content.

- **SEMINARS:** These are aimed at research, interdisciplinary studies, visual and performing arts, academic subjects, or other areas of interest. Seminars provide interaction with specialists who can give guidance in specific areas.

- **RESOURCE CENTERS:** A district can establish a resource center available to all students but reserve it at times for exceptionally able students from a broader geographical area (e.g., interdistrict or countywide).

Chapter 5

INSTRUCTIONAL ADAPTATIONS FOR STUDENTS WITH LIMITED ENGLISH PROFICIENCY
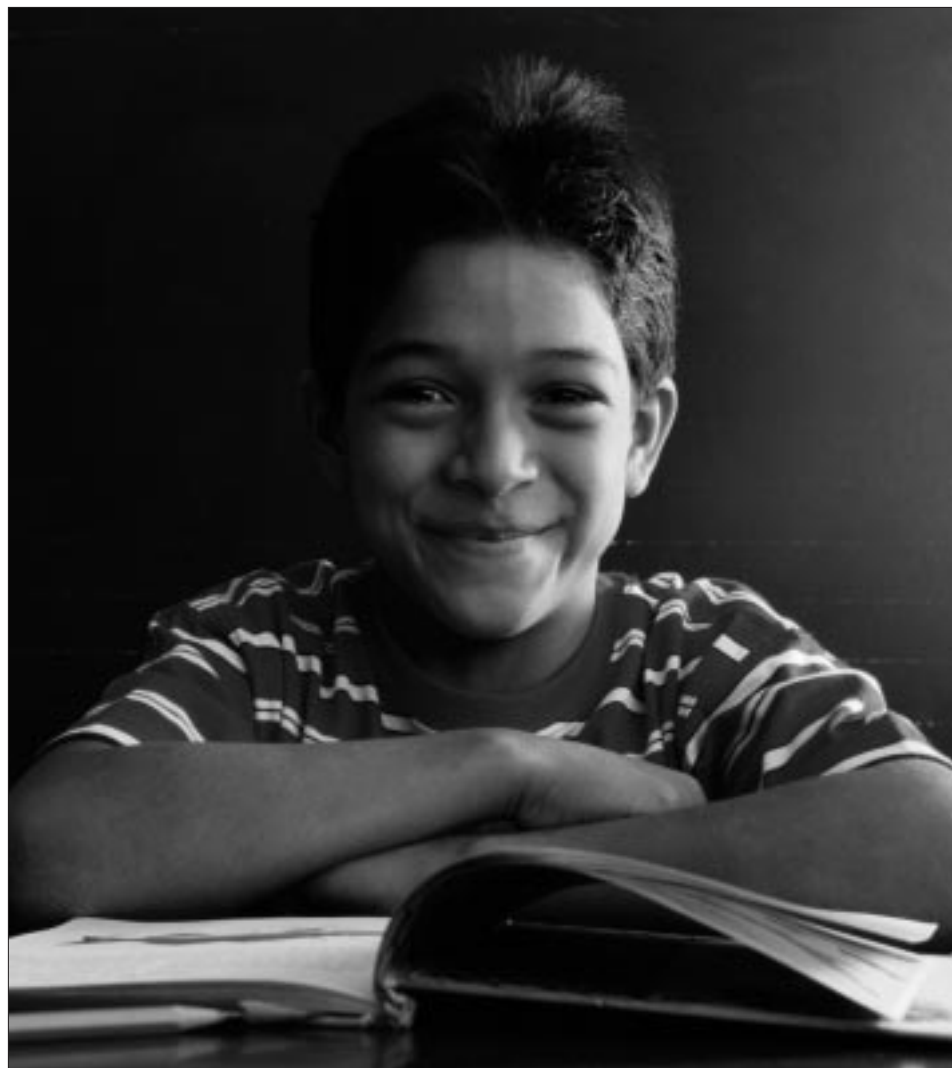
Introduction to Students with Limited English Proficiency (LEP)

Students with limited English proficiency (LEP) come to school with diverse linguistic and cultural backgrounds. They bring differences in physical, social, and intellectual abilities. Some are refugees who have experienced traumatic hardships. Learning a language means learning to speak, listen, read, and write with clarity and understanding, all of which rely upon thinking in a new language. The students' level of literacy in their first language and their prior mastery of the subject must be factored in. The task is daunting for the students. The number of LEP students is increasing, and familiarity with the strategies on the following pages will help to smooth the way for teacher and learner. When adaptations are not provided, instruction will not be effective and the student will not benefit.

The purpose of adaptations is to reduce the complexity of the language, not the depth of the subject content. By lowering the language barrier and making the lessons as comprehensible as possible, the students' ability to understand is increased. Two factors will influence the student's ability: (1) the level of familiarity the student has with the content; and (2) the degree to which the content is given meaning through visuals such as pictures, charts, and diagrams. Nonlinguistic cues enable the student to comprehend the material and the teacher's messages.

The aim is to lower the language barrier by making the classroom communication simple, clear, and meaningful to the student. Students may sound "fluent" in a social setting but have difficulty with "academic" language. Students will go through stages of silence, then mimicking the language before using the language spontaneously.

The following pages include specific recommendations for teachers to incorporate in their strategies. They are presented to ease the task of teaching content and skills to these students and to facilitate student learning.

ADAPTATIONS FOR LEP STUDENTS

PREPARE FOR THE STUDENT

1. Learn the student's background.
2. Work with the ESL/bilingual teacher to identify key objectives, skills, and concepts prior to introducing a unit.
3. Plan a lesson that is culturally and linguistically appropriate.
4. Create flexible small groups based on interests, need, or ability.
5. Give clear, simple directions.
6. Have students retell in their own words before attempting the task.
7. Lead the lesson with the bilingual teacher providing background, examples, or other support to the lesson.
8. Allow bilingual teacher to reiterate key concepts in simple English or student's first language.
9. Reorganize/reinforce information.
10. Provide bilingual resources.

PREPARE INSTRUCTION

1. Eliminate peripheral information.
2. Be clear and concise.
3. Translate abstract to concrete.
4. Consult ESL/bilingual teacher for guidance.
5. Build background information with:
   - Brainstorming;
   - Semantic webbing;
   - Maps, graphics, photos, illustrations; and
   - Videos, film.
6. Use KWL chart: Students consider what they:
   - **K**now
   - **W**ant to learn
   - **L**earned
7. Slowly expand the amount of material to be learned.

TEACHING STRATEGIES

1. Simplify vocabulary/sentence structure.
2. Provide concrete examples with hands-on activities.
3. Elaborate understanding using "thinking aloud" and demonstrations.
4. Emphasize key words and phrases; use intonation and repetition.
5. Build associations/connections between the new and known.
6. Use variety when presenting materials: oral, visual, graphic, etc.
7. Elaborate on figurative language, idiomatic expressions.
8. Summarize on the chalkboard or with transparencies as you speak and model.

169

ENHANCE VOCABULARY

1. Start a picture dictionary or file.
2. Teach vocabulary appropriate to a given subject before content.
3. Report/reinforce/review vocabulary during content activities.
4. Label objects in the room.
5. Tape vocabulary words in context for sound recognition.
6. Use real objects with words where possible.
7. Encourage dictionary use for word meaning.

PREPARE INSTRUCTION

1. Maintain consistent classroom procedures/routines for prediction and comfort level.
2. Use verbal and nonverbal communications to communicate expectations.
3. Share routine expectations such as checking homework or going to the office for a late slip upon arrival.
4. Assign buddies/peer tutors to assist with acclimation to the school and school routines.

TEACHING STRATEGIES

■ Graphic organizers	■ Labeling	■ Vocabulary	■ Drawing/Illustrating	■ Response journals
■ Posters	■ Simulations	■ Word banks		
		■ Charts	■ Student-made books	■ Tape recordings
■ Games	■ Student-made	■ Graphs		
■ Puzzles	flash cards	■ Surveys	■ Language experience	■ Role playing &
		■ Interviews	books	drama

CHECK FOR STUDENT UNDERSTANDING	QUESTIONING STRATEGIES
1. Check periodically.	1. Use questions structured to the student's language level. Begin with yes/no questions.
2. Promote participation.	2. Ask new student to point to a picture or word to demonstrate knowledge.
3. Check understanding of assignments, directions, instruction.	3. Use visual cues, ask simple yes/no questions, e.g., "Is this a pencil?"
4. Use visual reviews with lists and charts.	4. Ask either/or questions where the answer is embedded in the question, e.g., "Is this a pencil or a crayon?"
5. Break task into sequential parts.	5. Break complex questions into several steps, e.g., "Look at the picture. Point to the boy. Is he jumping?"
6. Help students learn to "think aloud."	6. Avoid the negative when questioning.
7. Allow for translation time; questions need "wait time."	7. Ask simply "how" and "why" questions that can be answered with a short phrase or sentence.
8. Rephrase for understanding.	8. Do not require that students speak in full sentences until that level of proficiency is reached.
	9. Tell the student in advance which question she/he will be responding to, thus allowing for "think" and response practice.

The following pages provide samples of adaptations of activities for limited English proficient students.

Samples of Adaptations for LEP Students

K-4 THEATER ACTIVITY "WHAT ARE YOU DOING HERE?" AND K-4 DANCE ACTIVITY "DANCE TALKS" *(See pages 89 & 32.)*

Need: Some languages are tonal in nature (e.g., Chinese and Vietnamese). For these students, English sounds like a monotone. Tonal meanings are lost to the student. Messages conveyed by gesture are culture/language specific. Nonverbal messages, including bodily or facial gestures, may convey no meaning, an insulting meaning, or the opposite of what was intended.

Solutions: Define the purpose of the lesson to teach gesture and tone as used in the United States. Contextual situations make meaning clearer. Reading themes focused on communication such as "The Boy Who Cried Wolf" would be helpful or use signs used to warn or inform.

Emphasize: Various elements of voice: tone, pitch, loudness, and inflection. Have students convey emotions such as excitement, fear, or suspicion, using facial gestures and body language. Emphasize the vocabulary used to describe the qualities of voice and delivery: e.g., fast, loud, deep, gesture, rhythm. Enunciation and clarity are more important than accent.

Presentation: Mix LEP students with native English speakers in groups. Record the variety of messages they can convey. Have one student express the message, and another provide the gesture. Summarize that *voice plus gesture conveys messages and feelings.* Students rehearse, in pairs or small groups, a variety of gestures for the same meanings and convert these gestures to dance movement; choreograph a dance phrase, then practice, and perform.

(continued from previous page)

5-8 DANCE: "WITH FEELING!" AND "MASTERWORKS 1"   *(See pages 43 & 38)*

Need: Dance teachers consider that messages conveyed by gesture are culture/language specific. Just as dance differs from one culture to another, gestures differ in meaning. A gesture having no meaning for one may be read as highly offensive by another. The focus of the lesson needs to be clear. Depending on the dance, the focus may be to clarify the meaning of dance movement/gestures as used in the United States; or it may be movement with meanings from another culture. The students need to know which it is. The LEP student will gain more from a thematic approach with literary selections dealing with emotions, social studies topics such as discrimination or resistance, or science classes about natural disasters (earthquakes, volcanoes, etc.).

Presentation: Review previously learned dance terminology. Include terms for human emotions. Students will use their bodies to express a series of emotions. Give a secret cue card to each student with an emotion written on it. Use a variety of cues from strong to subtle, e.g., fear or shyness. Instruct students to mime their word and have the class guess the emotion. When expressed, write the name of the emotion on the board. Write a brief scene on the board. Students in pairs will dance to relate the emotions created by the scene. An extension of this activity continues on the next page.

Presentation: Show students two or three video clips of expressive dances. Ask individual students to critique the dancer's use of movement, shape, and energy as well as the musical selection depicting the emotion.

Suggested Masterworks Selections: View Michael Flatley (contemporary Irish Step Dance) or Chamroeun Yin (traditional Cambodian dance). Students compare/contrast use of hands, feet, speed, and space. Share findings and emotions felt from the dance. Use another contrasting pair of dance clips, "Rhythm of Resistance" (South African) and "One Hand Don't Clap" (calypso), for social studies connection.

9-12 VISUAL ARTS: "INTERIOR DESIGN" *(See page 140)*

Need: Students with limited English proficiency are also learning about United States culture. The notion of one's own bedroom may be an unfamiliar one. The idea of designing space reflects values common to our capitalistic and materialistic society. Sensitivity to differing values would suggest a modification of the activity; e.g., students can design a room for a function of their choice. The LEP student may be unfamiliar with style, pricing, and U.S. currency and may wish to design based on familiar styles and to use other resources. Flexibility as to mode of expression is essential. The activity will most benefit the student if it is combined in a thematic unit to include a math measurement, scientific strength of construction materials, etc.

Instructional Delivery: Introduce concept of "form follows function" using illustrations of similar function. A variety of living spaces may be presented:

A Japanese house	Form: *paper walls, minimal furniture*	Function: *multipurpose, unroll beds at night*
A Mongolian tent	Form: *hide*	Function: *movable protection*
Teenager's bedroom	Form: *generally wood, door, windows*	Function: *sleep, schoolwork, store clothing, personal items*

Check for understanding: Using a teacher-prepared form, students list the room's identified needs, keeping in mind the functions to be served: e.g., window treatments, electric outlets, type of flooring, wall coverings, or furnishings. Based on satisfying the functional needs, students develop a two-dimensional floor plan and sketches or collages to represent sections of the room. Students critique each other's work, based on the prepared form, for completeness, clarity, and basis for costs.

174

APPENDIX

FRAMEWORK CONTRIBUTORS

VISUAL AND PERFORMING ARTS LEADERSHIP TEAM

JAY DOOLAN
Director
Office of Standards and Professional Development
New Jersey Department of Education

ROBERTA CAROL
Arts Framework Project Coordinator
New Jersey Department of Education

DONALD PROFFIT
Field-Based Consultant
Principal
Highland Park High School
Highland Park, New Jersey

LAURA FATTAL
Director
New Jersey School of the Arts
New Jersey Department of Education

PHILIP THOMAS
Education Vice President
New Jersey Performing Arts Center

TERRI CERRITTO
Education Director
New Jersey Performing Arts Center

Visual and Performing Arts Framework Development Task Force

Judy Alberta, Bedminster Township Schools

Arlene Arons, Silver Run School District

Lynda Barretto, Little Ferry School District

Jan Becker, Washington Township School District

Ruth Bodek, Jefferson School District

Helene Boedart, Long Branch School District

Vincent Borelli, Long Branch School District

Leigh Bratman, Newark Museum

Estelle Brodkey, Garden State Philharmonic

Dan Bush, Montgomery Township School District

Jo Ann Coccia, Hamilton Township School District

Karen Cummins, New Jersey State Museum

Barbara Falk, Washington Township School District

Deborah Ford, Cicely Tyson School of Performing Arts

James Frankel, Franklin Township School District

Donald Gephardt, Rowan University

Barbara Harris, South Plainfield School District

Maureen Heffernan, Institute for Arts and Humanities

Renee Hogan, Metuchen School District

John P. Iatesta, Bridgewater Raritan School District

Lynne Kramer, Project Impact

Jean Levine, Egg Harbor Township School District

Robert E. B. Manning, Atlantic City School District

Deborah Mello, Washington Township School District

Anthony Migliaccio, East Brunswick School District

Judy Nachison, New Jersey Symphony Orchestra

Edward R. Nelson, Elizabeth School District

Tanya Oznowich, New Jersey Department of Environmental Protection

Linda Pugliese, Art Educators of New Jersey

Claudia Revak, Liberty Township School District

Berda Rittenhouse, Arts Education Consultant

Dale Schmid, Gloucester County Institute for Technology

Edward Schmiedecke, Franklin Township School District

Sharon Schrack, Arts and Business Partnership

Michael Shannon, Center for Design Studies, Englewood

Rina Shere, Institute for Arts and Humanities

Richard Siegel, Morristown School District

Arthur Smith, Lacey Township School District

Sheldon Strober, Hunterdon Central School District (retired)

Bruce Taylor, Arts for Everyone

Sally Topham, Shore Valley Dance Company

Joanne Traskiewicz, Milltown School District

Carol Tremper, Hampton Township School District

Danielle Van Oyen, East Greenwich Township School District

Diane Vernam, Hillsborough Township School District

Beth Vogel, New Jersey State Council on the Arts

Septime Weber, American Repetory Theater

Marete Wester, Alliance for Arts Education/New Jersey

Gretchen Williams, Rowan University

Harriet Washington Williams, Newark School District

The Following Provided Professional Expertise

Artists

Laurence Altman, Composer, Roosevelt

Dominique Cieri, Playwright and Theater Artist, Boonton

Carol Hendrickson and Marco Giametti, Spiritree, Freehold

Wendy Lewis, Sculptor, Montclair

Robin Shevitz, Dancer, Carolyn Dorfman Dance Company

Special Education Committee

Nancy Holmes, Black Horse Pike Regional School District

Rachel McKay, Clinton Township School District

Kathy Murphy, Children's Seashore House

Debra Paragone, Clinton Township School District

David Smith, Learning Resource Center-South

Donna Wyatt, Bridgewater-Raritan School District

Patricia Zippilli, Creative Achievement Academy

Gifted and Talented Committee

Roberta Braverman, NJ Association for Gifted Children
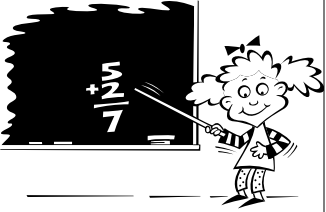
Barbara Swicord, NJ Association for Gifted Children

Bilingual/ESL Committee

Connie Cochran, Consultant

Ivette Garcia Rodriquez, Jersey City School District

Nancy Sanchez, Jersey City School District

Tommie Shider, New Brunswick School District

Raquel Sinai, NJ Department of Education

Joanne Sirdofsky, Englewood School District

Awilda Towney, Elizabeth School District

APPENDIX D:
Instructional Strategies

Figure 44

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS

Intelligence	Students learn best by:	Planning questions for teachers	Learning activities
Linguistic **ABCDEFGHIJKLM** 	Verbalizing, hearing, and seeing words	How can I use the spoken or written word?	Creative writing Formal speech Humor or telling jokes Impromptu speaking Journal or diary keeping Oral debate Poetry Storytelling Words—used in reading, writing, speaking
Logical-Mathematical 	Conceptualizing it, quantifying it, thinking critically about it	How can I bring in numbers, calculations, logic, classifications, or critical-thinking skills?	Abstract symbols, formulas Calculation Counting Deciphering codes Finding patterns Forcing relationships Graphic organizers Number sequences Outlining Problem solving Syllogisms
Spatial 	Drawing it, sketching it, visualizing it	How can I use visual aids, visualization, color, art, or metaphor?	Active imagination Color schemes Designs and patterns Drawing guided imagery Mind mapping Painting pictures Pretending Sculpture/models
Bodily-Kinesthetic 	Dancing it, building a model of it, doing a hands-on activity related to it	How can I involve the whole body or use hands-on experience?	Body language Dancing—folk or creative Drama/acting Inventing Martial arts Mime Physical gestures Physical exercises Playing sports and games Role-playing

Adapted from the *Nebraska K-12 Foreign Language Frameworks*, 1996

Figure 44 (continued)

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS

Intelligence	Students learn best by:	Planning questions for teachers	Learning activities
Musical	Singing it, chanting it, finding music that illustrates it, putting on background music while learning it	How can I bring in music or environmental sounds, or set key points in a rhythmic or melodic framework?	Creating music Environment sounds Humming Listening to music Music performance Music composition, creation Percussion vibrations Rhythmic patterns Singing Tonal patterns Vocal sounds and tones
Interpersonal	Working on it with another person or group of people	How can I engage students in peer-sharing, cooperative learning, or large-group simulation?	Collaboration skills Cooperating Cooperative learning Empathy practices Giving Feedback Group projects Intuiting others' feelings Listening Person-to-person communication Receiving feedback Sensing others' motives Talking to others Teamwork/division of labor
Intrapersonal	Relating it to a personal feeling or inner experience	How can I evoke personal feelings or memories, or give students choices?	Being alone Complex guided imagery "Centering" practices Emotional processing Focusing/concentration skills Higher-order reasoning "Know thyself" practices Metacognition techniques Mindfulness practices Silent reflection methods Telling about feelings Telling about thinking Thinking strategies
Naturalist-Physical World	Observing it, classifying it, appreciating it	How can I relate the student's learning to the physical world?	Discovering, uncovering Observing, watching Forecasting, predicting Planting Comparing Displaying Sorting and classifying Photographing Building environments

Adapted from the *Nebraska K-12 Foreign Language Frameworks,* 1996

Figure 45

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS
Multiple Intelligences Grid of Ideas

MULTIPLE INTELLIGENCES GRID OF IDEAS							
The Olympic Games or Games of Life							
Verbal	**Logical**	**Spatial**	**Bodily**	**Musical**	**Interpersonal**	**Intrapersonal**	**Naturalist**
Biographies	Graphic arts	Greek architecture	Fitness	National songs	Teamwork	Individual achievement	Nutrition
Writing about heroes	Biochemistry	Pottery	Sports	Raps	Cooperation	Pride	Health
Historical fiction	Laws of physics	Painting	Practice	Practicing music	Competition	Sense of accomplish-ment	Wellness
Myths	Statistics	Posters	Routines	Relaxation music	Sportsman-ship	Logs	Biochemistry
Literature	Percentages	Photos	Regimens	Meditation	Coaching	Journals	Climate
News reporting	Logical thinking	Graphic organizers	Physical therapy	Composing	Mentoring	Psychology of peak performance	Culture
Expository writing	Sequences	Graphs	Conditioning	Performing	Global relationships		Biofeedback
Features	Cause/effect	Visualization techniques	Experiences	Selecting appropriate music	Conflict management	Endurance	Attitudes

Multiple Intelligences Grid of Life (Fogarty, 1997)

Figure 46

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS
Planning Model Using Bloom's Taxonomy

Bloom's Taxonomy is a model that focuses on six levels of thinking. The six levels roughly form a two-tiered arrangement that represents levels of complexity in thinking. Knowledge and comprehension are the lower or more concrete levels of thinking. Analysis, evaluation, and synthesis represent higher or more complex levels of thinking. The application level, which falls between the lower and higher levels, can be very complex depending on the task.

A variety of instructional strategies and products may be catagorized for each level of thinking. Teachers who design a variety of learning activities that require different levels of thinking will provide appropriate opportunity for the diverse number of students whose thinking levels range throughout the spectrum.

Figure 46 provides a model for instructional planning based on Bloom's taxonomy of thinking. Also see Figure 47, World Languages and Bloom's Taxonomy.

Level		Definition	Instructional Strategies	Activities, Tasks, & Products
Lower, less complex, more concrete levels	Knowledge	Students recall information, recite, or write	• ask • define • describe • discover • indentify • label • list • listen • locate • match • memorize • name • observe • recite • recognize • remember • research • select • state • tell	• books • diagrams • events • exams • facts in isolation • films • film stirps • magazine articles • models • newspapers • people • plays • quiz • radio • recordings/records • tapes • text reading • vocabulary • workbook pages
	Comprehension	Students restate the information in their own words	• ask • change • compare • convert • defend • discover • distinguish • edit • explain • express • extend • generalize • give example • identify • illustrate • infer • interpret • listen • locate • match • observe • paraphrase • predict • relate • research • restate • rewrite • show symbol • summarize • transform • translate	• casual relationship • comparison of like/unlike items • conclusion/implication based on data • diagrams • films • filmstrips • graph • magazines • models • newspapers • outline • own statement • people • photograph • radio • response to questions • revisions • skit • speech • story • summary • tape recording • television

Adapted from the *Nebraska K-12 Foreign Language Frameworks,* 1996

Figure 46 (continued)

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS
Planning Model Using Bloom's Taxonomy

Level		Definition	Instructional Strategies	Activities, Tasks, & Products
Level depends on complexity of task	Application	Students apply the information on one or more contexts.	• apply • build • change • choose • classify • construct • cook • demonstrate • discover • dramatize • experiment • interview • list • manipulate • modify • paint • prepare • produce • record • report • show • sketch • solve • stimulate • teach • use guides, charts, maps	• artwork • collection • crafts • demonstration • diagram • diorama • diary • drama • forecast • illustration • list • map • meeting • mobile • model • paint • photographs • project • puzzle • question • recipe • scrapbook • sculpture • shifting smoothly from one gear into another • solution • stichery
Higher, more complex, more abstract levels	Analysis	Students understand component parts to be able to compare and contrast or categorize information.	• advertise • analyze • categorize • classify • compare • contrast • differentiate • dissect • distinguish • infer • investigate • point out • select • separate • solve • subdivide • survey	• argument broken down • chart • commercial • conclusion • checked • diagram • graph • parts of propaganda statement identified • plan • prospectus • questionnaire • report survey • report • solution • survey • syllogism broken down • word defined
	Synthesis	Students judge what they have analyzed and support their opinions.	• combine • compose • construct • create • design • estimate • forecast • hypothesize • imagine • infer • invent • predict • produce • rearrange parts • role-play • write	• advertisement • article • book • cartoon • experiment • formation of a hypothesis or question • game • invention • lesson plan • machine • magazine • new game • new product • new color, smell, taste • news article • pantomine • play • poem • puppet show • radio show • recipe • report • set of rules, principles, or standards • song • speculate on or plan alternative courses of action • story • structure • television show
	Evaluation	Students create and/or gather pieces of information to form a novel thought, idea, product, or perspective.	• appraise • choose • compare • consider • criticize • critique • debate • decide • discuss • editorialize • evaluate • give opinion, viewpoint • judge prioritize • recommend • relate • summarize • support • weigh	• conclusion • court trial • critique • debate • decision • defense/verdict • discussion • editorial • evaluation • group discussion • group • letter • news item • panel • rating/grades • recommendation • self-evaluation • standard compared • standard established • survey • valuing

Adapted from the *Nebraska K-12 Foreign Language Frameworks,* 1996

Figure 47

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS
World Languages and Bloom's Taxonomy

Knowledge/ Comprehension	Application	Analysis	Synthesis	Evaluation
What students will do:	*What students will do:*	*What students will do:*	*What students will do:*	*What students will do:*
• Write telegrams • Arrange lines of dialogues • Fill out authentic forms for the target country • Explain proverbs, slang • Listen for sequence • Explain the "What? Who? Where? How? Why?" • Give description of scenes from a video presentation • Describe pictures from the target country • Define words • Listen and paraphrase in English a conversation heard in the target language • Draw picture from verbal information of a target culture's scene or object	• Dub cartoons, TV shows • Command others step-by-step to prepare a typical cultural dish • Produce questions with correct pronunciation • Apply a cultural custom to a real-life situation in the target country • Interview classmates on their daily activities • Plan a menu for occasions typical of the target culture • Make shopping lists for various cultural, social events • Apply rules of correct cultural protocol while dining in the target country • Classify words, poems, authentic materials, genre • Apply gestures learned to an authentic situation • Apply reading strategies to understand authentic texts	• Identify elements of a particular literary form • Analyze the lyrics of popular songs to compare both cultures' perspectives • Compare points of view found in two editorials • Analyze a story, poem, and other authentic materials • Analyze a scene in the target culture • Find evidence to support opinion • Compare students' customs with the target culture's • Conduct a survey and analyze the results • Analyze the typical foods of the target country for nutritional value • Identify the best route to a historic site in the target country • Play the role of a tourist who bargains for merchandise in the target country	• Write an alternative ending to a story • Predict consequences if other historical events would have resulted differently • Write titles for a play, story, or article • Write headlines in newspaper style on current issues in the target country • Predict future events • Write a diary of an imaginary trip • Extend a story • Hypothesize the reaction to different situations based on the cultural beliefs • Compose a poem, skit, role-play, advertisement • Create hypothetical real-world situations found in the target culture • Create an infomercial	• Prioritize solutions to cultural dilemmas • Express and justify opinions on creative products of the culture • Give and support opinions about issues • Evaluate TV shows, movies, cartoons • Write an editorial giving and supporting own opinion • Express the pros and cons of policies • Give and support the decision in a mock trial • Write an ambassador with suggestions for the resolution of a real-world problem • Justify decisions of sites to visit in the target culture • Read an editorial in a target-country newspaper; respond and send response • Evaluate best World Wide Web pages for source of current events in the target country

Adapted from the *Nebraska K-12 Foreign Language Frameworks,* 1996

Figure 48

STRATEGIES FOR EXCEPTIONALLY ABLE (GIFTED) STUDENTS
Strategies for Exceptionally Able Students

To ensure success *with exceptionally able students...*

- allow for choice within assignments and projects.

- use compacting.

- allow students to make independent plans for independent learning.

- provide mentoring or apprenticeship with professionals.

- teach entrepreneurship.

- use theory of multiple intelligences.

- use tiered assignments which are more complex or abstract.

- use Socratic questioning.

- use critical and creative questioning strategies.

- use open-ended questioning strategies.

- use interdisciplinary units.

- allow in-depth enrichment learning.

- allow time with like-intellectual peers.

- use accelerated pace of instruction.

- allow dual enrollment or early admission opportunities.

- remove time and space restrictions to allow for a long-term integrated plan of study.

- provide more difficult or abstract resources.

- allow for concrete or real-life investigations and explorations.

- teach coping skills.

- allow students to suggest modifications in the content of their learning, the process which they use to learn, and the product they produce to show their learning.

- clearly communicate criteria and parameters to avoid students taking unacceptable risks or creative detours.

Adapted from the *Nebraska K-12 Foreign Language Frameworks,* 1996

Figure 49

STRATEGIES FOR STUDENTS WITH SPECIFIC LEARNING NEEDS
Considerations for Meeting Specific Learning Needs
in Skill and Instructional Areas

To ensure success *with speaking...*

- give sentence starters.
- use graphic organizers to organize ideas and relationships.
- use visuals.
- allow extra response time for processing.

- use cues and prompts to help the student know when to speak.
- use partners.
- phrase questions with choices embedded in them.

- use choral reading or speaking.
- use rhythm or music.
- allow practice opportunities for speaking.
- practice role-playing activities.

To ensure success *with assessment...*

- use a variety of authentic assessments.
- establish criteria and expectations prior to instruction.
- teach test-taking strategies.
- teach the format of an upcoming test.

- allow adequate time for test taking.
- allow paper-and-pencil tests to be taken in a different space.
- allow a variety of ways to respond, e.g., orally, pictorially, tape recordings.

- give choices.
- assess learning continuously over time, not just at the end of a unit of study.
- use rubrics.
- use self-assessment tools

To ensure success *when working in groups...*

- teach group rules and expectations.
- teach skills of independence; e.g., bridging phrases, disagreeing agreeably, voice level.
- teach manageable strategies for moving in and out of groups within the classroom setting.

- post rules and expectations.
- give adequate time but not "fooling around" time.
- be in close proximity to groups as they work.
- teach students to self-monitor group progress.
- assign student roles or responsibilities in the group.

- teach a signal for getting attention of all groups.
- practice and assess students' behaviors in small-group settings.
- use cooperative learning strategies.
- use a wide variety of groupings; e.g., flexible, cluster, skill.

Adapted from the *Nebraska K-12 Foreign Language Frameworks,* 1996

Figure 49 (continued)

STRATEGIES FOR STUDENTS WITH SPECIFIC LEARNING NEEDS
Considerations for Meeting Specific Learning Needs in Skill and Instructional Areas

The following suggestions are grouped to address specific kinds of learning needs, but the strategies also may be beneficial to other students in the same classroom.

To ensure success *with reading...*

- use pre-reading and post-reading activities to pre-teach or reinforce main ideas.
- use before, during, and after reading strategies; e.g., before—preview questions; during—pausing to reflect; after—self-evaluation, summary.
- provide advanced organizers when showing videos.
- use peer tutoring.
- provide audiotaped materials (text or study guides).

- teach self-questioning.
- paraphrase key points and/or have students paraphrase key points.
- summarize key points and/or have students summarize key points.
- label main ideas.
- label 5Ws—Who? What? When? Where? Why?
- allow highlighting of texts, passages, key words, or concepts.
- use visual imagery.

- explain idioms that appear in reading passages.
- allow silent pre-reading.
- allow partner reading.
- use computer programs or games.
- allow students to quietly read aloud (subvocalization).
- use graphic organizers.
- use preparatory set, i.e., talk through what a reading passage is about using new vocabulary and concepts.

To ensure success *with writing...*

- shorten writing assignments.
- require lists instead of sentences.
- dictate ideas to peers.
- provide note takers.
- allow students to use a tape recorder to dictate writing.
- allow visual representation of ideas.
- provide a fill-in-the-blank form for note taking.
- allow students to use a computer for outlining, word-processing, spelling, and grammar check.

- provide a structure for the writing.
- allow collaborative writing.
- provide a model of the writing.
- allow use of different writing utensils and paper.
- use a flow chart for writing ideas before the student writes.
- brainstorm a word bank of possible words that would be needed prior to the writing activity.

- narrow the choice of topics
- grade on the basis of content; do not penalize for errors in mechanics and grammar.
- allow choices of manuscript, cursive, keyboarding.
- allow different positions of writing paper and/or surfaces.

Adapted from the *Nebraska K-12 Foreign Language Frameworks,* 1996

Figure 49 (continued)

STRATEGIES FOR STUDENTS WITH SPECIFIC LEARNING NEEDS
Considerations for Meeting Specific Learning Needs
in Skill and Instructional Areas

To ensure success *with visually-impaired learners...*

- describe what you are doing.
- provide preferential seating.
- provide material in large or braille print.
- give student an individual copy of visual information presented to the group
- use black-and-white printed hand outs.
- use audiotaped books.
- use tactual materials to represent concepts—contact a vision consultant to assist with the design.
- be aware of lighting requirements.
- stand away from window glare when talking to the student.
- allow extra time to complete a task.

To ensure success *with hearing-impaired learners...*

- provide preferential seating.
- use visual cues (overheads, drawings maps, demonstrations, visual samples of new vocabulary).
- face student directly when speaking.
- emphasize key points; don't overload with information.
- repeat or rephrase what other students say—hearing what other students say is often difficult for hearing-impaired students.
- highlight text and study guides.
- provide note-taking assistance during lectures to allow hearing-impaired student to concentrate on the teacher.
- use peer tutoring.
- use study sheets to organize information.
- pre-teach vocabulary.
- use captioned videos, films, etc.
- show videos or visuals before presenting information to provide a knowledge base for students.
- use alternative testing methods.
- minimize background noise.
- simplify vocabulary.
- use preprinted outline of materials.

To ensure success *with retaining and retrieving information...*

- use multi-modalities (visual, auditory, tactile) to teach the same concept.
- teach vocabulary in context.
- use cues, prompts.
- use graphic organizers.
- use frequent repetition of key points.
- break down instructional units into smaller steps.
- show relationships among concepts through graphs, outlines, and webbing.
- use color coding to show concepts and relationships.
- use peer tutors.
- highlight important information.
- teach mnemonics as a memory tool.
- teach visual imagery.
- use rhythm, music, and movement.
- use lists
- use matrix to organize information; allow students to construct some of their own.
- use pictographs

Adapted from the *Nebraska K-12 Foreign Language Frameworks,* 1996

Figure 49 (continued)

STRATEGIES FOR STUDENTS WITH SPECIFIC LEARNING NEEDS
Considerations for Meeting Specific Learning Needs in Skill and Instructional Areas

To ensure success *with understanding new concepts...*

- pre-teach new concepts.
- identify priority learning from less important material.
- provide adequate time.
- provide meaningful practice, review, repetition
- use flow charts.
- connect previous learning to new information.

- use multiple means of learning, the same material (visual, auditory, tactile).
- have student set personal goals.
- use peer tutors.

- use multiple intelligences information to deliver material in a variety of ways.
- use cooperative learning and small groups.
- provide cues.

To ensure success *with attention deficit learners...*

- surround students with peers who are good role models. Encourage peer tutoring and cooperative, collaborative learning.
- maintain eye contact with students during verbal instruction.
- make directions clear and concise. Be consistent with daily instructions.
- simplify complex directions. Avoid multiple commands.
- make sure that students comprehend before beginning the task.
- repeat in a calm, positive manner, if needed.
- help students to feel more comfortable seeking assistance. (Most ADD students won't ask for help.)
- assign only one task at a time.
- monitor frequently. Use a supportive attitude.
- modify assignments as needed. Special education personnel can identify specific strengths and weaknesses of students.
- make sure you test knowledge and not attention span.
- give extra time for certain tasks. Students with ADD may work more slowly. Don't penalize for needed extra time.
- require a daily assignment notebook if necessary. Make sure students write down all assignments each day. Parents and teachers may sign the notebook on a daily basis and use this as an additional form of communication with one another.

Adapted from the list compiled by members of CH.A.D.D. (Children with Attention Deficit Disorders) in *Meeting The Special Needs of Students.* Glencoe/McGraw-Hill 1997, p. 10.