ARIZONA ACADEMIC STANDARDS

GRADE 8

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The Arts Standards Rationale

Dance, music, theatre and visual arts are everywhere in our lives, adding depth and dimension to the environment we live in and shaping our experiences, often so deeply or subtly that we are unaware of their presence. In any civilization, the arts are inseparable from the very meaning of the term "education." To be truly educated, one must have knowledge and skills in **Creating Art, Art in Context** and **Art As Inquiry**. In addition to specialized instruction in the arts, the knowledge and skills will be further enhanced by integration of the arts across the other curricular areas. Building mastery at each of the readiness, foundations, essentials, proficiency and distinction levels is the overriding principal of a rigorous arts education. As students continue to use a wide range of subject matter, symbols, images and expressions, they grow more sophisticated in their knowledge and use of the arts to investigate, communicate, reason and evaluate the merits of their work. As a result of developing these capabilities, students can arrive at their own knowledge, beliefs and values for making personal and artistic decisions and be better prepared to live and work in a constantly changing, expanding society.

All students will achieve the essentials level (see standards section of this document) in the four arts disciplines (music, visual arts, theatre and dance) and attain the proficiency level in at least one art form on or before graduation. All levels are built upon previous levels. Since students will achieve the proficiency level at different ages or rates, schools will provide curriculum to allow students who go beyond proficiency to study at the distinction level.

Education in the arts benefits students by:

- cultivating the whole child by building multiple literacies (e.g., developing intuition, reasoning, imagination and dexterity) into unique forms of expression and communication
- initiating them into a variety of ways of perceiving and thinking that will help them see and grasp life in new ways
- teaching the analyzation of nonverbal communication and the making of informed judgments
- enhancing understanding of themselves and others
- acquiring the tools and knowledge to take charge of their own learning—assessing where they have been, where they are and where they want to go
- promoting the processes of thinking, creating and evaluating
- developing attributes of self-discipline and personal responsibility, reinforcing the joy of learning and self-esteem, and fostering the thinking skills and creativity valued in the workplace
- demonstrating the direct connection between study, hard work and high levels of achievement
- giving them knowledge of potential career pathways or involvement in the arts
- encouraging experimentation with and utilization of current technology
- fostering a lifelong appreciation for and support of the arts

An education in the arts also benefits society and the workplace because students gain powerful skills for:

- understanding human experiences, both past and present
- learning to adapt to and respect others' ways of thinking, working and expressing themselves
- learning artistic modes of analyzing different situations, which brings an array of expressive, analytical and developmental tools to everyday experiences
- encouraging experimentation with, and utilization of, new electronic media and global networks to give them marketable workplace skills
- understanding the influences of the arts to create and reflect cultures
- understanding the impact of design on virtually all we use in daily life, and in the interdependence of work in the arts with the broader worlds of ideas and action
- learning adaptability and flexibility to meet the needs of a complex and competitive society
- learning the importance of teamwork and cooperation
- making decisions in situations where there are no standard answers
- bringing their own contributions to the nation's storehouse of culture
- communicating their thoughts and feelings in a variety of modes, giving them a vastly more powerful repertoire of self-expression
- carrying our individual and collective images and ideas from one generation to another
- recognizing the essential role the arts have in sustaining the viability of cultures

Whenever possible and within the limits and needs of individual districts, students need direct contact with objects, professional artists and performers through partnerships with state and local resources (e.g., museums, symphonies, artists in residence, traveling exhibits, theatre companies, art centers, dance companies).

Inservice and support to teachers, parents and students will be an ongoing process as innovative and integrated approaches for learning are developed within the four arts disciplines and across the other subject areas.

Success will be realized when all students have equal access to all the arts.

Research Supporting the Value of the Arts as Core Subjects

- The arts have far-reaching potential to help students achieve education goals. Students of the arts continue to outperform their non-arts peers on the Scholastic Assessment Test, according to the College Entrance Examination Board. In 1995, SAT scores for students who had studied the arts more than four years were fifty-nine points higher on the verbal and forty-four points higher on the mathematics portion than students with no course work or experience in the arts.

  The College Board, Profile of SAT and Achievement Test Takers, 1995

- The percentage of students at or above grade level in second grade mathematics was highest in those with two years of test arts, less in those with only one year and lowest in those with no test arts.

  Learning Improved by Arts Training, Nature: International Weekly Journal of Science, by Alan Fox, Donna Jeffrey and Faith Knowles, May 1996

- Researchers at the University of California, Irvine, studied the power of music by observing two groups of preschoolers. One group took piano lessons and sang daily in chorus. The other did not. After eight months the musical three year olds were expert puzzlemasters, scoring 80 percent higher than their playmates did in spatial intelligence--the ability to visualize the world accurately. This skill later translates into complex mathematics and engineering skills. "Early music training can enhance a child's ability to reason," says Irvine physicist Gordon Shaw.

  Scientists argue that children are capable of far more at younger ages than schools generally realize…the optimum "window of opportunity for learning" lasts until about the age of ten or twelve, says Harry Chugani of Wayne State University's Children's Hospital of Michigan.

  Why Do Schools Flunk Biology?, Newsweek, by LynNell Hancock, February 1996

- Classes were more interactive, there were more student-initiated topics and discussions, and more time was devoted to literacy activities and problem solving activities in schools using the arts-based "Different Ways of Knowing" program. The program also produced significant positive effects on student achievement, motivation and engagement in learning.

  Different Ways of Knowing: 1991-94 National Longitudinal Study Final Report, by J.S. Catterall,1995

- Self-concept is positively enhanced through the arts, according to a review of fifty-seven studies, as are language acquisition, cognitive development, critical thinking ability and social skills. The authors examined studies of measurable results in the emotional and social development of children. The relationship between music participation and self-concept was strongly in evidence.

  The Effects of Arts and Music Education on Student's Self-Concept, by J. Trusty and G. M. Oliva,1994

- As critics, the children learned to emphasize the value of rules, resources and bases for common knowledge in dramatic interpretation. As characters, they shifted perspective from self to other through voice, physical action, and connection to other characters.

  Learning to Act/Acting to Learn: Children as Actors, Critics, and Characters in Classroom Theatre, by Shelby Wolf, 1994

- Research at New York University revealed that critical thinking skills in the arts are transferred to other subjects,[1] which is something Ann Alejandro, a teacher in the Rio Grande Valley in South Texas, observes in her classroom everyday: "I am convinced of the parallels between teaching children how to draw and teaching them how to read and write. In all cases, students need to learn how to see, to interpret data from the word, the canvas, and the page."[2]

- The writing quality of elementary students was consistently and significantly improved by using drawing and drama techniques, compared to the control group, which used only the discussion approach. Drama and drawing techniques allowed the students to experiment, evaluate, revise and integrate ideas before writing began, thus significantly improving results.

  Drama and Drawing for Narrative Writing in Primary Grades, by B.H. Moore and H. Caldwell, 1993

- Students improved an average of one to two months in reading for each month they participated in the "Learning to Read Through the Arts" program in New York City. Students' writing also improved, the study revealed. "Learning to Read Through the Arts," an intensive, integrated arts curriculum, has been designated a model program by the National Diffusion Network and has been adopted by numerous schools and districts across the country.

  Chapter 1 Developer/Demonstration Program: Learning to Read Through the Arts, 1992-93; Office of Educational Research, New York City Board of Education, 1993, 1981, 1978

- Originality and imagination scores were significantly higher for preschool children with disabilities after participation in a dance program than for those participating in the adopted physical education program.

  Effect of a Dance Program on the Creativity of Preschool Handicapped Children, by D. Jay, 1991

- "Humanitas Program" students in Los Angeles high schools wrote higher quality essays, showed more conceptual understanding of history, and made more interdisciplinary references than non-Humanitas students. Low achieving students made gains equivalent to those made by high achieving students. The Humanitas Program incorporates the arts into a broad humanities curriculum, drawing upon the relationship between literature, social studies and the arts. The program has reached 3.500 students in twenty high schools.

  The Humanitas Program Evaluation Project 1990-91, by P. Aschbacher and J. Herman, 1991

- High-risk elementary students with one year in the "Different Ways of Knowing" program gained eight percentile points on standardized language arts tests; students with two years in the program gained sixteen percentile points. Non-program students showed no percentile gain in language arts. Students with three years in the program outscored non-program students with significantly higher report card grades in the core subject areas of language arts, mathematics, reading and social studies. Participants showed significantly higher levels of engagement and increased beliefs that there is value in personal effort for achievement. In total, 920 elementary students in fifty-two classrooms were studied in this national longitudinal study in Los Angeles, south Boston, and Cambridge, Massachusetts.

  Different Ways of Knowing: 1991-94 National Longitudinal Study Final Report, by J.S. Catterall, 1995

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[1] *National Arts Education Research Center Principal Research Findings, 1987-1991, by Jerrold Ross and Ellyn Berk, 1992*

[2] *Like Happy Dreams-Integrating Visual Arts, Writing and Reading, by Ann Alejandro, 1994*

Table 1. The Arts Standards

MUSIC

STANDARD 1: Creating Art
Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

STANDARD 2: Art in Context
Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

STANDARD 3: Art As Inquiry
Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

VISUAL ARTS

STANDARD 1: Creating Art
Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

STANDARD 2: Art in Context
Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

STANDARD 3: Art As Inquiry
Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

THEATRE

STANDARD 1: Creating Art
Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

STANDARD 2: Art in Context
Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

STANDARD 3: Art As Inquiry
Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

DANCE

STANDARD 1: Creating Art
Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

STANDARD 2: Art in Context
Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

STANDARD 3: Art As Inquiry
Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

The Arts Standards Integration Statement

Because the Arizona Department of Education has an expectation that the content areas will be integrated across the curriculum, this document provides suggested integration links for each discipline and its related standard. Arizona's Arts Standards address competence in the arts disciplines first of all. That competence provides a firm foundation for connecting arts-related concepts and facts across the art forms, and from them to the sciences and humanities. A key factor in this approach to learning is the need for students to acquire enough prior knowledge and experience in one discipline to make applications in another.

Integration means identifying concepts shared among two or more content areas and including performance objectives for each discipline in the instructional model. All subject matter disciplines are comprised of concepts. A concept is an idea which applies to multiple content areas but which may represent the idea in different ways when used within each individual content area. Concepts can be very concrete or they can be representative of abstract ideas.

Learning is an integrative process. In a balanced curriculum, opportunities for students to use what is learned in one discipline to clarify or enhance an idea, concept, or skill in another occur almost daily. As learners work across the disciplines, there are many opportunities to discover relationships that lead to the process of forming ideas and concepts. This way of learning provides an intellectual stimulation involving thinking, feeling, and doing behaviors that enable students to be more flexible and inventive in their approaches to problem solving processes. All teachers, regardless of discipline, are encouraged to find links between their subjects and the area of the arts.

Integration links which appear in Arizona's Arts Standards follow the performance objectives (POs) within the standards. The links identify other disciplines and the concepts they share with the arts. These references suggest a few examples of the many ways creative teachers will make connections between content areas.

Credits: Visual and Performing Arts Framework for California Public Schools (1983)
National Standards for Arts Education (1994)

THE ARTS STANDARDS
BY LEVEL: ESSENTIALS (Grades 4-8)

MUSIC

Singing, playing instruments, moving to music, and creating music enables students to acquire skills and knowledge about a diverse range of musical styles: symphonic, chamber, opera, musical, folk, jazz, pop, mariachi, gospel, and contemporary and traditional cultural genres. Learning to read and notate music gives students skills with which to explore and critique music independently and with others. Listening, analyzing and evaluating music helps students understand their own historical and cultural heritage and those that surround them.

STANDARD 1: CREATING ART (Music)

Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

- **1AM-E1. Expand note-reading ability to include sixteenth and dotted notes, and rests in 6/8, 3/8, and *alla breve* (cut time) meter signatures**

  (Grades 4-5)
  PO 1. Identify meter and note/rest values
  PO 2. Compare/contrast meter and note/rest values
  PO 3. Speak and/or sing and/or play examples of music utilizing the above elements

  (Grades 6-8)
  PO 1. Read patterns using the above elements
  PO 2. Demonstrate patterns using the above elements
  PO 3. Write patterns using the above elements

  Possible links to: Art – rhythm; Comprehensive Health/Dance - pulmonary rhythms, circulatory rhythms; Mathematics - numbers, count, add, divide, measurement; Science – rhythm

- **1AM-E2. Articulate notes on the page (e.g., letters [a, b, c, d, e, f, g], numbers [1, 2, 3, etc.], syllables [do, re, mi, etc.])**

  (Grades 4-5)
  PO 1. Read simple notation

  (Grades 6-8)
  PO 1. Read notation based upon major and minor tonalities

  Possible links to: Mathematics - numbers, linear measurement, line; Science – sound

- **1AM-E3. Sing/perform accurately and with good breath control, tone quality, posture and technique**

  (Grades 4-5)
  PO 1. Demonstrate appropriate diaphragmatic breathing in vocal and instrumental music
  PO 2. Stand/sit with posture appropriate to activity

  (Grades 6-8)
  PO 1. Perform with appropriate tone quality

  Possible links to: Comprehensive Health/Dance - pulmonary, circulatory, bodily balance; Science - anatomy, physiology, equilibrium of force, structure

- **1AM-E4. Sing/play in ensemble or alone, with expression and technical accuracy, a varied repertoire of musical literature with level of difficulty 3 on a scale of 1-6, including some songs performed from memory**

  (Grades 4-5)
  PO 1. Perform pieces of various styles for an audience with expression (e.g., dynamics, phrasing) and technical accuracy (e.g., breath support, pitch, diction)

  (Grades 6-8)
  PO 1. Sing/play numerous pieces of music in various styles (e.g., spirituals, folk songs) with improved expression (e.g., dynamics, phrasing) and technical accuracy (e.g., breath support, pitch, diction)
  PO 2. Sing music without accompaniment (*a capella*) if stylistically appropriate

  Possible links to: Foreign Language - communication, culture, communities; Social Studies - culture, race, region, history

- **1AM-E5. Recognize and perform the major and minor scale structures**

  (Grades 4-5)
  PO 1. Identify pattern of whole and half-steps in the major and minor scales (natural and harmonic)
  PO 2. Sing/play tetrachord/major scales

  (Grades 6-8)
  PO 1. Identify pattern of whole and half-steps in the major and minor scales (melodic)
  PO 2. Notate major/minor scales
  PO 3. Sing/play major and minor scales

  Possible links to: Mathematics - measurement, linear measurement; Science - sound, cycle, cause/effect, balance

- **1AM-E6. Sight-read accurately and expressively music with level of difficulty 2 on a scale of 1-6**

  (Grades 4-5)
  PO 1. Sight-read at level of difficulty 1

  (Grades 6-8)
  PO 1. Sight-read at level of difficulty 2

- **1AM-E7. Improvise simple harmonic accompaniments and melodies**

  (Grades 4-5)
  PO 1. Identify tonic and dominant chords
  PO 2. Play an improvised harmonic accompaniment using tonic and dominant chords
  PO 3. Sing and/or play an improvised melody based on a two-chord progression

  (Grades 6-8)
  PO 1. Identify sub-dominant chords
  PO 2. Play an improvised harmonic accompaniment using tonic, dominant, and sub-dominant
  PO 3. Sing and/or play an improvised melody based on a three-chord progression

  Possible link to: Science - sound

- **1AM-E8. Compose short pieces within specified guidelines, demonstrating how the elements of music are used to achieve unity and variety, tension and release, and balance**

  (Grades 4-5)
  PO 1. Create a 2, 4, or 8 bar piece using standard or nonstandard notation

  (Grades 6-8)
  PO 1. Create a 4, 8, or 16 bar piece using standard notation

  Possible links to: Art - texture, balance, symmetry/asymmetry; Mathematics – symmetry/ asymmetry

- **1AM-E9. Identify and demonstrate the basic physical and scientific properties of the technical aspects of music (e.g., acoustics, resonance, intervals, materials used in the construction of instruments, computer keyboards and workstations, Musical Instrument Digital Interface [MIDI], Computer Assisted Musical Instruction [CAMI], mathematics, human anatomy)**

  (Grades 4-5)
  PO 1. Explain the nature of sound as vibration
  PO 2. Describe the effect an instrument's physical properties will have upon its sound
  PO 3. Analyze the qualities that differentiate one instrument or voice from another

  (Grades 6-8)
  PO 1. Identify the harmonic series
  PO 2. Explain the effect the harmonic series has on the timbre of an instrument
  PO 3. Compare/contrast an instrument's construction with its sound

  Possible links to: Science - sound, equilibrium of force and structure, matter, electricity; Technology - essential skills, current technologies

- **1AM-E10. Use a variety of traditional (e.g., voices, instruments) and non-traditional (e.g., paper tearing, clapping, finger snapping, pencil tapping) sound sources and electronic media when composing and arranging**

  Possible links to: Science - sound, equilibrium of force and structure, matter, electricity; Technology - essential skills, current technologies

STANDARD 2: ART IN CONTEXT (Music)

Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

- **2AM-E1. Analyze the uses of dynamics, pitch, duration, melodic contour, structure, timbre, and tempo in aural examples representing diverse genres and cultures**

  (Grades 4-5)
  PO 1. Describe characteristics of various musical genres and cultures

  (Grades 6-8)
  PO 1. Identify the musical elements (listed in above concept) used in a musical score
  PO 2. Compare/contrast the musical elements of various genres and cultures

  Possible link to: Social Studies - culture, race, region, location, history

- **2AM-E2. Describe and classify by genre and style listening examples of high quality; explain the characteristics that cause those selections to be exemplary**

  (Grades 4-5)
  PO 1. Identify characteristics of various musical genres and styles

  (Grades 6-8)
  PO 1. Identify characteristics of an exemplary performance
  PO 2. Evaluate the difference between an adequate and an exemplary performance

- **2AM-E3. Discuss diverse functions which music serves**

  (Grades 4-5)
  PO 1. Identify various settings where music is used

  (Grades 6-8)
  PO 1. Compare/contrast music's function in various settings

  Possible links to: Foreign Language - culture, communities; Social Studies - culture, race, region, location, history

- **2AM-E4. Compare the roles of musicians (e.g., music video performer, symphony conductor, opera soloist, gospel choir singer, recording artist, film score composer/ arranger, church organist, Apache violinist) according to the various functions and the conditions under which music is performed**

  (Grades 4-5)
  PO 1. Identify the roles and responsibilities of various music professions

  (Grades 6-8)
  PO 1. Describe how two or more roles could be used to achieve a performance

STANDARD 3: ART AS INQUIRY (Music)

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

- **3AM-E1. Devise and apply criteria for evaluating performances and compositions**

  (Grades 4-5)
  PO 1. Identify criteria used in evaluating performances and compositions

  (Grades 6-8)
  PO 1. Compare/contrast performances of similar and different musical genre

Possible link to: Social Studies - culture, race, region, location, socialization, values

- **3AM-E2. Describe ways in which the principles and subject matter of other disciplines taught in the school are interrelated with music**

  (Grades 4-5)
  PO 1. Describe elements of subject matter in other disciplines
  PO 2. Compare/contrast elements from PO 1 with the elements used in music

  (Grades 6-8)
  PO 1. Describe how the various musical elements could foster learning in other disciplines (e.g., periodic table)

  Possible links to: Art - color, line, form, space, texture, balance, rhythm, harmony, emotional, meaning; Comprehensive Health/Dance - time, force, energy, rhythm, motion, movement, kinesiology; Foreign Language - culture, communication, communities; Mathematics - numbers, count, add, divide, measurement, time, geometry, line; Science - equilibrium of force and structure, sound, cycle, chance, cause/effect, energy, balance, theory; Social Studies - culture, race, region, location, history

- **3AM-E3. Analyze and demonstrate the use of the elements of music (e.g., in live and recorded performance, verbal discussion)**

  (Grades 4-5)
  PO 1. Analyze how music is used to reflect particular moods and feelings
  PO 2. Demonstrate a story utilizing the elements of music

  (Grades 6-8)
  PO 1. Create a story utilizing the elements of music

  Possible links to: Art - color, line, form, space, texture, balance, rhythm, harmony, emotional, meaning; Comprehensive Health/Dance - time, force, energy, rhythm, motion, movement, kinesiology

VISUAL ARTS

Study in the visual arts develops students' skills of observation as they learn to examine the objects and events of their lives. At the same time, they grow in their ability to describe, interpret, evaluate and respond to work in the visual arts. The visual arts are extremely rich. This broad category includes the traditional fine arts such as drawing, painting, printmaking, sculpture, photography and communication; design arts such as film, television, graphics and product design; architecture and environmental arts such as urban, interior and landscape design; folk arts; and works in ceramics, fiber and jewelry, as well as in wood, paper and other materials. Through examination of their own work and that of other people at various times in various places, students learn to unravel the essence of artwork and to appraise its purpose and importance. Further, they learn to make choices that enhance communication of their ideas.

STANDARD 1: CREATING ART (Visual Arts)

Students know and apply the arts, disciplines, techniques and processes to communicate in original or interpretive work.

- **1AV-E1. Choose the most appropriate media, techniques, and processes to enhance communication of one's own ideas and experiences**

  (Grades 4-5)
  PO 1. Create artwork using the most appropriate media to communicate ideas and experiences

  (Grades 6-8)
  PO 1. Create artwork using the most appropriate techniques and processes to communicate ideas and experiences
  PO 2. Analyze the effectiveness of the characteristics of the specific media used to enhance the communication of experiences and ideas

- **1AV-E2. Demonstrate increasing technical ability and skill to complete visual arts assignments**

  (Grades 4-8)
  PO 1. Demonstrate technical ability and skill to complete visual arts assignments
  PO 2. Demonstrate improvement of technical ability and skill in a sequence of one's own artwork
  PO 3. Produce a portfolio demonstrating improved technical ability and skill

  Possible links to: Language Arts – illustrations; Mathematics - charts, graphs; Technology - use of tools

- **1AV-E3. Identify and demonstrate the basic physical and scientific properties of the technical aspects of visual arts media (e.g., glazes, paints, printing equipment, photo papers/chemicals, fiber dyes, kilns, cameras, computer software and hardware, mathematics, light, tensile strength)**

  (Grades 4-8)
  PO 1. Identify basic physical and scientific properties of the technical aspects of visual arts media
  PO 2. Demonstrate, within one's own artworks, the basic physical and scientific properties of the technical aspects of visual arts media

  Possible links to: Mathematics – ratios; Science - properties of materials; Technology - advances, use of tools

- **1AV-E4. Continue to expand knowledge and use of different arts media, acquiring several new techniques**

  (Grades 4-5)
  PO 1. Know how to use different arts media and techniques
  PO 2. Demonstrate the use of different arts media and techniques

  (Grades 6-8)
  PO 1. Compare different arts media and techniques
  PO 2. Select a combination of known techniques and apply them in new and different ways creating artworks

  Possible links to: Language Arts - reading instructions; Science - properties of materials; Social Studies - social and cultural advancements; Technology - use of tools and materials to create a product

- **1AV-E5. Investigate and sequence multiple visual solutions to a given problem, making revisions and articulating the rationale for the best solutions**

  (Grades 4-5)
  PO 1. Identify the issues to be addressed within one's own artwork
  PO 2. Determine the variety of options one could use in producing an artwork to address an artistic problem
  PO 3. Select the specific options that would best solve an artistic problem
  PO 4. Create an artwork that best solves an artistic problem

  (Grades 6-8)
  PO 1. Analyze factors leading to a successful resolution of an artistic problem
  PO 2. State rationale for the choices or options selected in resolving the artistic Problem

  Possible links to: Language Arts - persuasive writing; Science - properties of materials; Technology - problem solving

STANDARD 2: ART IN CONTEXT (Visual Arts)

Students demonstrate how interrelated conditions (social, economic, political, time, and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

- **2AV-E1. Use subjects, themes and symbols that demonstrate knowledge of contexts, values and aesthetics to communicate intended meaning in their artworks**

  (Grades 4-5)
  PO 1. Identify cultural and historical symbols for one's own meaning, past and present
  PO 2. Apply subjects, themes or symbols from various cultural or historical contexts to one's own artwork that will communicate their intended meanings
  PO 3. Compare and contrast the values and aesthetics of one's own work and the historic or cultural work with similar meanings

  (Grades 6-8)
  PO 1. State meaning of symbols and subject matter based on their values and preferences
  PO 2. Predict the intended meanings of symbols and subject matter to the viewing audience
  PO 3. Evaluate one's own work based on the success of communicating their intended meaning

  Possible links to: Language Arts - understanding visual symbolism; Mathematics - function symbols; Music – symbols; Science – symbols; Social Studies - symbols in context of time and place

- **2AV-E2. Identify and investigate visual arts careers and qualifications, noting the personal and work attributes required to succeed**

  (Grades 4-8)
  PO 1. Determine careers in the visual arts
  PO 2. Research a particular career choice for qualifications necessary
  PO 3. List one's own personal strengths and interests and match those with existing arts careers

  Possible links to: Language Arts - research and articulation; Technology - skill requirements; Workplace Skills - career awareness

- **2AV-E3. Identify and compare the characteristics of artworks that share similar subject matter, historical periods or cultural context**

  (Grades 4-5)
  PO 1. Determine characteristics in several artworks from the same cultural group
  PO 2. Compare and contrast the characteristics of various cultural groups in similar time periods
  PO 3. Compare and contrast the use of subject matter in various cultural groups in various time periods

  (Grades 6-8)
  PO 1. Categorize subject matter based on cultural or historical content
  PO 2. Differentiate the similarities in their artwork with characteristics of cultural groups or historical periods

  Possible links to: Language Arts - articulation of genre; Mathematics - patterns and relationships; Technology - tools used to create; Workplace Skills - speak in a content area using appropriate vocabulary

- **2AV-E4. Describe the role art plays in culture and how it reflects, records and shapes history in various times, places and traditions**

  (Grades 4-5)
  PO 1. Explain functional and non-functional art forms
  PO 2. Describe traditional art forms based on culture
  PO 3. State the social, economic, political, geographic, or cultural implications of one's own work

  (Grades 6-8)
  PO 1. Categorize art images/objects for one's own social, economic, political, geographic, and/or cultural purposes
  PO 2. Appraise the social, economic, political, geographic, and/or cultural purpose of one's own work

  Possible links to: Language Arts – articulation; Mathematics - patterns and relationships; Technology - evaluate tools and materials used; Workplace Skills - articulation using appropriate vocabulary

STANDARD 3: ART AS INQUIRY (Visual Arts)

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

- **3AV-E1. Compare and contrast the various purposes for creating art**

  (Grades 4-8)
  PO 1. Analyze purposes for creating art
  PO 2. Compare various purposes for creating art
  PO 3. Contrast various purposes for creating art

  Possible links to: Language Arts – articulation; Social Studies - social context; Workplace Skills - share ideas

- **3AV-E2. Identify the artistic styles of realistic, abstract and non-objective artworks**

  (Grades 4-5)
  PO 1. Identify realistic artworks
  PO 2. Identify abstract artworks
  PO 3. Identify non-objective artworks

  (Grades 6-8)
  PO 1. Explain characteristics of realistic artworks
  PO 2. Explain characteristics of abstract artworks
  PO 3. Explain characteristics of non-objective artworks

  Possible links to: Language Arts – articulation; Mathematics - geometry and symmetry

- **3AV-E3. Interpret and describe the messages of contemporary and historic artworks in terms of cultural and ethnic influences**

  (Grades 4-5)
  PO 1. Describe the meaning of contemporary artworks in terms of a particular culture or ethnic back ground
  PO 2. Describe the meaning of historical artworks in terms of a particular culture or ethnic background

  (Grades 6-8)
  PO 1. Interpret the meaning of contemporary artworks in terms of a particular culture or ethnic background
  PO 2. Interpret the meaning of historical artworks in terms of a particular culture or ethnic background
  PO 3. Suggest the influences of culture on artworks

Possible links to: Language Arts – articulation; Social Studies - cultural and ethnic study; Technology - electronic information/research sources

- **3AV-E4. Use art elements and the principles of design to describe the effective communication of ideas in one's own personal work and in the work of master artists**

  (Grades 4-5)
  PO 1. Use the elements of art to describe the effective communication of ideas in the work of master artists of various cultures
  PO 2. Use the principles of design to describe the effective communication of ideas in the work of master artists of various cultures

  (Grades 6-8)
  PO 1. Use the elements of art to describe the effective communication of ideas in one's own personal work
  PO 2. Use the principles of design to describe the effective communication of ideas in one's own personal work

  Possible links to: Language Arts – articulation; Social Studies - historical context of master work; Technology - electronic information/research source

- **3AV-E5. Describe and compare own responses and responses of others to works by artists from various eras and cultures**

  (Grades 4-5)
  PO 1. Develop one's own response about works from various eras and cultures
  PO 2. Identify the responses of others about works from various eras and cultures
  PO 3. Compare one's own response with the responses of others about works from various eras and cultures

  (Grades 6-8)
  PO 1. Develop one's own rationale about works from various eras and cultures
  PO 2. Describe the rationale of others about works from various eras and cultures
  PO 3. Compare one's own rationale with the rationale of others about works from various eras and cultures

  Possible links to: Language Arts – articulation; Social Studies - historical concept/social responses; Technology - electronic information/research sources

- **3AV-E6. Describe and demonstrate the persuasive power of the visual arts to influence messages used by business, industry and politics**

  (Grades 4-5)
  PO 1. Identify images used to influence messages used by business, industry, and politics
  PO 2. Describe the persuasive power of the images to influence messages used by business, industry and politics

(Grades 6-8)
PO 1. Develop a presentation illustrating the persuasive power of the visual arts to influence messages used by business, industry and politics

Possible links to: Language Arts - articulation, analyze visual media; Social Studies – political, economic and social ramifications of art

- **3AV-E7. Describe ways in which the principles and subject matter of other disciplines in the curriculum are interrelated with visual arts**

(Grades 4-5)
PO 1. Identify the curriculum concepts from other disciplines that are used in the visual arts (e.g., measurements in mathematics, writing and public speaking in language arts)

(Grades 6-8)
PO 1. Explain how the curriculum concepts translate from other disciplines into the visual arts (e.g., measurements in mathematics, writing and public speaking in language arts)
PO 2. Employ the curriculum concepts from other disciplines to the visual arts (e.g., measurements in mathematics, writing, and public speaking in language arts)

Possible links to: all content areas

- **3AV-E8. Demonstrate the process and value of critiquing one's own artwork and the work of others, using technology as one means of communicating personal ideas in a variety of forums**

(Grades 4-5)
PO 1. Demonstrate one process of critiquing an artwork
PO 2. Name a benefit of the critique process

(Grades 6-8)
PO 1. Summarize one process of critiquing
PO 2. Use one process of critiquing to critique one's own work using a computer
PO 3. Use one process of critiquing to critique the work of others using a computer

Possible links to: Language Arts - articulation, analyze visual media;
Social Studies - politics, economics, society

THEATRE

Theatre represents a broad and diverse range of forms such as Japanese Kabuki theatre, improvisation, Indonesian shadow puppetry, television, pantomime, Native American storytellers, Noh, drama, film, vaudeville and dramatic readings. Students develop theatre literacy in learning to see the created world of theatre through the eyes of the playwright, actor, designer and director. By creating, performing, analyzing and critiquing dramatic works, students develop a deeper understanding of personal issues and a broader world view that includes global issues. Theatre is an art of synthesis. Language arts, social studies, and the other arts disciplines are an integral part of theatre and as such are already deeply embedded in the standards and performance objectives. Therefore, examples included link theatre to such disciplines as foreign language, health, mathematics, science, technology, workplace skills.

STANDARD 1: CREATING ART (Theatre)

Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

- **1AT-E1. Create and script (e.g., through scenarios for improvisations and scripts), both individually and in groups, scenarios that develop tension and suspense between believable, interrelated characters**

  (Grades 4-5)
  PO 1. Develop a scene that has a simple series of actions with conflict, challenge, or problems for the characters
  PO 2. Analyze the relationships and believability of the characters in the improvisation
  PO 3. Use class discussions as a basis for scripting (in appropriate format) a scene that involves character, tension/conflict, and action

  (Grades 6-8)
  PO 1. Create a draft for a short play or screen play with several scenes including subplots and major and minor conflicts
  PO 2. Rewrite a short play or screenplay with insights based on improvisations and/or readings of the draft scripts working for dialogue and action appropriate for characters and situation

  Possible link to: Language Arts - creative writing, reading, formatting

- **1AT-E2. Demonstrate mental and physical attributes (e.g., concentration, sense recall, and ability to remember lines and cues; breath and vocal control, body alignment, flexibility, and coordination) required to communicate characters different from themselves**

  (Grades 4-5)
  PO 1. Concentrate as a character portraying simple identified role characteristics
  PO 2. Demonstrate fluidity of dialogue in improvisations and when remembering lines and taking cues for scripted dramas
  PO 3. Use simple vocal techniques (e.g., rate, tone, pitch, rhythm, tempo, volume) to create a believable character

PO 4. Use simple range of movement to differentiate one character from another
Possible links to: Dance – movement; Science - sound, pitch; Social Studies – psychology

(Grades 6-8)
PO 1. Support the relationships with other characters in a role within the scene
PO 2. Demonstrate fluidity of dialogue when delivering lines and responding to cues
PO 3. Use vocal techniques (e.g., enunciation, pronunciation, rate, rhythm, tempo, tone, pitch, volume) to create a character
PO 4. Demonstrate a controlled range of movement to differentiate one character from another

Possible links to: Dance – movement; Science – sound

- **1AT-E3. Cooperate in an ensemble to rehearse and present improvisations and scripted scenes involving themselves as invented characters**

(Grades 4-5)
PO 1. In small groups cooperatively plan scenes or improvisations
PO 2. Rehearse an improvisation or scene making certain the action is seen and heard
PO 3. Participate in a classroom presentation and/or a film/video demonstrating vocal and movement techniques to portray a character

Possible links to: Language Arts –presentation skills; Workplace Skills - cooperation, planning

(Grades 6-8)
PO 1. Based on an analysis of the text, describe character motivations, the basic structure of the story, and the role of the environment in the story
PO 2. Integrate the ideas of student designers and directors in the development of a scene for production, using readily available materials for scenery, props and costumes
PO 3. Demonstrate the ability to take direction from teacher or student director
PO 4. Give directions as director or designer (based on an analysis of the text, including placement of characters that utilize all stage areas–upstage, down stage, etc.–and that creates emphasis and contrast)
PO 5. Participate in a formal presentation and/or a film/video that demonstrates ability to portray a character (e.g., through vocal and movement control, concentration, reaction)

Possible links to: Language Arts - presentation skills; Social Studies – psychology; Workplace Skills - cooperation, planning

- **1AT-E4. Identify and demonstrate the basic physical and chemical properties of the technical aspects of theatre (e.g., light, color, electricity, paint, set construction and makeup)**

  (Grades 4-5)
  PO 1. Demonstrate the effect of a light source on shadow (reflection, refraction and absorption) and mood
  PO 2. Mix paint to create different colors, values, and hues; explain the process

  (Grades 6-8)
  PO 1. Demonstrate light as an additive phenomenon (i.e., the primary lighting colors are blue, green, and yellow, and by adding them other colors and white can be created) and paint as subtractive (i.e., pigments in which the primary colors red, blue, and yellow, absorb light and mixing them leads to black)
  PO 2. Describe basic characteristics of electricity as it is used to control light (e.g., wattage, voltage and electronic dimmers)
  PO 3. Explain the basic differences between oil and water-based makeup and the effect each has on the skin

  Possible links to: Language Arts - presentation skills; Science - properties of matter, electricity; Technology - machines, color theory; Visual Art – color theory

- **1AT-E5. Analyze scenes for artistic and technical requirements; develop design based on musical and visual art principles that meet the requirements of the scene**

  (Grades 4-5)
  PO 1. Discuss how visual and aural design elements affect the audience
  PO 2. Experiment with arts media and techniques to create a design that contributes to the mood and meaning of an improvisation (e.g., collage, computer image, sound plot)

  (Grades 6-8)
  PO 1. Create a floor plan for the scene indicating environmental objects and set props; take into account sight lines and character action
  PO 2. Develop a design that communicates story and environment for a theatre, film or video scene (i.e., choices about art elements in the setting, lighting, sound and costumes should convey a unified meaning)
  PO 3. Make costume sketches (using figure models if needed) to convey character and character relationships, class, time, culture)
  PO 4. Design makeup (given face models) to suggest age and personality of the character
  PO 5. Create a simple light and sound plot indicating cues for changes (based on available equipment)

  Possible links to: Music - aural design elements; Social Studies - historical research; Technology - equipment use, computers; Visual art - design, drawing; Workplace Skills – problem solving, collaboration

- **1AT-E6. Work collaboratively and safely to select and create elements of scenery, properties, lighting, sound, costumes and makeup that will suggest their designs**

  (Grades 4-5)
  PO 1. Use available art materials and tools to construct set pieces or select from a variety of sources, objects that can convey the image of the environment
  PO 2. Make certain the action is seen and light sources colored to enhance the mood of the scene
  PO 3. Record and play sound to enhance the mood and meaning of the scene
  PO 4. Select costume accessories (e.g., from home wardrobes) to enhance the design of the performance and help delineate character

  (Grades 6-8)
  PO 1. Use tools correctly (power tools if available and appropriate for the project) when constructing the scenery for the presentation
  PO 2. Use lighting and sound equipment appropriately
  PO 3. Construct costume pieces to enhance characterization and performance
  PO 4. Apply simple suggestive makeup using safe products and procedures

  Possible links to: Music - aural design elements; Social Studies - historical research; Technology - apply information; Visual art - design, drawing; Workplace Skills - problem solving, collaboration

STANDARD 2: ART IN CONTEXT (Theatre)

Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

- **2AT-E1. Analyze the physical, emotional and social dimensions of characters found in dramatic texts from various genre and media**

  Given a dramatic text or media presentation:

  (Grades 4-5)
  PO 1. Identify and compare the physical traits (e.g., ethnicity, body shape, age, physical ability) of various characters
  PO 2. Explain how the emotional range (e.g., feelings that motivate a character, feelings or reactions) of characters effects their personality
  PO 3. Identify and compare the social status of characters

  Possible links to: Comprehensive Health – lifestyle; Foreign Language – culture; Workplace Skills - communication, critical thinking

(Grades 6-8)

PO 1. Compare similar characters (e.g., physical, social and emotional dimensions) from written or media sources

PO 2. Compare similar characters from two different genres of drama (e.g., comedy, drama, farce)

- **2AT-E2. Explain and compare the roles and interrelated responsibilities of various personnel involved in theatre, film, television and/or electronic media productions**

(Grades 4-5)

PO 1. Explain what the playwright, actor, designer and director do to put on a play and the role of editor, camera operator in film

PO 2. Compare and contrast the roles and responsibilities of actors, designers and directors in film and theatre

Possible link to: Workplace Skills - careers, personal traits

(Grades 6-8)

PO 1. Explain how theatre/film playwrights, directors, producers, actors, designers work together to plan and produce a show

PO 2. Utilize knowledge of roles and responsibilities of various theatre/film/television professionals to collaborate on the production of a scene, short video, puppet show

Possible links to: Foreign Language – culture; Mathematics - graphs, tables; Technology – products

- **2AT-E3. Explain how social concepts (e.g., cooperation, communication, collaboration, consensus, self-esteem, risk-taking, sympathy, empathy) apply in theatre and in daily life, literature or history**

(Grades 4-5)

PO 1. Utilizing their knowledge of social skills needed in the planning, rehearsing and presentation of a dramatic work, give examples from daily life when these skills are applicable

PO 2. Compare the social behavior of characters in a film/television and or theatre productions with examples from social behavior in similar situations in daily life

PO 3. Improvise scenes exemplifying these behaviors

Possible link to: Comprehensive Health - personal well-being behavior, family relationships

(Grades 6-8)

PO 1. Discuss ways in which different behaviors might change or resolve the fictional problem

PO 2. Incorporate insights from comparison of character behavior in dramatic literature and productions to analyze real life situations

Possible link to: Workplace Skills - personal, professional well-being

- **2AT-E4. Apply research to script writing, acting, designing and directing**

(Grades 4-5)

PO 1. Identify a variety of sources (e.g., library, school, community) to supply information about characters, environment, etc. to improve a performance

PO 2. Evaluate the research materials for appropriateness and usefulness to support character, story development and design

Possible link to: Technology - research, material presentation

(Grade 6-8)

PO 1. Refine research skills (e.g., increase sources, analyze sources in more depth)

PO 2. Present selected information from research to the ensemble to support the production process

PO 3. Develop a production utilizing the most applicable and appropriate researched insights

- **2AT-E5. Analyze the emotional and social impact (e.g., historical and contemporary) of performances in their lives and the lives of others)**

(Grades 4-5)

PO 1. Analyze and describe orally or in writing a personal response to a play, film or other performance

PO 2. Describe how the characters in a situation might be similar to one experienced in real Life

Possible link to: Comprehensive Health - relationships

(Grades 6-8)

PO 1. Define differences between the emotional and social impact of a fictional experience with real life

PO 2. Explain how one's own behavior might change in response to a performance (e.g., drugs or alcohol abuse, criminal behavior, friendship or family relationships)

Possible links to: Comprehensive Health – lifestyles; Workplace Skills - communication, critical thinking

- **2AT-E6. Select characters representing various historical periods and cultures from scripts and other sources and illustrate how these characters 1) have similar needs and motivations and 2) reflect the conditions of their time and place**

  (Grades 4-5)
  PO 1. Identify and describe characters from dramatic productions from two historical periods and/or cultures
  PO 2. Improvise a scene that places characters from two different historical periods or cultures in a problem situation
  PO 3. Explain how and why the characters behaved as they did in the improvisation or the production

  (Grade 6-8)
  PO 1. Diagnose and discuss the conditions of time, place, cultural beliefs, class and relationships that affected character actions
  PO 2. Compare conditions that affected character actions with personal and current social Situations

  Possible link to: Mathematics - estimation, measurement

- **2AT-E7. Describe and compare responses to their own works and works by others**

  (Grades 4-5)
  PO 1. Identify similar and different emotional and critical responses to selected works of art
  PO 2. Evaluate responses according to one's own objective or artists' perceived purpose

  Possible link to: Visual Art - art history, criticism

  (Grades 6-8)
  PO 1. Compare and contrast differences of opinion of the same work of art

STANDARD 3: ART AS INQUIRY (Theatre)

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

- **3AT-E1. Explain and justify the meanings constructed from their and others/ dramatic performances**

  (Grades 4-5)
  PO 1. Identify and explain the effect of conflicts between characters in a dramatic production
  PO 2. Describe how the conflict is related to daily life
  PO 3. Formulate a general theme based on a play and its relationship to daily life

(Grades 6-8)

PO 1. Explain the effect a plays' conflicts have on the interaction of characters and the resulting themes

PO 2. Improvise or script a scene based on a discussed theme

PO 3. Justify the treatment (e.g., choice of characters, environment, action, beginning, middle, ending) of a dramatic theme

- **3AT-E2. Describe and analyze the effect of publicity, study guides, programs and physical environments on audience response and appreciation of dramatic performances**

(Grades 4-5)

PO 1. Discuss appropriate dress and behavior for attending or participating in various activities (e.g., sports, theatre, concert)

(Grades 6-8)

PO 1. Instruct younger students to prepare them to enjoy and understand a performance

PO 2. Organize and provide an appropriate environment for an enjoyable performance (e.g., program, ushers, greeters, prepare audience space)

PO 3. Analyze and critique the audience response to a performance and the effect a study guide and the environment had on their understanding and enjoyment of the production

Possible link to: Workplace Skills - critical thinking, planning, organizing

- **3AT-E3. Describe ways in which the principles and subject matter of the curriculum are interrelated with theatre**

(Grades 4-5)

PO 1. Dramatize a story from classroom literature

PO 2. Interpret a story poem using musical instruments and movement

PO 3. Dramatize a concept from other subject areas (e.g., math, science) through pantomime, rap, two-voice poems, or other performance medium

PO 4. Improvise a scene, demonstrating a science or social studies concept (e.g., enact a scene about a major scientific figure or a scene demonstrating how a scientific principle solves a problem)

Possible links to: Comprehensive Health – relationships; Workplace Skills - well-being

(Grades 6-8)

PO 1. Create a two-way dialogue with characters from opposing cultures, viewpoints, etc.

PO 2. Role-play an historical or current event

- **3AT-E4. Analyze how characters change as a result of events in a drama and identify key messages or themes from a dramatic text or performance**

  (Grades 4-8)
  PO 1. Adapt a story to another time and place
  PO 2. Explain how and why the dramatic elements (e.g., dialogue, setting, lighting, costuming, acting style) change in an adaptation
  PO 3. Create and justify transitions between improvised or scripted scenes in a play

  Possible link to: Workplace Skills - critical thinking, organizing, cooperating

- **3AT-E5. Explain own personal criteria for evaluating their dramatic work and the work of others by identifying 1) the basic elements of a drama, and 2) the acting and process of theatrical design**

  (Grades 4-8)
  PO 1. Interpret the importance of time and place in a story
  PO 2. Analyze the interrelationship among character, conflict/problem and resolution
  PO 3. Construct a scenario with a definite beginning, middle and ending
  PO 4. Evaluate the artistic choices (e.g., dialogue, setting, lighting, costuming, acting style) made in a performance

  Possible link to: Comprehensive Health - relationships, well-being

- **3AT-E6. Describe and evaluate their sense of the effectiveness of classmates' and others' contributions (e.g., as playwrights, actors, designers, directors) to the collaborative process of improvising, scripting and performing scenes**

  (Grades 4-5)
  PO 1. Describe the collaborative roles (e.g., listener, recorder, encourager, questioner) in creating drama
  PO 2. Utilize collaboration when creating a theatrical performance
  PO 3. Analyze the results of cooperation and collaboration in the creative process

  Possible link to: Mathematics - measurement

  (Grade 6-8)
  PO 1. Analyze the process of cooperation as the role of director is introduced into the dramatic process
  PO 2. Evaluate the effectiveness of classmates' roles within the theatrical process

  Possible link to: Workplace Skills – careers

DANCE

Dance begins with an awareness of the movement of the body and its creative potential. Skills and knowledge acquired will allow students to begin working both independently and with a partner in creating and performing dances. Students learn to compare styles and meanings of ethnic dance, social dance, jazz, modern, tap and ballet in terms of the elements of space, time, and force/energy. Experiences in perceiving and responding to dance expand students' vocabularies, enhance their listening and viewing skills, and enable them to begin thinking critically.

STANDARD 1: CREATING ART (Dance)

Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

- **1AD-E1. Demonstrate the difference between literal gesture and abstract movement**

  (Grades 4-5)
  PO 1. Identify and demonstrate literal gestures (e.g., greeting, sports skill)
  PO 2. Use the elements of dance to abstract a literal gesture
  PO 3. Perform the abstracted literal gestures

  (Grades 6-8)
  PO 1. Recognize and perform the difference between a literal gesture and an abstract movement
  PO 2. Use an emotion (e.g., fear or joy) as the basis to create an abstracted movement phrase

  Possible link to: Art – meaning

- **1AD-E2. Demonstrate and explain alignment, balance, imitation of movement, articulation of isolated body parts, weight shift, elevation and landing, and fall and recovery**

  (Grades 4-5)
  PO 1. Perform given movement sequences incorporating weight shift, elevation and landing, and fall and recovery
  PO 2. Develop proper alignment through movement activities
  PO 3. Participate in movement activities that develop both stationary and moving balance and control
  PO 4. Define terms (e.g., alignment, articulation)
  PO 5. Move various body parts simultaneously in a contrasting manner (e.g., shake right leg while swinging left arm)

(Grades 6-8)
PO 1. Create a movement sequence incorporating weight shift, elevation and landing, and fall and recovery
PO 2. Demonstrate the concept of alignment
PO 3. Demonstrate the concept of balance

Possible link to: Science - equilibrium of force and structure, cause/effect

- **1AD-E3. Identify and demonstrate the basic physical and scientific properties (e.g., sound, physics, light, computer software/hardware, mathematics, human anatomy, costume design) of the technical aspects of dance**

(Grades 4-5)
PO 1. Explore natural forces as forms of energy and movement
PO 2. Demonstrate angles through the space relationships between various body parts
PO 3. Identify the actions of joints
PO 4. Select and/or make costumes for a dance

(Grades 6-8)
PO 1. Identify the large muscle groups of the body
PO 2. Demonstrate correct use of the large muscle groups of the body
PO 3. Demonstrate knowledge of technical theatre vocabulary (e.g., sound, lighting, stage directions)
PO 4. Identify technical aspects of a production

- **1AD-E4. Identify and demonstrate basic dance steps, positions and patterns for dances from at least two different styles or traditions**

(Grades 4-5)
PO 1. Identify and demonstrate steps from ballet, jazz, modern, tap or ethnic dance
PO 2. Memorize and perform set patterns of movement

(Grades 6-8)
PO 1. Demonstrate a sequence of movements from two different styles of dance (ballet, jazz, modern, tap or ethnic dance)
PO 2. Compare and contrast two different styles of dance

Possible link to: Social Studies - culture, socialization

- **1AD-E5. Transfer accurately a visual pattern to a physical motion (i.e., kinesthetic)**

(Grades 4-5)
PO 1. Demonstrate shapes with body parts
PO 2. Improvise by relating to the shapes of objects in the environment

(Grades 6-8)
PO 1. Perform body shapes that include angular, curved, twisted, symmetrical, asymmetrical and oppositional designs
PO 2. Create and follow a floor pattern (i.e., draw a pattern, then produce the pattern in motion)

Possible links to: Art - symmetry, asymmetry; Mathematics - symmetry, asymmetry

- **1AD-E6. Transfer accurately a rhythmic pattern from the aural to a physical motion (i.e., kinesthetic)**

(Grades 4-5)
PO 1. Respond to a movement with a sound, and to a sound with movement
PO 2. Initiate spontaneous movement through various stimuli (e.g., music, sound, words)
PO 3. Listen to a rhythmic pattern and then recreate the pattern in movement

(Grades 6-8)
PO 1. Create a sound while a partner responds with a movement for that sound
PO 2. Create movements in response to musical rhythms produced by a partner clapping or playing instruments
PO 3. Listen to complex rhythmic patterns and then recreate the pattern in movement

Possible link to: Science – sound

- **1AD-E7. Demonstrate aesthetic qualities (e.g., creating and contrasting complementary shapes; taking and supporting weight) through partner and small group skills**

(Grades 4-5)
PO 1. Demonstrate the concept of symmetry
PO 2. Demonstrate the concept of asymmetry
PO 3. Identify the varying dynamic, spatial and/or rhythmic elements

(Grades 6-8)
PO 1. Demonstrate the dance element of time as it relates to rhythmic aspects (e.g., meter, tempo) of dance music
PO 2. Demonstrate the dance element of space as it relates to body design and motion (e.g., direction, levels)
PO 3. Demonstrate the dance element of energy as it relates to the body's vitality or power (e.g., intensity, dynamics)
PO 4. Demonstrate how time, space, and energy combine to create moods, feelings and ideas

Possible links to: Science - energy, motion; Social Studies - socialization

STANDARD 2: ART IN CONTEXT (Dance)

Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

- **2AD-E1. Select and demonstrate folk and/or classical dances from various cultures; describe similarities and differences in steps and movement styles**

  (Grades 4-5)
  PO 1. Observe many styles of dance (i.e., ballet, ethnic, tap, folk, and modern)
  PO 2. Compare similarities and differences in steps and costuming
  PO 3. Participate in folk and/or classical dance

  (Grades 6-8)
  PO 1. Create a movement phrase in a specific style
  PO 2. Identify the origins of folk and or classical dance
  PO 3. Identify the functions and meanings of the dances to the culture

  Possible link to: Social Studies - culture, geography

- **2AD-E2. Devise original warm-ups and discuss how warm-ups prepare the body and mind for expressive purposes and prevent injuries**

  (Grades 4-5)
  PO 1. Identify warm-ups that prepare the body to dance
  PO 2. Describe a thorough warm-up
  PO 3. Create and demonstrate a series of warm-up exercises

  (Grades 6-8)
  PO 1. Perform flexibility exercises and participate in activities that promote cardiovascular and muscular endurance
  PO 2. Participate in activities that develop both stationary and moving balance and control
  PO 3. Demonstrate techniques which increase self-discipline and concentration skills

  Possible link to: Science - mechanics

- **2AD-E3. Compare the roles of dancers (e.g., storyteller, performer, teacher, choreographer, artistic director) according to the various functions and the conditions under which dance is performed**

  (Grades 4-5)
  PO 1. Describe the different functions performed by people involved in creating a dance
  PO 2. Discuss how conditions might affect the dance which is to be performed

(Grades 6-8)
PO 1. Observe several dance performances and identify the various functions performed by people involved in creating a dance
PO 2. Compare the roles of people involved in creating dance
PO 3. Analyze certain roles from a given dance

Possible links to: Social Studies - geography, interrelationships; Workplace Skills - team work

- **2AD-E4. Discuss how lighting, costuming and different accompaniment can affect the meaning of dance**

(Grades 4-5)
PO 1. Describe the lighting, costuming and accompaniment used in a performance
PO 2. Compare the effect of different lighting, costumes, music or sets on a dance

(Grades 6-8)
PO 1. Identify props and costumes that can be utilized in dance and discuss how they limit or extend the range of body movement
PO 2. Create a movement phrase to a given piece of music, then perform it to another piece of music and analyze the results

Possible link to: Theatre – production

- **2AD-E5. Demonstrate respect for the work of others through appropriate audience behavior during dance performances**

(Grades 4-5)
PO 1. Demonstrate appropriate audience behavior (e.g., attentiveness, appropriate applause)

(Grades 6-8)
PO 1. Demonstrate appropriate audience behavior (e.g., attentiveness, appropriate applause)

STANDARD 3: ART AS INQUIRY (Dance)

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

- **3AD-E1. Identify aesthetic criteria (e.g., skill of performers, originality, visual and/or emotional impact, variety and contrast) for evaluating dance**

(Grades 4-5)
PO 1. List dance aesthetic criteria
PO 2. Observe and describe the non-verbal portrayal of emotions
PO 3. Observe and describe the mood of a given dance

(Grades 6-8)
PO 1. Execute and recognize dance movements which express ideas, feelings, and moods
PO 2. Evaluate a given dance using identified aesthetic criteria

Possible link to: Language Arts – criticism

- **3AD-E2. Describe ways in which the principles and subject matter of other disciplines in the curriculum are interrelated with dance**

(Grades 4-5)
PO 1. Demonstrate knowledge of dance in different historical periods
PO 2. Demonstrate application of stage directions
PO 3. Demonstrate musical note values, accents, and syncopation in movement

(Grades 6-8)
PO 1. Apply knowledge of dance in history to choose or recreate a dance for a time period or specific country
PO 2. Identify different ethnic styles of dance and describe how and why they are used
PO 3. Demonstrate musical pulse, pattern and phrasing through movement

- **3AD-E3. Compare and contrast dance compositions in terms of time, space and energy/force**

(Grades 4-5)
PO 1. Demonstrate the ability to vary the intensity of the dynamics in a given movement phrase
PO 2. Demonstrate the ability to vary spatial elements in a given movement phrase
PO 3. Demonstrate the ability to alter the tempo of a given movement phrase

(Grades 6-8)
PO 1. Identify and describe the elements of time, space and energy in a given dance phrase
PO 2. Identify the similarities and differences of time, space, and energy in two different dance phrases
PO 3. Analyze a dance composition by its use of time, space and energy

THE ARTS GLOSSARY

AB A two-part compositional form with an A theme and a B theme; the binary form consists of two distinct, self-contained sections that share either a character or quality, such as the same tempo, movement quality or style. [M, D]

ABA A three-part compositional form in which the second section contrasts with the first section. The third section is a restatement of the first section in a condensed, abbreviated or extended form. [M, D]

Abstract Not representational. Removed from the representative, yet retaining the essence of the original. [D, M, T, V]

Action The core of a theatre piece; the sense of forward movement created by the sense of time and/or the physical and psychological motivations of characters. [T]

Aesthetics A branch of philosophy that focuses on the nature of beauty, the nature and value of art, and the inquiry processes and human responses associated with those topics. [D, M, T, V]

Aesthetic Criteria Criteria developed about the visual, aural and oral aspects of the witnessed event, derived from cultural and emotional values and cognitive meaning. [D, M, T, V]

Aesthetic Qualities The perceptual aspects, emotional values and cognitive meanings derived from interpreting a work of art; the symbolic nature of art. [D, M, T, V]

Alignment The relationship of the skeleton to the line of gravity and the base of support. [D, V]

Alla breve The meter signature indicating the equivalent of 2/2 time. [M]

Articulation In performance, the characteristics of attack and decay of tones and the manner and extent to which tones in sequence are connected or disconnected. [D, M]

Artistic Choices Selections made by artists about situation, action, direction and design in order to convey meaning. [D, M, T, V]

Art Form Graphic or visual representation usually distinguished by process (i.e. painting, drawing, sculpture, photography). [V]

Art Media Material used in the creation and study of visual art, such as paint, clay, cardboard, canvas, film, videotape, models, watercolors, wood and plastic. [V]

Key: D-Dance; M-Music; T-Theatre; V-Visual Arts

Aural Having to do with the ear or the sense of hearing. [D, M]

Axial Movement Any movement that is anchored to one spot by a body part, using only the available space in any direction without losing the initial body contact. Movement is organized around the axis of the body rather than designed for travel from one location to another; also known as nonlocomotor movement. [D]

Call and Response A structure that is most often associated with African music and dance forms, although it is also used elsewhere. One soloist/group performs with the second soloist/group entering "in response" to the first. [D, M]

Canon Choreographic form that reflects the musical form of the same name, in which individuals and groups perform the same movement/phrase beginning at different times. [D, M]

Character A created being in a drama. [T]

Characterization The creative process whereby an actor understands the fundamental personality of a part and then projects it to the audience in such a way that the character becomes a living, convincing human being. [T]

Choreography, Choreographic Describes a dance sequence that has been created with specific intent. [D]

Classical A dramatic form and production technique(s) considered of significance in earlier times, in any culture or historical period. [D, M, T, V]

Classroom Instruments Instruments typically used in the general music classroom (e.g., recorder-type instruments, chorded zithers, mallet instruments, simple percussion instruments, fretted instruments, keyboard instruments and electronic instruments). [M]

Classroom Production The exploration of all aspects (e.g., visual, oral, aural) of a dramatic work in a classroom setting where experimentation is emphasized. Classmates and teachers are the usual audience. [T]

Clef One of the three symbols that indicate the location on the staff of G above Middle C, Middle C or F below Middle C. [M]

Constructed Meaning The personal understanding of dramatic/artistic intentions and actions and their social and personal significance, selected and organized from the aural, oral and visual symbols of a dramatic production. [T]

Context A set of interrelated conditions (e.g., social, economic, political) that influence the context and give meaning to the reception of thoughts, ideas, or concepts and specific cultures and eras. [D, M, T, V]

Criticism Describing and evaluating the media, processes and meanings of works, and making comparative judgments. [D, M, T, V]

Drama A literary composition intended to portray life or character or to tell a story usually involving conflicts and emotions exhibited through action and dialogue, designed for theatrical performance. [T]

Dramatization The art of composing, writing, acting or producing plays. [T]

Dramatic Media Means of telling stories by way of stage, film, television, radio, laser discs or other electronic media. [T]

Dynamics, Dynamic Levels The expressive content of human movement, sometimes called qualities or effects. Dynamics manifest the interrelationships among the elements of space, time and force/energy. Degrees of loudness. See also movement quality. [D, M]

Electronic Media Means of communication characterized by the use of technology including (but not limited to) computers, multimedia, CD-ROM, MIDI, sound boards, light boards, virtual reality, video, film. Used as tools to create, learn, explain, document, analyze. [D, M, T, V]

Elements of Art Visual arts components, such as line, texture, color, form, value and space. [V]

Elements of Dance The use of the body moving in space and time with force/energy. [D]

Elements of Music Melody, rhythm, harmony, pitch, dynamics, timbre, texture, form, text or lyrics. [M]

Ensemble The dynamic interaction and harmonious blending of the efforts of many artists. [T, M]

Environment Physical surroundings that establish place, time, and atmosphere/mood; physical conditions that reflect and affect the emotions, thoughts, and actions of characters and the audience. [D, M, T, V]

Folk Work created and performed by a specific group within a culture. Generally these works originated outside the courts or circle of power within a society. [D, M, T, V]

Form The overall structural organization of a music composition (e.g., AB, ABA, call and response, rondo, theme and variations, sonata-allegro) and the interrelationships of music events within the overall structure. [M] The structural organization of a drama (e.g., plot sequence; logical, realistic use of character and time/non-realistic use of character and time. [T] An element of art that is three-dimensional and encompasses volume. [V]

Formal Production The staging of a dramatic work for presentation for an audience. [T]

Front of House Box office and lobby (i.e., business services). [T]

Found Objects Objects that are used to create elements of music that were not originally designed for music (e.g., pencil, string, rubber band) [M] Objects that were not originally considered art media that are used to create works of art (e.g., tin foil, string, wire). [V]

Genre A type or category of music (e.g., sonata, opera, oratorio, art song, gospel, suite, jazz, madrigal, march, work song, lullaby, barbershop, Dixieland). [M] A type or category of dramatic literature (e.g., comedy, tragedy, melodrama, farce, serious drama). [T]

Harmony, Harmonics Agreeable relationship between parts of a design or composition giving unity of effect or an aesthetically pleasing whole. [D, V] The combination of tones of a chord into music of three or more parts. [M]

Improvisation Movement that is created spontaneously, ranging from free form to highly structured environments, but always with an element of chance. Provides the dancer with the opportunity to bring together elements quickly, and requires focus and concentration. Is instant and simultaneous choreography and performance. [D] The spontaneous use of movement and speech to create a character in a particular situation. [T] Music that is performed spontaneously either melodically or harmonically, alone or in ensemble, without written notation. [M]

Kinesphere The movement space, or the space surrounding the body in stillness and in motion, which includes all directions and levels both close to the body and as far as the person can reach with limbs or torso. [D]

Kinesthetic The sensation of movement or action in the muscles, tendons and joints in response to stimuli while dancing or viewing dance. [D]

Level of Difficulty For purposes of these standards, music is classified into six levels of difficulty:

Level 1: Very easy. Easy keys, meters and rhythms; limited ranges.
Level 2: Easy. May include changes of tempo, key and meter; modest ranges.
Level 3: Moderately easy. Contains moderate technical demands, expanded ranges and varied interpretive requirements.
Level 4: Moderately difficult. Requires well-developed technical skills, attention to phrasing and interpretation, and ability to perform various meters and rhythms in a variety of keys.
Level 5: Difficult. Requires advanced technical and interpretive skills; contains key signatures with numerous sharps or flats, unusual meters, complex rhythms, subtle dynamic requirements.
Level 6: Very difficult. Suitable for musically mature students of exceptional competence. [M]

(Adapted with permission from the New York State School Music Association (NYSSMA) Manual, Edition XXIII, published by the NYSSMA, 1991)

Locomotor Movement Movement that travels from place to place, usually identified by weight transference on the feet. Basic locomotor steps are the walk, run, leap, hop, and jump and the irregular rhythmic combinations of the skip (walk and hop), slide (walk and leap), and gallop (walk and leap). [D]

Major/Minor Key A key or tonality in the major/minor mode
Major: The intervals between the scale tones are all whole steps except those between 3-4 and 7-8, which are half steps.
Minor: In the natural form the intervals between the scale tones are all whole steps except those between 2-3 and 5-6, which are half steps. The more common melodic form requires a half step between 7-8 ascending, but reverts to the natural form descending. [M]

Meter The grouping in which a succession of rhythmic pulses or beats is organized; indicated by a meter signature at the beginning of a work. [M]

Meter Signature An indicator of the meter of a musical work, usually presented in the form of a fraction; the denominator indicates the unit of measurement (note) and the numerator indicates the number of units (notes) that make up a measure. [M]

MIDI (Musical Instrument Digital Interface) Standard specifications that enable electronic instruments such as the synthesizer, sampler, sequencer and drum machine from any manufacturer to communicate with one another and with computers. [M]

Motivation What a character wants and why. [T]

Movement Quality The identifying attributes created by the release, follow-through and termination of energy, which are key to making movement become dance. Typical terms denoting qualities include sustained, swing, percussive, collapse, and vibratory and effort combinations such as float, dab, punch and glide. [D]

Ostinato A short musical pattern that is repeated persistently throughout a composition. [M]

Palindrome A choreographic structure used with a phrase or longer sequence of movement in which the phrase, for example, is first performed proceeding from the first movement to the second movement; when the last movement of the phrase is completed, the phrase is retrograded from the penultimate movement to the first movement. (A commonly used example in prose is “Able was I ere I saw Elba.” In this example, the letters are the same forward to the “r” in “ere” as they are backward to that “r.”) [D]

Pantomime Originally a Roman entertainment in which a narrative was sung by a chorus while the story was acted out by dancers. Now used loosely to cover any form of presentation, which relies on dance, gesture and physical movement without the use of the voice. [D, T]

Pentatonic A musical scale using only five tones with a minor third between three and four, all other intervals being whole steps. [M]

Perception Sensory awareness, discrimination and integration of impressions, conditions and relationships with regard to objects, images and feelings. [V]

Portfolio Collected evidence of a student's progress in the visual arts. [V]

Principles of Design Underlying characteristics in the visual arts and theatrical design, such as reception, balance, emphasis, contrast and unity. [T, V]

Process A complex operation involving a number of methods or techniques (e.g., addition or subtraction processes in sculpture; etching and intaglio processes in printmaking; casting or constructing processes in making jewelry). [V]

Process of Critiquing A strategy which enables a viewer to assess works of art through perceiving, analyzing and discussing its properties and qualities (e.g., Broudy's Aesthetic Scanning, Anderson's Form & Context, the Feldman Approach, the Mittler Approach, and Parsons Model). [V]

Projection A confident presentation of one's body and energy to communicate vividly meaning to an audience. [D, M, T]

Range The whole ascending or descending series of sounds capable of being produced by a voice or instrument. [M] The scope or extent of one's abilities in movement, technique, etc. [D, T]

Real Work of Art The original work of art rather than a reproduction. [V]

Rhythmic Acuity The physical expression of auditory recognition of various complex time elements. [D, M]

Role The characteristic and expected social behavior of an individual in a given position (e.g., mother, employer). Role portrayal is likely to be more predictable and one-dimensional than character portrayal (see characterization) and is appropriate for early improvisation exercises. [T]

School A group of artists located in a particular region with common theology. Some examples of schools are the New York School, the Ashcan School, the Hudson River School and the Pont Aven School. [V]

Script The written dialogue, description and directions provided by the playwright. [T]

Space The performance area used by an individual or ensemble. [D, T] The open place between the lines of the staff. [M] The emptiness or area between, around, above, below, or within objects. [V]

Staff The five parallel horizontal lines and four spaces on which music is written. [M]

Staves Plural of staff. [M]

Style The distinctive or characteristic manner in which the elements of music are treated. In practice, the term may be applied to, for example, composers (the style of Copland), periods (Baroque style), media (keyboard style), nations (French style), form or type of composition (fugal style, contrapuntal style), or genre (operatic style, bluegrass style). [M] A distinctive manner of moving; the characteristic way dance is done, created or performed that identifies the dance of a particular performer, choreographer or period. [D] The manner in which a play is written or performed (e.g., classical, Shakespearean, realistic, absurdist). [T]
An artist's characteristic manner of expression. Also, works of art by a group of artists with commonalities in their work such as impressionistic, expressionistic, realistic and surrealistic. [V]

Symbol An image, object, sound or movement that stands for or represents something else. [D, M, T, V]

Technical Skills The ability to perform with appropriate timbre, intonation, breath support, articulation, and diction and to play or sing the correct pitches and rhythms. [M]

Techniques Specific methods or approaches used in a larger process (e.g., graduation of value or hue in painting; conveying linear perspective through overlapping, shading, or varying size and color). [V]

Technology Electronic media (e.g., video, computers, compact discs, lasers, audio tape, satellite equipment) used as tools to create, learn, explain, document, analyze, or present artistic work or information. [D, M, T, V]

Tempo The rate of speed at which a performance or elements of a performance occur. [D, M, T]

Tension The atmosphere created by unresolved, disquieting or inharmonious situations that human beings feel compelled to address. [M, T] A design created by unresolved, disquieting or inharmonious shapes or elements. [V]

Text The basis of dramatic activity and performance; a written script or an agreed-upon structure and content for improvisation. [T] The words or lyrics of a piece of vocal music. [M]

Theatre Literacy The ability to create, perform, perceive, analyze, critique and understand dramatic performances. [T]

Theatre The imitation/representation of life, performed for other people; the performance of dramatic literature, drama; the milieu of actors and playwrights, the place that is the setting for dramatic performances. [T]

Timbre The character or quality of a sound that distinguishes one instrument, voice or other sound source from another. [M]

Tonality The harmonic relationship of tones with respect to a definite center or point of rest; fundamental to much of Western music circa 1600. [M]

Tools Instruments and equipment used by students to create and learn about art, such as brushes, scissors, brayers, easels, knives, kilns and cameras. [V]

Transposition A change in a composition, either in the transcript or the performance, into another key. [M]

Value The significance of an idea to an individual or group.

Visual Arts Problems Specific challenges based on thinking about and using visual arts components. [V]

Warm-up Movements and/or movement phrases designed to raise the core body temperature and bring the mind into focus for the activities to follow. [M, T, D]

Comprehensive Health Standards 1997

Essentials (Grades 4-8)

Comprehensive Health Standards Rationale

Parents and Guardians

It is understood that parents and guardians are the primary educators in their children's health; therefore, it is important to include the applicable statutes and state Board of Education rule in the comprehensive health education standards. Parents and guardians must be provided opportunities to preview school district policies, curriculum and take-home materials.

The ultimate goal of comprehensive health education is to help young people in Arizona achieve their fullest potential by attaining their highest level of health and wellness as students and adults. Basic to health education is the knowledge about the importance of the interrelationships of physical, behavioral, and social well-being and the prevention of diseases and other health problems. Students should learn to accept responsibility for personal health decisions and practices, work with others to maintain a healthy environment, as well as become informed consumers.

Rationale for Standard 1: Students comprehend concepts related to health promotion and disease prevention.

Comprehension of health promotion strategies and disease prevention concepts enables students to become health literate, self-directed learners, which establishes a foundation for leading healthy and productive lives.

Rationale for Standard 2: Students demonstrate the ability to access accurate health information.

Accessing valid health information and health promoting products and services is important in the prevention, early detection and treatment of most health problems. Applying skills of information analysis, organization, comparison, synthesis and evaluation to health issues provides a foundation for individuals to move toward becoming health literate and responsible, productive citizens.

Rationale for Standard 3: Students demonstrate the ability to practice health-enhancing behaviors and reduce health risks.

Research confirms that many diseases and injuries can be prevented by reducing harmful and risk-taking behaviors. Accepting responsibility and practicing health-enhancing behaviors can contribute to a positive quality of life.

Rationale for Standard 4: Students analyze the influence of culture, media, technology and other factors on health.

Health is influenced by a variety of factors that coexist within society. The ability to analyze, evaluate and interpret the influence of culture, media and technology on health is important in a rapidly changing world. The health literate, responsible and productive citizen draws upon the contributions of these factors to strengthen individual, family and community health.

Rationale for Standard 5: Students demonstrate the ability to use interpersonal skills to enhance health.

Personal, family and community health are enhanced through effective communication. The ability to organize and to convey information, beliefs, opinions, and feelings (both verbal and nonverbal) are skills that strengthen interactions and can reduce or avoid conflict. When communicating, individuals who are health literate demonstrate care, consideration, and respect for self and others.

Rationale for Standard 6: Students demonstrate the ability to use goal setting and decision-making skills to enhance health.

Decision-making and goal setting are essential lifelong skills needed to implement and sustain health-enhancing behaviors. These skills make it possible for individuals to transfer health knowledge into healthy lifestyles, thus improving the quality of life.

Rationale for Standard 7: Students demonstrate the ability to advocate for personal, family and community health.

Quality of life is dependent on an environment that protects and promotes the health of individuals, families and communities. Responsible citizens who are health literate communicate and advocate for positive health in their communities.

§ 15-102. Parental involvement in the school; definition

A. The governing board, in consultation with parents, teachers and administrators, shall develop and adopt a policy to promote the involvement of parents and guardians of children enrolled in the schools within the school district, including:
   1. A plan for parent participation in the schools which is designed to improve parent and teacher cooperation in such areas as homework, attendance and discipline.
   2. Procedures by which parents may learn about the course of study for their children and review learning materials.
   3. Procedures by which parents who object to any learning material or activity on the basis that it is harmful may withdraw their children from the activity or from the class or program in which the material is used. Objection to a learning material or activity on the basis that it is harmful includes objection to a material or activity because it questions beliefs or practices in sex, morality or religion.

B. The policy adopted by the governing board pursuant to this section may also include the following components:
   1. A plan by which parents will be made aware of the district's parental involvement policy and the provisions of this section, including:
      (a) Rights under the family educational rights and privacy act of 1974 relating to access to children's official records.
      (b) The parent's right to inspect the school district policies and curriculum.
   2. Efforts to encourage the development of parenting skills.
   3. The communication to parents of techniques designed to assist the child's learning experience in the home.
   4. Efforts to encourage access to community and support services for children and families.
   5. The promotion of communication between the school and parents concerning school programs and the academic progress of the parents' children.
   6. Identifying opportunities for parents to participate in and support classroom instruction at the school.
   7. Efforts to, with appropriate training, support parents as shared decision makers and to encourage membership on school councils.
   8. The recognition of the diversity of parents and the development of guidelines that promote widespread parental participation and involvement in the school at various levels.
   9. The development of preparation programs and specialized courses for certificated employees and administrators that promote parental involvement.
   10. The development of strategies and programmatic structures at schools to encourage and enable parents to participate actively in their children's education.

C. For the purposes of this section, "parent" means the parent or person who has custody of the child.

R7-2-303. Sex Education

A. Instruction in sex education in the public schools of Arizona shall be offered only in conformity with the following requirements.
   1. Common schools: Nature of instruction; approval; format.
      a. Supplemental/elective nature of instruction. The common schools of Arizona may provide a specific elective lesson or lessons concerning sex education as a supplement to the health course study.
         i. This supplement may only be taken by the student at the written request of the student's parent or guardian.
         ii. Alternative elective lessons from the state-adopted optional subjects shall be provided for students who do not enroll in elective sex education.
         iii. Elective sex education lessons shall not exceed the equivalent of one class period per day for one-eighth of the school year for grades K-4.
         iv. Elective sex education lessons shall not exceed the equivalent of one class period per day for one-quarter of the school year for grades 5-8.

b. Local governing board approval. All elective sex education lessons to be offered shall first be approved by the local governing board.
   i. Each local governing board contemplating the offering of elective sex education shall establish an advisory committee with membership representative of district size and the racial and ethnic composition of the community to assist in the development of lessons and advise the local governing board on an ongoing basis.
   ii. The local governing board shall review the total instruction materials for lessons presented for approval.
   iii. The local governing board shall publicize and hold at least two public hearings for the purpose of receiving public input at least one week prior to the local governing board meeting at which the elective sex education lessons will be considered for approval.
   iv. The local governing board shall maintain for viewing by the public the total instructional materials to be used in approved elective sex education lessons within the district.
c. Format of instruction.
   i. Lessons shall be taught to boys and girls separately.
   ii. Lessons shall be ungraded, require no homework, and any evaluation administered for the purpose of self-analysis shall not be retained or recorded by the school or the teacher in any form.
   iii. Lessons shall not include tests, psychological inventories, surveys, or examinations containing any questions about the student's or his parents' personal beliefs or practices in sex, family life, morality, values or religion.

2. High Schools: Course offering; approval; format.
   a. A course in sex education may be provided in the high schools of Arizona.
   b. The local governing board shall review the total instructional materials and approve all lessons in the course of study to be offered in sex education.
   c. Lessons shall not include tests, psychological inventories, surveys, or examinations containing any questions about the student's or his parents' personal beliefs or practices in sex, family life, morality, values or religion.
   d. Local governing boards shall maintain for viewing by the public the total instructional materials to be used in all sex education courses to be offered in high schools within the district.
3. Content of instruction: Common schools and high schools.
   a. All sex education materials and instruction shall be age appropriate, recognize the needs of exceptional students, meet the needs of the district, recognize local community standards and sensitivities, shall not include the teaching of abnormal, deviate, or unusual sexual acts and practices, and shall include the following:
      i. Emphasis upon the power of individuals to control their own personal behavior. Pupils shall be encouraged to base their actions on reasoning, self-discipline, sense of responsibility, self-control and ethical considerations such as respect for self and others; and

ii. Instruction on how to say “no” to unwanted sexual advances and to resist negative peer pressure. Pupils shall be taught that it is wrong to take advantage of, or to exploit, another person.

b. All sex education materials and instruction which discuss sexual intercourse shall:

i. Stress that pupils should abstain from sexual intercourse until they are mature adults;

ii. Emphasize that abstinence from sexual intercourse is the only method for avoiding pregnancy that is 100 percent effective;

iii. Stress that sexually transmitted diseases have severe consequences and constitute a serious and widespread public health problem;

iv. Include a discussion of the possible emotional and psychological consequences of preadolescent and adolescent sexual intercourse and the consequences of preadolescent and adolescent pregnancy;

v. Promote honor and respect for monogamous heterosexual marriage; and

vi. Advise pupils of Arizona law pertaining to the financial responsibilities of parenting, and legal liabilities related to sexual intercourse with a minor.

B. Certification of compliance. All districts offering a local governing board-approved sex education course of lesson shall certify, under the notarized signature of both the president of the local governing board and the chief administrator of the school district, compliance with this rule except as specified in paragraph (C). Acknowledgment of receipt of the compliance certification from the state Board of Education is required as a prerequisite to the initiation of instruction. Certification of compliance shall be in a format and with such particulars as shall be specified by the Department of Education.

C. All districts offering state Board approved sex education lessons or courses prior to the effective date of this rule shall comply with this rule on or before June 30, 1990.

§ 15-716. Instruction on acquired immune deficiency syndrome; department assistance

A. Each common, high and unified school district may provide instruction to kindergarten programs through the twelfth grade on acquired immune deficiency syndrome and the human immunodeficiency virus.

B. Each district is free to develop its own course of study for each grade. At a minimum, instruction shall:

1. Be appropriate to the grade level in which it is offered.
2. Be medically accurate.
3. Promote abstinence.
4. Discourage drug abuse.
5. Dispel myths regarding transmission of the human immunodeficiency virus.

C. No district shall include in its course of study instruction which:

1. Promotes a homosexual life-style.
2. Portrays homosexuality as a positive alternative life-style.
3. Suggests that some methods of sex are safe methods of homosexual sex.

D. At the request of a school district, the department of health services or the department of education shall review instruction materials to determine their medical accuracy.

E. At the request of a school district, the department of education shall provide the following assistance:
   1. A suggested course of study.
   2. Teacher training
   3. A list of available films and other teaching aids.

F. At the request of a parent, a pupil shall be excused from instruction on the acquired immune deficiency syndrome and the human immunodeficiency virus as provided in subsection A of this section. The school district shall notify all parents of their ability to withdraw their child from the instruction.

Physical Activity Standards Rationale

A wealth of information has been accumulated to point to the importance of physical activity in promoting health and wellness. Evidence also indicates that habits (lifestyles) established in youth are likely to influence adult lifestyles and associated health and wellness. Physical activity, a primary risk factor for many chronic health conditions, is an integral part of comprehensive school health education but also must be promoted as an important educational goal. Meeting physical activity standards includes both promotion of physical activity among youth and promotion of lifelong physical activity that will enhance workplace skills, fitness and wellness associated with quality of life. Achieving lifetime physical activity standards results in learning real life skills. Higher order skills include decision-making and problem solving required to become informed, lifetime physical activity consumers.

Rationale for Standard 1: Students demonstrate proficiency and the achievement of higher order cognitive skills necessary to enhance motor skills.

Movement competence implies the development of sufficient ability to enjoy participation in physical activities and re-establish a foundation to facilitate continued motor skill acquisition and increased ability to engage in developmentally appropriate daily physical activities. In addition to achieving competence in a few movement forms, which increases the likelihood of lifetime activity participation, the students apply concepts from exercise science disciplines that will help them achieve independence in developing movement competence in new movement forms. The focus is on movement forms appropriate for lifetime activity involvement and the establishment of personal competence.

Rationale for Standard 2: Students comprehend basic physical activity principles and concepts that enable them to make decisions, solve problems and become self-directed lifelong learners who are informed physical activity consumers.

Accessing accurate physical activity information, products and services is important to become informed, responsible physical activity consumers.

Rationale for Standard 3: Students exhibit a physically active lifestyle.

The intent of this standard is to establish patterns of regular participation in meaningful physical activity. This standard connects what is taught in school with students' choices for physical activity outside of school. Students are more likely to participate in physical activities if they have had opportunities to develop interests that are personally meaningful to them.

Rationale for Standard 4: Students achieve and maintain a health-enhancing level of physical fitness. The intent of this standard is for the student to achieve a health-enhancing level of physical fitness. Students should be encouraged to develop personal fitness levels above those necessary for health-enhancement, based on unique personal needs and interests and necessary for many work situations and active leisure participation. Health-related fitness components include cardiorespiratory endurance, muscular strength and endurance, flexibility, and body composition. Expectations for students' fitness levels should be established on a personal basis, taking into account variation in entry levels, rather than setting a single standard for all children at a given grade level.

Rationale for Standard 5: Students develop self-initiated behaviors that promote effective personal and social interactions in physical activity settings.

The intent of this standard is achievement of self-initiated behaviors that promote personal and group success in activity settings. Behaviors such as safe practices, adherence to rules and procedures, etiquette, cooperation and teamwork, ethical behavior in sports, and positive social interaction are necessary for all students to develop effective communication skills.

Rationale for Standard 6: Students demonstrate understanding and respect for differences among people in physical activity settings.

The intent of this standard is to develop respect for similarities and differences through positive interaction among participants in physical activity. Similarities and differences include characteristics of culture, ethnicity, motor performance, disabilities, physical characteristics (e.g., strength, size, shape), gender, race and socioeconomic status.

Rationale for Standard 7: Students develop behavioral skills (self-management skills) essential to maintaining a physically active lifestyle.

The intent of this standard is for students to develop an awareness of the intrinsic benefits of participation in lifelong physical activity. Physical activity can provide opportunities for enjoyment, physical fitness and personal challenge.

Table 1. Comprehensive Health Education Standards

STANDARD 1
Students comprehend concepts related to health promotion and disease prevention.
STANDARD 2
Students demonstrate the ability to access accurate health information.
STANDARD 3
Students demonstrate the ability to practice health-enhancing behaviors and reduce health risks.
STANDARD 4
Students analyze the influence of culture, media, technology and other factors on health.
STANDARD 5
Students demonstrate the ability to use interpersonal skills to enhance health.
STANDARD 6
Students demonstrate the ability to use goal setting and decision-making skills to enhance health.
STANDARD 7
Students demonstrate the ability to advocate for personal, family and community health.

Table 2. Physical Activity Standards

STANDARD 1

Students demonstrate proficiency and the achievement of higher order cognitive skills necessary to enhance motor skills.

STANDARD 2

Students comprehend basic physical activity principles and concepts that enable them to make decisions, solve problems and to become self-directed lifelong learners who are informed physical activity consumers.

STANDARD 3

Students exhibit a physically active lifestyle.

STANDARD 4

Students achieve and maintain a health-enhancing level of physical fitness.

STANDARD 5

Students develop self-initiated behaviors that promote effective personal and social interaction in physical activity settings.

STANDARD 6

Students demonstrate understanding and respect for differences among people in physical activity settings.

STUDENT 7

Students develop behavioral skills (self-management skills) essential to maintaining a physically active lifestyle.

ADDENDUM

A Brief Description of Ten Major Content Areas in Comprehensive School Health Education

1. **Community Health** includes topics such as individual responsibility; healthful school, home and community environments; community health resources and facilities; official and nonofficial health agencies; health service careers; pollution control; community involvement; current issues; and trends in medical care.

2. **Consumer Health** addresses health care resources i.e., knowing what is available and how to be an educated consumer.

3. **Environmental Health** addresses individual and community responsibility, pollution, effects of environment on health, environmental protection agencies, population density, world health, waste disposal, sanitation, laws and career choices.

4. **Family Life Education** covers information about family dynamics, building relationships, child abuse, choices about relationships, family planning, parenting skills, sex education, and sexually transmitted diseases such as HIV infection and AIDS.

5. **Injury Prevention and Safety** includes learning about first aid and emergency health care and addresses the prevention of unintentional injuries. (Many schools include violence prevention and homicide as health issues within this content area.)

6. **Mental and Emotional Health** includes building self-esteem, effectively coping with stress, and communication skills, among others.

7. **Nutrition** addresses a balanced diet, food preparation, reading and understanding food labels, differences in nutritional needs for pregnant women, and more.

8. **Personal Health** includes physical fitness and lifetime activities, cardiovascular health, sleep, rest, relaxation, recreation, growth and development, oral health, vision and hearing, body systems and their functions, aging, personal wellness plans, and positive health habits and choices.

9. **Prevention and Control of Disease** addresses heart disease, stroke, diabetes, cancer, HIV/AIDS and others.

10. **Substance Use and Abuse** refers to the use and misuse of tobacco, alcohol, and other drugs and often includes topics such as positive decision-making, individual responsibility, substances beneficial to humankind, the classification of substances and their effects on the body, and the formation of habits and their influence.

The ten major content areas in this addendum are provided to assist local school districts in developing sequential curricula. It will be left to the discretion of the local district to determine the emphasis of each of the content areas. The Comprehensive Health Education and Physical Activity Standards are the required competency indicators, while the addendum is a tool to be used by school districts as a cross-reference.

COMPREHENSIVE HEALTH STANDARDS
BY LEVEL: ESSENTIALS (Grades 4-8)

STANDARD 1

Students comprehend concepts related to health promotion and disease prevention.

- **1CH-E1. Explain the relationship between positive health behaviors and health care and the prevention of injury, illness, disease, disability and premature death**

  (Grades 4-5)
  PO 1. Describe positive health behaviors which can prevent common injuries, diseases and other conditions
  PO 2. Describe harmful effects of substance use

  (Grades 6-8)
  PO 1. Illustrate how positive health behaviors can prevent common injuries, diseases and conditions
  PO 2. Illustrate the harmful effects of use of tobacco, alcohol and other drugs

- **1CH-E2. Describe the interrelationship of mental, emotional, social and physical health during adolescence**

  (Grades 4-5)
  PO 1. Draw how thoughts, feelings, being with people and being healthy are all related

  (Grades 6-8)
  PO 1. Describe how thoughts, feelings, dealing with people and being physically healthy are all interconnected
  PO 2. Illustrate how the variables stated above (in PO 1) interact as seen in case studies, movies, etc.

- **1CH-E3. Explain how health, growth and development are influenced by the interaction of body systems, genetics, environment and lifestyle**

  (Grades 4-5)
  PO 1. Contrast healthy and unhealthy lifestyles
  PO 2. Describe the effects on healthy and unhealthy lifestyles on health, growth and development

  (Grades 6-8)
  PO 1. Develop a plan for a healthy environment and lifestyle and apply it to health, growth and development

- **1CH-E4. Describe how family and peers influence the health of adolescents**

  (Grades 4-5)
  PO 1. Classify healthy and unhealthy choices that you have learned from family and peers

  (Grades 6-8)
  PO 1. Illustrate how family and peers effect the choices you make regarding health

- **1CH-E5. Explain how environmental health and personal health are interrelated**

  (Grades 4-5)
  PO 1. Describe the relationship between healthy people and a healthy environment

  (Grades 6-8)
  PO 1. Compare healthy environments and healthy people with unhealthy environments and unhealthy people

- **1CH-E6. Describe ways to reduce risks related to adolescent health problems**

  (Grades 4-5)
  PO 1. Identify changes adolescents can make in their lifestyle to reduce health risks

  (Grades 6-8)
  PO 1. Identify personal health behaviors that reduce health problems

- **1CH-E7. Describe how lifestyle and family history are related to the cause and prevention of disease and other health problems**

  (Grades 4-5)
  PO 1. Explain how an individual lifestyle and family history can prevent or cause health problems

  (Grades 6-8)
  PO 1. Describe how living a healthy lifestyle and knowing family health history can help a person live a more healthy life

- **1CH-E8. Explain how basic nutrients are utilized by the body and the relationship of a balanced diet and essential nutrients to appropriate weight, appearance and wellness**

  (Grades 4-5)
  PO 1. Identify the basic nutrients and identify their uses in the body
  PO 2. Describe how a balanced and nutritious diet is related to weight, appearance and wellness

(Grades 6-8)
PO 1. Classify nutrients and their uses in the body
PO 2. Apply this knowledge of nutrients and balanced diets to your weight, appearance and wellness

STANDARD 2

Students demonstrate the ability to access accurate health information.

- **2CH-E1. Obtain and utilize accurate health resources from home, school and community**

  (Grades 4-5)
  PO 1. List accurate health information from home, school and community
  PO 2. Utilize accurate health information

  (Grades 6-8)
  PO 1. Apply health information from home, school and community

- **2CH-E2. Describe how media influences the selection of health information and products (e.g., exercise equipment, cosmetics)**

  (Grades 4-5)
  PO 1. Explain how media influences the selection of health information and products

  (Grades 6-8)
  PO 1. Illustrate how the media affects what you know about health and health products

- **2CH-E3. Compare the costs and effectiveness of health products**

  (Grades 4-5)
  PO 1. Demonstrate effectiveness of a specific health product (e.g., shampoo, soap)
  PO 2. Compare cost of products

  (Grades 6-8)
  PO 1. Describe similar health products' cost and effectiveness in treating health problems

- **2CH-E4. Describe situations requiring professional health services**

  (Grades 4-8)
  PO 1. *Same as concept*

- **2CH-E5. Identify emergency preparedness and emergency resources (e.g., first aid, CPR)**

  (Grades 4-5)
  PO 1. List what you need to be prepared for a medical emergency
  PO 2. List emergency resources

  (Grades 6-8)
  PO 1. Describe a variety of emergency situations
  PO 2. List emergency resources

STANDARD 3

Students demonstrate the ability to practice health-enhancing behaviors and reduce health risks.

- **3CH-E1. Explain the importance of assuming responsibility for personal health behaviors**

  (Grades 4-8)
  PO 1. Illustrate examples of responsible healthy behavior

- **3CH-E2. Identify strengths of, and risks to, one's personal and family health (e.g., heart disease, diabetes, high blood pressure) and implement strategies to improve or maintain both**

  (Grades 4-5)
  PO 1. Compare personal and family health risks and strengths
  PO 2. Explain ways to reduce risks and increase strengths

  (Grades 6-8)
  PO 1. Rank personal and family strengths and risks
  PO 2. Develop a plan that would improve health and reduce risks

- **3CH-E3. Distinguish between responsible and risky/harmful behaviors (e.g., responsible: exercise, sleep, nutrition; risky: the use of tobacco, alcohol and other drugs)**

  (Grades 4-5)
  PO 1. List differences between responsible and risky behaviors

  (Grades 6-8)
  PO 1. Identify responsible and risky behaviors

- **3CH-E4. Develop injury prevention and management strategies for personal and family health including ways to avoid and reduce threatening situations**

  (Grades 4-5)
  PO 1. Identify ways to prevent personal and family injuries
  PO 2. Identify ways to avoid dangerous situations for yourself and your family

  (Grades 6-8)
  PO 1. Identify existing prevention and management strategies regarding personal and family health
  PO 2. Identify ways to avoid threatening situations

- **3CH-E5. Demonstrate strategies to manage stress**

  (Grades 4-8)
  PO 1. Choose five ways to reduce stress

- **3CH-E6. Perform basic safety, first aid and life saving techniques**

  (Grades 4-5)
  PO 1. Demonstrate basic safety techniques

  (Grades 6-8)
  PO 1. Apply basic first aid and basic life saving techniques

STANDARD 4

Students analyze the influence of culture, media, technology and other factors on health.

- **4CH-E1. Describe health behaviors and the use of health services in different cultures and explain the factors responsible for the differences**

  (Grades 4-5)
  PO 1. Compare how different cultures regard health
  PO 2. Distinguish the ways health services are used by different cultures

  (Grades 6-8)
  PO 1. Distinguish how different cultures utilize health services
  PO 2. Describe the factors responsible for the differences in health care

- **4CH-E2. Explain how messages from media and other sources influence health behaviors**

  (Grades 4-5)
  PO 1. Determine the way media messages influence your health

  (Grades 6-8)
  PO 1. Identify a variety of media messages and determine how they influence your health

- **4CH-E3. Describe the influence of technology on personal and family health**

  (Grades 4-5)
  PO 1. Specify five ways that technology affects your health

  (Grades 6-8)
  PO 1. Describe five ways that technology can hurt or improve your health

- **4CH-E4. Describe how information from peers influences health**

  (Grades 4-8)
  PO 1. *Same as concept*

STANDARD 5

Students demonstrate the ability to use interpersonal skills to enhance health.

- **5CH-E1. Demonstrate ways to communicate care, consideration and respect of self and others**

  (Grades 4-5)
  PO 1. Choose five ways to show that you care about self and others

  (Grades 6-8)
  PO 1. Choose five ways you can show respect for self and others

- **5CH-E2. Identify the causes of conflict among youth in schools and communities and demonstrate refusal and negotiation skills to enhance health**

  (Grades 4-5)
  PO 1. Explain what influences individuals to engage in conflict
  PO 2. List two problem solving strategies to avoid conflict

(Grades 6-8)
PO 1. Identify a minimum of two reasons for conflict among young people
PO 2. Apply two ways to let the other person know that you mean "no" to something you do not want
PO 3. Apply two things you can use to come to an agreement in a conflict and foster health

- **5CH-E3. Demonstrate strategies to manage conflict in healthy ways**

(Grades 4-5)
PO 1. Classify techniques that will promote conflict resolution
PO 2. Choose five healthy ways to control conflict

(Grades 6-8)
PO 1. Determine which ways can control conflict
PO 2. Apply five healthy ways to control conflict

STANDARD 6

Students demonstrate the ability to use goal setting and decision-making skills to enhance health.

- **6CH-E1. Apply a sound decision-making process that includes an examination of alternatives and consequences and determines a course of action to resolve health issues and problems individually or collaboratively**

(Grades 4-5)
PO 1. Demonstrate the decision-making process
PO 2. Choose three alternatives and consequences regarding a health issue

(Grades 6-8)
PO 1. Describe collaboratively the decision-making process
PO 2. List three alternatives and consequences regarding a health issue
PO 3. Collectively choose which solution best fits the health issue

- **6CH-E2. Explain how decisions regarding health behaviors have consequences for self and others**

(Grades 4-5)
PO 1. Identify five (positive or negative) health behaviors
PO 2. Define the consequences of the above health behaviors

(Grades 6-8)
PO 1. Identify five (positive or negative) health behaviors that relate to adolescence
PO 2. Explain the consequences of the above health behaviors

- **6CH-E3. Describe how personal health goals are influenced by information, abilities, priorities and responsibilities**

  (Grades 4-5)
  PO 1. List five behaviors that maintain personal health
  PO 2. List five strategies for the above information that can impact personal health goals
  PO 3. List five health priorities and responsibilities based on the above list
  PO 4. Describe how these strategies affect health goals

  (Grades 6-8)
  PO 1. Identify three personal health goals
  PO 2. Correlate the relationship between knowledge of health and personal selected goals

- **6CH-E4. Develop a plan that addresses personal strengths, needs and health risks, and apply strategies and skills needed to attain personal health goals**

  (Grades 4-8)
  PO 1. Develop three personal health goals
  PO 2. Design a plan to improve strengths, realize needs, and reduce health risks
  PO 3. Describe attainment of personal health goals

STANDARD 7

Students demonstrate the ability to advocate for personal, family and community health.

- **7CH-E1. Research various media for language, subject matter and visual techniques used to influence health-related information and decision-making**

  (Grades 4-5)
  PO 1. Compare three different types of health information found in the media
  PO 2. Identify which visual techniques used above (in PO 1) about health information is the most dramatic and why

  (Grades 6-8)
  PO 1. Compare three different types of health information found in the media
  PO 2. Select which language, subject matter and visual techniques did the best job of informing you about health

- **7CH-E2. Present information about health issues**

  (Grades 4-5)
  PO 1. Choose a health issue of personal interest
  PO 2. Present the positive and negative aspects about your health issue

(Grades 6-8)
PO 1. Choose two health issues
PO 2. Present positive and negative aspects of selected health issues

- **7CH-E3. Identify barriers to effective communication of information about health issues**

  (Grades 4-8)
  PO 1. Name three barriers of communication about a health issue

- **7CH-E4. Demonstrate the ability to support others in making positive health choices**

  (Grades 4-8)
  PO 1. Distinguish three positive strategies to support someone making health choices

- **7CH-E5. Demonstrate the ability to work cooperatively when advocating for healthy individuals, families and schools**

  (Grades 4-8)
  PO 1. Identify the various roles in a cooperative setting
  PO 2. Construct a cooperative group where everyone has a role toward promoting health awareness for a person, family or school
  PO 3. Determine ways to make this cooperative group successful

PHYSICAL ACTIVITY STANDARDS

STANDARD 1

Students demonstrate proficiency and the achievement of higher order cognitive skills necessary to enhance motor skills.

- **1PA-E1. Demonstrate competence in a variety of movement forms**

  (Grades 4-5)
  PO 1. Throw, catch, strike and kick using mature form in a variety of physical activity settings
  PO 2. Dribble and pass a variety of objects to a stationary target/receiver (e.g., hands, feet, equipment)
  PO 3. Balance with control on a variety of objects
  PO 4. Transfer weight from feet to hand at fast and slow speeds, using large extensions (e.g., mule kick, handstand, cartwheel)
  PO 5. Travel, changing speeds and directions, in response to a variety of rhythms

  (Grades 6-8)
  PO 1. Throw, strike and kick a variety of objects demonstrating both accuracy and force
  PO 2. Dribble and pass a variety of objects to a moving target/receiver (e.g., hands, feet, equipment)
  PO 3. Perform a variety of rhythmic movements

- **1PA-E2. Apply more advanced movement and game strategies**

  (Grades 4-5)
  PO 1. Use basic offensive and defensive strategies in small group games

  (Grades 6-8)
  PO 1. Utilize basic offensive and defensive skills in a modified version of a team sport
  PO 2. Adapt and combine locomotor and nonlocomotor and manipulative skills to meet the demands of increasingly complex movement activities

- **1PA-E3. Identify the critical elements of more advanced movement skills**

  (Grades 4-5)
  PO 1. Identify the critical elements of a basic movement made by a fellow student and provide feedback to that student

(Grades 6-8)
PO 1. Identify the critical elements of a more advanced movement (e.g., golf swing, cartwheel, tennis serve) made by a fellow student and provide feedback to that student

- **1PA-E4. Identify the characteristics of highly skilled performance in a few movement forms**

  (Grades 4-5)
  PO 1. Identify the characteristics of a highly skilled performer in a few movement forms

  (Grade 6-8)
  PO 1. Identify the characteristics which differentiate a highly skilled performer from other performers

- **1PA-E5. Apply more advanced discipline-specific knowledge (e.g., conditioning and fitness in a selected sport)**

  (Grade 4-5)
  PO 1. Demonstrate specialized movement skills

  (Grades 6-8)
  PO 1. Apply specialized movement skills that use similar patterns and transfer concepts from one to another (e.g., follow-through, opposition, force)

STANDARD 2

Students comprehend basic physical activity principles and concepts that enable them to make decisions, solve problems and to become self-directed lifelong learners who are informed physical activity consumers.

- **2PA-E1. Describe the relationship between a healthy lifestyle and feeling good**

  (Grades 4-5)
  PO 1. Give examples of the benefits derived from regular physical activity
  PO 2. Identify several moderate to vigorous physical activities that provide personal pleasure

  (Grades 6-8)
  PO 1. Explain that success in physical activities leads to recognition
  PO 2. Explain the value of exercise in relieving stress

- **2PA-E2. Apply basic principles of training to improve physical fitness**

  (Grades 4-5)
  PO 1. Engage in appropriate activity that results in the development of muscular strength and endurance
  PO 2. Apply the concepts that impact the quality of physical fitness

  (Grades 6-8)
  PO 1. Participate in physical activities at home for personal enjoyment and benefit
  PO 2. Describe principles of training and conditioning for specific physical activities

- **2PA-E3. Describe physiological indicators of exercise during and after physical activity**

  (Grades 4-5)
  PO 1. Demonstrate ability to calculate heart rate
  PO 2. Monitor intensity of exercise (e.g., heart rate, respiration, body temperature)

  (Grades 6-8)
  PO 1. Demonstrate ability to calculate resting and target heart rate
  PO 2. Maintain a record of moderate to vigorous physical activity
  PO 3. Monitor heart rate before, during and after vigorous physical activity

- **2PA-E4. Explain the concept of target zones for health-related physical fitness**

  (Grades 4-8)
  PO 1. *Same as concept*

STANDARD 3

Students exhibit a physically active lifestyle.

- **3PA-E1. Participate regularly in health-enhancing physical activities to accomplish personal health goals**

  (Grades 4-5)
  PO 1. Participate regularly in a physical activity that develops a healthy lifestyle
  PO 2. Describe health benefits that result from regular and appropriate participation in physical activity

  (Grades 6-8)
  PO 1. Participate in an individualized physical activity program designed with the help of the teacher
  PO 2. List long-term physiological, psychological, and cultural benefits that may result from regular participation in physical activity

- **3PA-E2. Participate in a variety of physical activities of personal interest**

  (Grades 4-5)
  PO 1. Identify at least one enjoyable activity he/she participates in daily (formal or informal)
  PO 2. Identify opportunities for more formal participation in physical activities in the community
  PO 3. Design games, gymnastics, and dance sequences based on personal interests

  (Grades 6-8)
  PO 1. Participate in activities both in and out of school based on individual interests and capabilities (e.g., aquatics, self-defense, gymnastics, games, sports, dance and outdoor pursuits)
  PO 2. Design a program to improve skills in a favorite activity

STANDARD 4

Students achieve and maintain a health-enhancing level of physical fitness.

- **4PA-E1. Accomplish the health-related fitness standards as defined by Fitnessgram**

  (Grades 4-5)
  PO1. Engage in appropriate activities that result in the development of muscular strength and endurance, flexibility, appropriate body composition, and aerobic endurance

  (Grades 6-8)
  PO 1. Correctly demonstrate activities designed to improve and maintain muscular strength and endurance, flexibility, cardiorespiratory functioning, and proper body composition

- **4PA-E2. Apply basic principles of training to improve or maintain health-related physical fitness**

  (Grades 4-5)
  PO 1. Participate in moderate to vigorous physical activities at least four days per week
  PO 2. Accumulate 30-60 minutes of moderate activity per day at least four days per week
  PO 3. Maintain continuous aerobic activity for a specified time and activity (e.g., 10 minutes or more)
  PO 4. Demonstrate how to balance food intake with physical activity

  (Grades 6-8)
  PO 1. Demonstrate proper warm-up and cool-down techniques and the reasons for using them
  PO 2. Engage in physical activity at the target heart rate for a minimum of 10 minutes
  PO 3. Calculate heart rate before, during and after vigorous physical activity

PO 4. Examine the impact of such factors as nutrition, relaxation, stress and substance abuse on the body
PO 5. Incorporate the FITT principle into a regular activity program to improve or maintain fitness

STANDARD 5

Students develop self-initiated behaviors that promote effective personal and social interactions in physical activity settings.

- **5PA-E1. Explain the influence of peer pressure in physical activity settings**

  (Grades 4-5)
  PO 1. Explain the difference between acts of courage and reckless acts
  PO 2. Demonstrate responsibility when teaching or learning an activity with a partner or small group

  (Grades 6-8)
  PO 1. Identify positive and negative peer influence
  PO 2. List positive ways to exert independence

- **5PA-E2. Identify potential consequences when confronted with a behavior choice**

  (Grades 4-5)
  PO 1. Act in a safe manner during physical activity

  (Grades 6-8)
  PO 1. Remain on task without close teacher monitoring
  PO 2. Solve problems by analyzing causes and potential solutions

- **5PA-E3. Cooperate with a group to achieve group goals in competitive as well as cooperative settings**

  (Grades 4-5)
  PO 1. Work independently and on task for partner, small or large group activities
  PO 2. Participate in establishing rules and procedures that are safe and effective for specific activities

  (Grades 6-8)
  PO 1. Participate in establishing rules, procedures and etiquette that are safe and effective for specific activity situations
  PO 2. Resolve interpersonal conflicts with a sensitivity to rights and feelings of others

- **5PA-E4. Identify the social benefits of participation in physical activity**

  (Grades 4-5)
  PO 1. Explain the difference between compliance and noncompliance of game rules and demonstrate compliance
  PO 2. Identify one's own performance problems without blaming others

  (Grades 6-8)
  PO 1. Demonstrate appropriate sportsmanship

STANDARD 6

Students demonstrate understanding and respect for differences among people in physical activity settings.

- **6PA-E1. Explain the role of sports, games and dance in modern culture**

  (Grades 4-5)
  PO 1. Explain the validity of games and activities reflecting one's own and others' heritage

  (Grades 6-8)
  PO 1. Explain the role of games, sports and dance in getting to know and understand others of like and different backgrounds
  PO 2. Demonstrate an understanding of the ways sport and dance influence American culture

- **6PA-E2. Identify behaviors that are supportive and inclusive in physical activity settings**

  (Grades 4-5)
  PO 1. Demonstrate fairness in games and activities
  PO 2. Demonstrate acceptance of the skills and abilities of others through verbal and nonverbal behavior

  (Grades 6-8)
  PO 1. Display sensitivity to the feelings of others during interpersonal interaction
  PO 2. Demonstrate cooperation (through verbal and nonverbal behaviors) with peers of different gender, race and ethnicity in a physical activity setting

- **6PA-E3. Participate in physical activities with others regardless of diversity and ability**

  (Grades 4-5)
  PO 1. Identify the attributes that individual differences can bring to group activities

(Grades 6-8)
PO 1. *Same as concept*

STANDARD 7

Students develop behavioral skills (self-management skills) essential to maintaining a physically active lifestyle.

- **7PA-E1. Establish personal physical activity goals**

  (Grades 4-5)
  PO 1. Explain how appropriate practice improves performance
  PO 2. Use information from internal (self-evaluation) and external sources to set physical activity goals to improve performances

  (Grades 6-8)
  PO 1. Establish personal health-related fitness status and develop goals to meet health-related fitness
  PO 2. Participate daily in some sort of physical activity

- **7PA-E2. Explore a variety of new physical activities for personal interest**

  (Grades 4-5)
  PO 1. Identify opportunities for participation in physical activity in the school

  (Grades 6-8)
  PO 1. Identify opportunities for participation in physical activity in the community

- **7PA-E3. Participate in new and challenging activities**

  (Grade 4-8)
  PO 1. Participate in a variety of physical activities, both in and out of school, based upon individual interests and capabilities

Foreign and Native Language Standards 1997

Essentials (Grades 4-8)

Foreign and Native Language* Standards Rationale

Today's students prepare for the tomorrow in which they will need to function in varied contexts. The constant shrinking of the globe will expand their experience beyond that of previous generations to include contacts with other languages and cultures, both in their private lives and in their work. Languages are increasingly demanded in a wide range of professions. To succeed, students will need new tools, many of which are available primarily, if not solely, through the study of other languages. They include:

- ***the ability to communicate well for varied purposes.*** In other languages, as well as in English, effective communication requires an understanding of both the target language and culture under study and one's own, which implies the ability to interact confidently within many arenas, including the workplace and communities where the language is spoken.

- ***a solid foundation in basic subject matter and skills.*** All core subjects must contribute to this end, in an integrated fashion, to aid students in realizing the connections among the parts of their education. Basic subject matter includes the development of verbal reasoning, and listening skills and knowledge of the great achievements of human cultures, e.g., artistic, literary, scientific. The study of another language has been shown to enhance student performance in other academic fields. Learnings from other fields can also be reinforced in the foreign language classroom.

- ***an understanding and appreciation of the diversity of languages and cultures, including one's own.*** These tools aid students to function as responsible, informed, and confident citizens and enhance their personal development. They allow the finding of one's own place in the wider world.

Introduction to the Foreign Language Standards

The foreign language standards state what students need to know about languages and cultures, including their own; what students need to be able to do; and how this knowledge and these abilities relate to the subject matter of other core areas. The standards are stated clearly and in measurable terms:

- what students need to **know** in order to function successfully as they enter a new millennium that promises major changes in communications and contacts with other languages and cultures;

- what students need to be able to **do**. Knowing about a language and its culture(s), while essential, is not sufficient; students will develop skills for functioning effectively in varied contexts; and

*The Foreign Language Standards name was changed 10/22/01 to Foreign and Native Language by the state Board of Education.

- the integration of foreign languages into the rest of the curriculum so that the connections are clear and so that learning in all areas is facilitated, including the development of a deeper understanding of one's own language and culture. The five strands under which the standards are organized–Communication, Culture, Connections, Comparisons and Communities–are meant to be interwoven among themselves as well, rather than taught as separate entities. Meeting the standards for each one will contribute to reaching the standards of the others.

These standards for foreign language study are highly challenging for all students. They assume an extended sequence of learning throughout the students' school career, thus reflecting the likely nature of schools in the future. Meeting these standards will require the study of grammar–the forms and structures of the language–as well as effective learning strategies. Students will also need to use technologies that will bring the language and the culture to them in new ways and enhance their opportunities to learn.

In these standards we refer to "the target language," which may stand for "world language," "foreign language," "second language," or "heritage language" (i.e., the language that is the predominant language in the home).

Descriptions of Language Abilities for Each Level

Readiness

Students use basic vocabulary related to people, places, things and actions close to their own lives. They express themselves in phrases, short sentences and memorized material. Their language is characterized by an emerging control of the most common basic grammatical forms and structures. Because comprehension of oral and written language normally exceeds production, students are able to comprehend simple descriptions, narratives, and authentic materials such as advertisements, on topics studied in class. Pronunciation and fluency are such that students often might not be understood by native speakers. They are able to write accurately what they can say.

Foundations

Students speak and write extemporaneously using short sentences and sentence strings in present tense on topics within their experience with the language. They can describe, ask and answer questions; engage in simple conversations; and carry out simple realistic functions such as ordering a meal, buying something, or introducing themselves or others to a group. Since their knowledge of the forms and structures of the language has grown rapidly but their practice has been limited, their speech is likely to contain numerous linguistic errors. Students are comprehensible to sympathetic listeners who have experience with non-native speakers of their language. Their written language still mirrors their oral language, although they may be able to express more ideas more accurately in writing, given time to reflect, review and revise.

Essentials

Students speak with somewhat longer utterances and begin to display an ability to connect phrases and sentences to show relations between ideas expressed. Although patterns of errors are still common, students now speak and write extemporaneously in past, present and future time, using vocabulary related to their own lives and interests. Accent and intonation are generally accurate, although pauses and false starts may be common, as students give simple instructions and directions, make comparisons, solve problems together, and engage in conversations on a range of topics including leisure activities, professions and current events. In written work, students' spelling and punctuation are mostly accurate; and they organize their ideas well.

Proficiency

Students use paragraph-length connected discourse to narrate, describe, and discuss ideas and opinions. On topics of interest to them and within their experience, they show few patterns of linguistic errors, they are generally comprehensible to native speakers of the language, and their vocabulary is sufficient to avoid awkward pauses. They are able to circumvent linguistic gaps or lapses by "finding another way to say it." Given time to reflect and revise, they are able to express their ideas completely and interestingly in writing, with generally accurate grammar, vocabulary, spelling, accents and punctuation. They comprehend most authentic expository and fictional material produced for contemporary native speakers.

Distinction

Students show almost no patterns of linguistic errors and are able to carry out almost any task that they can execute in English, albeit with less fluency and control or breadth of vocabulary and grammar. They can argue a point effectively and extemporaneously, explaining their point of view in detail. In writing, their ideas are well organized and clearly, completely, and interestingly presented, with accurate use of the language's writing system. They can comprehend any non-technical material produced for the general public of native speakers in the standard language.

Table 1. Foreign and Native Language Standards

***STANDARD 1*: Communication**

Students understand and interpret written and spoken communication on a variety of topics in the target language

***STANDARD 2*: Communication**

Students engage in oral and written exchanges which include providing and obtaining information, expressing feelings and preferences, and exchanging ideas and opinions in the target language.

***STANDARD 3*: Communication**

Students present information and ideas in the target language on a variety of topics to listeners and readers.

***STANDARD 4*: Culture**

Students know "what to do when" and "what to say while doing it" in the culture and use this knowledge to interact appropriately. They also understand the relationships between cultural perspectives, products and practices within cultures.

***STANDARD 5*: Connections**

Students use the target language and authentic sources to reinforce and/or learn other content from the other subject areas.

***STANDARD 6*: Comparisons**

Students develop insights into their own language and their own culture through the study of the target language.

***STANDARD 7*: Communities**

Students use the target language within and beyond the school setting.

FOREIGN AND NATIVE LANGUAGE STANDARDS

STANDARD 1: COMMUNICATION

Students understand and interpret written and spoken communication on a variety of topics in the target language.

ESSENTIALS (Grades 4-8)

- **1FL-E1. Comprehend the main idea in authentic oral and written materials on a familiar topic**
- **1FL-E2. Comprehend well-developed paragraphs containing complex sentences and idiomatic expressions**
- **1FL-E3. Comprehend, interpret and analyze the style of a short piece of fiction or essay on familiar topics**
- **1FL-E4. Identify characteristics of a variety of literary genres, e.g., short stories, plays, essays**
- **1FL-E5. Identify emotions and feelings from selected reading material**
- **1FL-E6. Read a poem and analyze its components**

STANDARD 2: COMMUNICATION

Students engage in oral and written exchanges which include providing and obtaining information, expressing feelings and preferences, and exchanging ideas and opinions in the target language.

ESSENTIALS (Grades 4-8)

- **2FL-E1. Express and react to a variety of feelings**
- **2FL-E2. Develop and propose solutions to issues and problems cooperatively with other students**
- **2FL-E3. Support opinions with factual information**
- **2FL-E4. Use idiomatic expressions in oral and written communication**

STANDARD 3: COMMUNICATION

Students present information and ideas in the target language on a variety of topics to listeners and readers.

ESSENTIALS (Grades 4-8)

- **3FL-E1. Present understandable written reports and summaries**
- **3FL-E2. Perform short, student-created skits and scenes**
- **3FL-E3. Present a brief speech (monologue)**
- **3FL-E4. Prepare tape- (audio) or video-recorded materials**
- **3FL-E5. Retell a story**

STANDARD 4: CULTURE

Students know "what to do when" and "what to say while doing it" in the culture and use this knowledge to interact appropriately. They also understand the relationships between cultural perspectives, products and practices within cultures.

ESSENTIALS (Grades 4-8)

- **4FL-E1. Investigate and participate in age-appropriate cultural practices related to business, sports and entertainment**
- **4FL-E2. Use and respond appropriately to idiomatic verbal and nonverbal expressions**
- **4FL-E3. Identify, experience or produce expressive products of the culture, e.g., advertisements, stories, poems**
- **4FL-E4. Recognize simple themes, ideas or perspectives of the culture and the relationships to socially acceptable behavior**
- **4FL-E5. Identify the areas in the U.S. where the target language is most commonly spoken, noting the impacts**
- **4FL-E6. Recognize how the target language and its culture add to the richness of our own cultural diversity**
- **4FL-E7. Recognize when to switch between formal and informal language**

STANDARD 5: CONNECTIONS

Students use the target language and authentic sources to reinforce and/or learn other content from the other subject areas.

ESSENTIALS (Grades 4-8)

- **5FL-E1. Present reports in the target language orally and/or in writing on topics being studied in other classes**

- **5FL-E2. Generate reports for other content areas using information acquired through sources in the target language**

STANDARD 6: COMPARISONS

Students develop insights into their own language and their own culture through the study of the target language.

ESSENTIALS (Grades 4-8)

- **6FL-E1. Understand how idiomatic expressions impact communication and reflect culture**

- **6FL-E2. Demonstrate an awareness that there is more than one way to express ideas across languages**

- **6FL-E3. Recognize that there are linguistic and cultural concepts that exist in one language and not in another**

- **6FL-E4. Compare and contrast a variety of art forms (e.g., music, dance, visual arts, drama) with their own culture through oral and/or written descriptions and/or performance**

STANDARD 7: COMMUNITIES

Students use the target language within and beyond the school setting.

ESSENTIALS (Grades 4-8)

- **7FL-E1. Research and present a topic related to the target language or culture, using resources available outside the classroom**

- **7FL-E2. Write letters or electronic messages to native speakers**

- **7FL-E3. Interview community members who speak the target language on topics of personal or professional interest; report the results orally or in writing**

- **7FL-E4. Write letters to U.S. communities and other countries where the target language is used to request information on topics of interest; report orally or in writing about the information received**

- **7FL-E5. Identify and select written or oral materials of individual interest; report on them to others**

Reading Standard Articulated by Grade Level 2003

Grade 8

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 8

Strand 1: Reading Process

Reading Process consists of the five critical components of reading, which are Phonemic Awareness, Phonics, Fluency, Vocabulary and Comprehension of connected text. These elements support each other and are woven together to build a solid foundation of linguistic understanding for the reader.

Concept 1: Print Concepts

Demonstrate understanding of print concepts.

(Grades K-3)

Concept 2: Phonemic Awareness

Identify and manipulate the sounds of speech.

(Grades K-2)

Concept 3: Phonics

Decode words, using knowledge of phonics, syllabication, and word parts.

(Grades K-3)

Concept 4: Vocabulary

Acquire and use new vocabulary in relevant contexts.

PO 1. Determine the meaning of vocabulary using linguistic roots and affixes (e.g., Greek, Anglo-Saxon, Latin).

PO 2. Use context to identify the intended meaning of unfamiliar words (e.g., definition, example, restatement, synonym, contrast).

PO 3. Use context to identify the meaning of words with multiple meanings (e.g., definition, example, restatement, contrast).

PO 4. Determine the meaning of figurative language, including similes, metaphors, personification, idioms, hyperbole, and technical language.

PO 5. Identify the meanings, pronunciations, syllabication, synonyms, antonyms, and parts of speech of words, by using a variety of reference aids, including dictionaries, thesauri, glossaries, and CD-ROM and the Internet when available.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 8

Concept 5: Fluency Read fluently.
PO 1. Read from a variety of genres with accuracy, automaticity (immediate recognition), and prosody (expression).

Concept 6: Comprehension Strategies Employ strategies to comprehend text
PO 1. Predict text content using prior knowledge and text features (e.g., illustrations, titles, topic sentences, key words). *PO 2. Confirm predictions about text for accuracy.* *PO 3. Generate clarifying questions in order to comprehend text.* *PO 4. Use graphic organizers in order to clarify the meaning of the text.* *PO 5. Connect information and events in text to experience and to related text and sources.* *PO 6. Apply knowledge of the organizational structures (e.g., chronological order, compare and contrast, cause and effect relationships, logical order, by classification) of text to aid comprehension.* *PO 7. Use reading strategies (e.g., drawing conclusions, determining cause and effect, making inferences, sequencing) to interpret text.*

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 8

Strand 2: Comprehending Literary Text

Comprehending Literary Text identifies the comprehension strategies that are specific in the study of a variety of literature.

Concept 1: Elements of Literature

Identify, analyze, and apply knowledge of the structures and elements of literature

PO 1. Analyze plot development (e.g., conflict, subplots, parallel episodes) to determine how conflicts are resolved.

PO 2. Compare (and contrast) themes across works of prose, poetry, and drama.

PO 3. *Describe a character, based upon the thoughts, words, and actions of the character, the narrator's description, and other characters.*

PO 4. Contrast points of view (e.g., first vs. third, limited vs. omniscient) in literary text.

PO 5. Analyze the relevance of the setting (e.g., time, place, situation) to the mood and tone of the text.

PO 6. Draw conclusions about the style, mood, and meaning of literary text based on the author's word choice.

PO 7. Analyze the characteristics and structural elements (essential attributes) of a variety of poetic forms (e.g., epic, lyric, sonnet, ballad, elegy, haiku, free verse).

Concept 2: Historical and Cultural Aspects of Literature

Recognize and apply knowledge of the historical and cultural aspects of American, British, and world literature.

PO 1. *Describe the historical and cultural aspects found in cross-cultural works of literature.*

PO 2. Identify common structures and stylistic elements in literature, folklore, and myths from a variety of cultures.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 8

Strand 3: Comprehending Informational Text

Comprehending Informational Text delineates specific and unique skills that are required to understand the wide array of informational text that is a part of our day-to-day experiences.

Concept 1: Expository Text

Identify, analyze, and apply knowledge of the purpose, structures, and elements of expository text.

PO 1. *Restate the main idea (explicit or implicit) and supporting details in expository text.*

PO 2. Summarize the main idea (stated or implied) and critical details of expository text, maintaining chronological, sequential, or logical order.

PO 3. *Distinguish fact from opinion in expository text, providing supporting evidence from text.*

PO 4. *Identify the author's stated or implied purpose(s) for writing expository text.*

PO 5 Locate specific information by using organizational features (e.g., table of contents, headings, captions, bold print, italics, glossaries, indices, key/guide words, topic sentences, concluding sentences, end notes, footnotes, bibliographic references) in expository text. (Connected to Research Strand in Writing)

*PO 6. Locate appropriate print and electronic reference sources (e.g., encyclopedia, atlas, almanac, dictionary, thesaurus, periodical, CD-ROM, website) for a specific purpose. (*Connected to Research Strand in Writing)

*PO 7. Differentiate between primary and secondary source materials. (*Connected to Research Strand in Writing)

PO 8. Interpret graphic features (e.g., charts, maps, diagrams, illustrations, tables, timelines, graphs) of expository text. (Connected to Research Strand in Writing)

PO 9. Apply knowledge of organizational structures (e.g., chronological order, comparison and contrast, cause and effect relationships, logical order, classification schemes) of expository text to aid comprehension.

PO 10. Make relevant inferences about expository text, supported by text evidence.

PO 11. Compare (and contrast) the central ideas and concepts from selected readings on a specific topic.

PO 12. Explain how authors use elements (e.g., language choice, organization) of expository text to achieve their purposes.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 8

Concept 2: Functional Text

Identify, analyze, and apply knowledge of the purpose, structures, clarity, and relevancy of functional text.

PO 1. Use information from text and text features to determine the sequence of activities needed to carry out a procedure.

PO 2. Determine what information (e.g., steps in directions, legend, supplies needed, illustrations, diagram, sequence) is extraneous in functional text.

PO 3. Interpret details from a variety of functional text (e.g., warranties, product information, technical manuals, instructional manuals, consumer safety publications) for a specific purpose (e.g., to follow directions, to solve problems, to perform procedures, to answer questions.

PO 4. Evaluate the adequacy of details and facts from functional text to achieve a specific purpose.

Concept 3: Persuasive Text

Explain basic elements of argument in text and their relationship to the author's purpose and use of persuasive strategies.

PO 1. Determine the author's specific purpose for writing the persuasive text.

PO 2. Evaluate the effectiveness of the facts used to support an author's argument regarding a particular idea, subject, concept, or object.

PO 3. Describe the intended effect of persuasive strategies and propaganda techniques (e.g., bandwagon, peer pressure, repetition, testimonial, transfer, loaded words) that an author uses.

PO 4. Identify specific instances of bias in persuasive text.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

Writing Standard Articulated by Grade Level 2004

Grade 8

Writing Standard Articulated by Grade Level

Grade 8

Strand 1: Writing Process

Research has established the major steps of the writing process. These steps are identified in the five concepts of this strand, each supported with specific performance objectives. While all steps are needed and used by effective writers as they compose text, different skills may be emphasized in individual assignments. These steps may be used recursively as a piece moves toward completion. Throughout the process, students should reflect on their own writing skills, set goals, and evaluate their own progress.

Concept 1: Prewriting Prewriting includes using strategies to generate, plan, and organize ideas for specific purposes.
PO 1. Generate ideas through a variety of activities (e.g., prior knowledge, discussion with others, printed material or other sources).
PO 2. Determine the purpose (e.g., to entertain, to inform, to communicate, to persuade, to explain) of an intended writing piece.
PO 3. Determine the intended audience of a writing piece.
PO 4. Establish a central idea appropriate to the type of writing.
*PO 5. Use organizational strategies (e.g., outlines, charts, tables, graphs, **Venn Diagrams**, **webs**, **story map**, **plot pyramid**) to plan writing.*
PO 6. Maintain a record (e.g., lists, journals, folders, notebooks) of writing ideas.
*PO 7. Use **time management strategies**, when appropriate, to produce a writing product within a set time period.*

Concept 2: Drafting Drafting incorporates prewriting activities to create a first draft containing necessary elements for a specific purpose.
*PO 1. Use a **prewriting plan** to develop a draft with **main idea**(s) and supporting details.*
PO 2. Organize writing into a logical sequence that is clear to the audience.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing.
The bulleted (lettered) items within a performance objective indicate specific content to be taught.
Words shown in bold print are referenced in the glossary.

Writing Standard Articulated by Grade Level

Grade 8

Concept 3: Revising Revising includes evaluating and refining the rough draft for clarity and effectiveness. (Ask: Does this draft say what you want it to say?)
PO 1. Evaluate the draft for use of ideas and content, organization, voice, word choice, and sentence fluency. (See Strand 2)
PO 2. Add details to the draft to more effectively accomplish the purpose.
PO 3. Delete irrelevant and/or redundant information from the draft to more effectively accomplish the purpose.
PO 4. Rearrange words, sentences, and paragraphs to clarify the meaning or to enhance the writing style.
*PO 5. Add **transitional words**, phrases and/or sentences to clarify meaning or enhance the writing style.*
*PO 6. Use a variety of sentence structures (i.e., **simple**, **compound, complex)** to improve sentence fluency in the draft.*
*PO 7. Apply appropriate tools or strategies (e.g., **peer review**, checklists, **rubrics**) to refine the draft.*
PO 8. Use resources and reference materials to select more precise vocabulary.

Concept 4: Editing Editing includes proofreading and correcting the draft for conventions.
PO 1. Identify punctuation, spelling, and grammar and usage errors in the draft. (See Strand 2)
PO 2. Use resources (e.g., dictionary, word lists, spelling/grammar checkers) to correct conventions.
*PO 3. Apply **proofreading marks** to indicate errors in conventions.*
*PO 4. Apply appropriate tools or strategies (e.g., **peer review**, checklists, **rubrics**) to edit the draft.*

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing.
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Writing Standard Articulated by Grade Level

Grade 8

Concept 5: Publishing Publishing includes formatting and presenting a final product for the intended audience.
PO 1. Prepare writing in a format (e.g., oral presentation, manuscript, multimedia) appropriate to audience and purpose.
PO 2. Use margins and spacing to enhance the final product.
PO 3. Use graphics (e.g., drawings, charts, graphs), when applicable, to enhance the final product.
PO 4. Write legibly.

Strand 2: Writing Components

This strand focuses on the elements of effective writing. Good writing instruction incorporates multiple performance objectives into an integrated experience of learning for the student. Throughout the process, students should reflect on their own writing skills, set goals, and evaluate their own progress. The order of the concepts and performance objectives is not intended to indicate a progression or hierarchy for writing instruction. Instructional activities may focus on just one concept or many.

Concept 1: Ideas and Content Writing is clear and focused, holding the reader's attention throughout. Main ideas stand out and are developed by strong support and rich details. Purpose is accomplished.
PO 1. Use clear, focused ideas and details to support the topic.
PO 2. Provide content and selected details that are well-suited to audience and purpose.
PO 3. Develop a sufficient explanation or exploration of the topic.
PO 4. Include ideas and details that show original perspective.

Concept 2: Organization Organization addresses the structure of the writing and integrates the central meaning and patterns that hold the piece together.
*PO 1. Use a structure that fits the type or writing (e.g., letter format, **narrative**, play, essay).* (See Strand 3)
PO 2. Develop a strong beginning or introduction that draws in the reader.

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*PO 3. Place details appropriately to support the **main idea**.*
PO 4. Include effective transitions among all elements (sentences, paragraphs, ideas).
PO 5. Construct paragraphs by arranging sentences with an organizing principle (e.g., to develop a topic, to indicate a chronology).
PO 6. Create an ending that provides a sense of resolution or closure.

Concept 3: Voice Voice will vary according to the type of writing, but should be appropriately formal or casual, distant or personal, depending on the audience and purpose.
PO 1. Show awareness of the audience through word choice, style, and an appropriate connection with, or distance from, the audience.
PO 2. Convey a sense of identity through originality, sincerity, liveliness, or humor appropriate to the topic and application.
PO 3. Use language appropriate for the topic and purpose.
*PO 4. Choose appropriate voice (e.g., formal, informal, **academic discourse)** for the application.*

Concept 4: Word Choice Word choice reflects the writer's use of specific words and phrases to convey the intended message and employs a variety of words that are functional and appropriate to the audience and purpose.
PO 1. Use accurate, specific, powerful words that effectively convey the intended message.
PO 2. Use words that consistently support style and type of writing. (See R08-S2C1)
PO 3. Use vocabulary that is original, varied, and natural.
*PO 4. Use **literal** and **figurative language** where appropriate to purpose.* (See R08-S1C4-04)

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Writing Standard Articulated by Grade Level

Grade 8

Concept 5: Sentence Fluency Fluency addresses the rhythm and flow of language. Sentences are strong and varied in structure and length.
*PO 1. Write **simple**, **compound**, and **complex** sentences.*
PO 2. Create sentences that flow together and sound natural when read aloud.
PO 3. Vary sentence beginnings, lengths, and patterns to enhance the flow of the writing.
PO 4. *Use effective and natural **dialogue** when appropriate.*

Concept 6:Conventions Conventions addresses the mechanics of writing, including capitalization, punctuation, spelling, grammar and usage, and paragraph breaks.
PO 1. Use capital letters correctly for: a. ***proper nouns*** • *holidays* • *product names* • *languages* • *historical events* • *organizations* • *academic courses (e.g., algebra/Algebra I)* • *place* • *regional names (e.g., West Coast)* b. *words used as names (e.g., Grandpa, Aunt Lyn)* c. *literary titles (book, story, poem, play, song)* d. *titles* e. *abbreviations* f. ***proper adjectives***
PO 2. Use commas to correctly punctuate: a. *items in a series* b. *greetings and closings of letters* c. *introductory words and clauses* d. *direct address* e. ***interrupters*** f. ***compound sentences*** g. ***appositives*** h. **dialogue**

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Writing Standard Articulated by Grade Level

Grade 8

PO 3. Use quotation marks to punctuate: a. ***dialogue*** b. *titles of short works (e.g., chapter, story, article, song, poem)* c. *exact words from sources*
PO 4. Use italics (in typed copy) and underlining (in handwriting) to indicate titles of longer works (e.g., books, plays, magazines, movies, TV series).
PO 5. Use colons to punctuate business letter salutations.
PO 6. Use apostrophes to punctuate: *a. contractions* *b. singular possessives* *c. plural possessives*
*PO 7. Spell high **frequency words** correctly.*
PO 8. Use common spelling patterns/generalizations to spell words correctly.
*PO 9. Use **homonyms** correctly in context.*
PO 10. Use resources to spell correctly.
PO 11. Use paragraph breaks to indicate an organizational structure.
*PO. 12. Use the following parts of speech correctly in **simple sentences**:* *a. nouns* *b. action/linking verbs* *c. personal pronouns* *d. adjectives* *e. adverbs* *f. conjunctions* *g. prepositions* *h. interjections*
*PO 13. Use subject/verb agreement in **simple**, **compound**, and **complex sentences**.*

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Words shown in bold print are referenced in the glossary.

Writing Standard Articulated by Grade Level

Grade 8

Strand 3: Writing Applications

Writing skills particular to the applications listed here may be taught across the curriculum, although some applications may lend themselves more readily to specific content areas. It is imperative that students write in all content areas in order to increase their communication skills, and ultimately to improve their understanding of content area concepts. When appropriate, other content standards are referenced to show interdisciplinary connections.

Concept 1: Expressive Expressive writing includes **personal narratives**, stories, poetry, songs, and dramatic pieces. Writing may be based on real or imagined events.
*PO 1. Write a **narrative** that includes:* a. *an engaging **plot** based on imagined or real ideas, observations, or memories of an event or experience* b. *effectively developed characters* c. *a clearly described **setting*** d. *dialogue, as appropriate* e. ***figurative language,** or descriptive words and phrases to enhance style and **tone*** *PO 2. Write in a variety of expressive forms (e.g., poetry, skit) that, according to mode, employ:* a. ***figurative language*** b. ***rhythm*** c. ***dialogue*** d. ***characterization*** e. ***plot*** f. *appropriate format*

Concept 2: Expository Expository writing includes nonfiction writing that describes, explains, informs, or summarizes ideas and content. The writing supports a **thesis** based on research, observation, and/or experience.
PO 1. Record information (e.g., observations, notes, lists, charts, map labels and legends) related to the topic.
PO 2. Write a summary based on the information gathered that include(s): a. *a topic sentence* b. *supporting details* c. *relevant information* (See R08-S3C1-02)
PO 3. Write an **explanatory essay** that includes: a. a **thesis statement** b. supporting details c. introductory, body, and concluding paragraphs

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Writing Standard Articulated by Grade Level

Grade 8

Concept 3: Functional Functional writing provides specific directions or information related to real-world tasks. This includes letters, memos, schedules, directories, signs, manuals, forms, recipes, and technical pieces for specific content areas.
*PO 1. Write a variety of functional texts (e.g., directions, recipes, procedures, **rubrics**, labels, posters, graphs/tables).* (See R08-S3C2; M08-S2C1)
*PO 3. Write a **friendly letter** that includes a:* a. *heading* b. *salutation* c. *body* d. *closing* e. *signature*
PO 4. Write a formal letter that follows a conventional business letter format.
PO 5. Address an envelope for correspondence that includes: a. *an appropriate return address* b. *an appropriate recipient address*

Concept 4: Persuasive Persuasive writing is used for the purpose of influencing the reader. The author presents an issue and expresses an opinion in order to convince an audience to agree with the opinion or to take a particular action.
PO 1. Write persuasive text (e.g., essay, paragraph, written communications) that: a. *establishes and develops a **controlling idea*** b. *supports arguments with detailed **evidence*** c. *includes **persuasive techniques*** d. *excludes irrelevant information* e. *attributes sources of information when appropriate* (See R08-S3C3)

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing.
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Words shown in bold print are referenced in the glossary.

Writing Standard Articulated by Grade Level

Grade 8

Concept 5: Literary Response Literary response is the writer's reaction to a literary selection. The response includes the writer's interpretation, analysis, opinion, and/or feelings about the piece of literature and selected elements within it.
PO 1. Write a response to literature that: a. *presents several clear ideas* b. *supports **inferences** and conclusions with examples from the text, personal experience, references to other works, or reference to non-print media* c. *relates own ideas to supporting details in a clear and logical manner* d. provides support adequate to the literary selection (e.g. short poem vs. novel) (See R08-S2C1)

Concept 6: Research Research writing is a process in which the writer identifies a topic or question to be answered. The writer locates and evaluates information about the topic or question, and then organizes, summarizes, and synthesizes the information into a finished product.
PO 1. Write a summary of information from sources (e.g. encyclopedias, websites, experts) that includes: a. *paraphrasing to convey ideas and details from the source* b. ***main idea**(s) and relevant details* (See R08-S3C1-05, -06, -07, -08)
PO 2. Write an informational report that includes: a. *a focused topic* b. *appropriate facts and relevant details* c. *a logical sequence* d. *a concluding statement* e. *a list of sources used* (See R08-S3C1-05, -06, -07, -08)

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing.
The bulleted (lettered) items within a performance objective indicate specific content to be taught.
Words shown in bold print are referenced in the glossary.

Language Arts 1996
Writing (1996)
Listening and Speaking
Viewing and Presenting

Essentials (Grades 4-8)

Language Arts Standards Rationale
A Vision for Arizona's Students

Arizona's students must be able to communicate effectively in their schools and communities. The communication skills of reading, writing, listening, speaking, viewing and presenting form the core of language and literacy. The ultimate purpose of the following language arts standards is to ensure that all students be offered the opportunities, the encouragement and the vision to develop the language skills they need to pursue lifelong goals, including finding personal enrichment and participating as informed members of society. The language art standards presented in this document are organized into four areas:

- Reading
- Writing
- Listening and Speaking
- Viewing and Presenting

Reading, writing, listening and speaking are commonly recognized as language skills. Visual communication skills have long been applied in language arts classrooms through the use of media and visual resources. However, with the increase in the availability and variety of media, students are faced with numerous demands for interpreting and creating visual messages. In this document, viewing (interpreting visual messages) and presenting (creating visual messages) are the two aspects of visual communication. Resources available for teaching visual communication range from charts, graphs and photographs to the most sophisticated electronic media.

The interdependency of reading, writing, listening, speaking, viewing and presenting requires that language arts skills be integrated in two ways:

- Within language arts
- Across other content areas

Students use language skills to understand academic subject matter and to enrich their lives. They develop literacy at different rates and in a variety of ways. Consequently, interdependent language arts skills and processes should be taught in a variety of learning situations.

Assessment of language arts skills and processes should be comprehensive, authentic and performance based. Multiple assessment methods should be used to evaluate a student's knowledge base and the application of reading, writing, listening, speaking, viewing and presenting.

Assessment tasks should reflect those experiences encountered in the home, community and workplace. Issues concerning assessment of specific populations pose complex questions with no simple solutions. As programs and assessments are developed, these issues must be resolved to enable all students to meet the standards.

In conclusion, the standards in the language arts framework form the core of every student's ability to function effectively in society. Students will need a wide repertoire of communication strategies and skills to succeed as learners, citizens, workers and fulfilled individuals in the 21st century.

Table 1. Language Arts Standards

***STANDARD 1*: Reading - Removed from this document**
See Reading Standard Articulated by Grade Level

***STANDARD 2*: Writing - 2004-2005: Transition Year;**
2005-2006: Implement Writing Standard Articulated by Grade Level

Students effectively use written language for a variety of purposes and with a variety of audiences.

***STANDARD 3*. Listening and Speaking**

Students effectively listen and speak in situations that serve different purposes and involve a variety of audiences.

***STANDARD 4:* Viewing and Presenting**

Students use a variety of visual media and resources to gather, evaluate and synthesize information and to communicate with others.

LANGUAGE ARTS STANDARDS
BY LEVEL: ESSENTIALS (Grades 4-8)

STANDARD 2: WRITING

Students effectively use written language for a variety of purposes and with a variety of audiences.

Note: In developing the Essentials Level concepts, students should use the writing process, including generating topics, drafting, revising ideas and editing, to complete effectively a variety of writing tasks. See W-F1 for the performance objectives.

- **W-E1. Use correct spelling, punctuation, capitalization, grammar and usage, along with varied sentence structure and paragraph organization, to complete effectively a variety of writing tasks**

  (Grades 4-5)
  PO 1. Spell correctly
  PO 2. Punctuate correctly (e.g., sentence endings, commas in a friendly letter's greeting and closing, commas in a series, abbreviations, quotations in dialog, apostrophes)
  PO 3. Apply rules of capitalization (e.g., sentence beginnings, titles, abbreviations, proper nouns)
  PO 4. Apply standard grammar and usage (e.g., subject-verb agreement, simple and compound sentences, appropriate verb tense, plurals)
  PO 5. Organize paragraphs with a variety of sentence structures (e.g., simple, compound)

  (Grades 6-8)
  PO 1. Spell correctly
  PO 2. Punctuate correctly (e.g., sentence endings, commas in a series, commas in compound sentences, abbreviations, quotation marks, colon in a business letter greeting, apostrophes)
  PO 3. Apply rules of capitalization (e.g., sentence beginnings, titles, abbreviations, proper nouns, direct quotations)
  PO 4. Apply standard grammar and usage (e.g., subject-verb agreement; simple, compound and complex sentences; appropriate verb tense; plurals; prepositions)
  PO 5. Organize paragraphs with a variety of sentence structures (e.g., simple, compound, complex)

- **W-E2. Write a personal experience narrative or creative story that includes a plot and shows the reader what happens through well-developed characters, setting, dialog, and themes and uses figurative language, descriptive words and phrases**

  (Grades 4-5)
  PO 1. Write a personal experience narrative
  - develop a story line in a sequence that is clear
  - use descriptive words and phrases

  -OR-

  PO2. Write a story
  - develop a story line in a sequence that is clear
  - develop the characters
  - describe the setting
  - use dialog when appropriate
  - use descriptive words and phrases

  (Grades 6-8)
  PO 1. Write a personal experience narrative
  - develop a story line in a sequence that is clear
  - use figurative language or descriptive words and phrases

  -OR-

  PO2. Write a story
  - develop a story line in a sequence that is clear
  - develop the characters
  - describe the setting
  - use dialog when appropriate
  - use simile, metaphor or descriptive words and phrases

- **W-E3. Write a summary that presents information clearly and accurately, contains the most significant details and preserves the position of the author**

  (Grades 4-5)

  Note: For instructional purposes–not for state assessment

  (Grades 6-8)
  PO 1. Use own words except for material quoted
  PO 2. Preserve the author's perspective and voice
  PO 3. Contain main ideas of event/article/story plus the most significant details
  PO 4. Present clearly written and organized information

- **W-E4. Write an expository essay that contains effective introductory and summary statements and fully develops the ideas with details, facts, examples and descriptions**

  (Grades 4-5)

  Note: For instructional purposes–not for state assessment

  (Grades 6-8)
  PO 1. Write an expository essay that begins by stating the thesis (purpose) with an effective introductory statement or paragraph; provides smooth transitions; and ends with either a paragraph concluding the development of the thesis, a summary or a clincher statement
  PO 2. Use own words (except for quoted material) to develop ideas accurately and clearly with supporting details, facts, examples or descriptions
  PO 3. Use personal interpretation, analysis, evaluation or reflection to evidence understanding of subject

- **W-E5. Write a report that conveys a point of view and develops a topic with appropriate facts, details, examples and descriptions from a variety of cited sources**

  (Grades 4-5)
  PO 1. Write a report in own words that states, develops and provides a concluding statement for a point of view (perspective) about a topic that is narrow enough to be adequately covered
  PO 2. Use logical sequence (including transitional words and phrases such as *first*, *next*, *then*)
  PO 3. Provide support through facts, details, examples or descriptions that are appropriate, directly related to the topic and from a variety of cited sources

  (Grades 6-8)
  PO 1. Write a report in own words (except for material quoted) that states, develops and provides a concluding statement for a point of view (perspective) about a topic that is narrow enough to be adequately covered
  PO 2. Organize a report with a clear beginning, middle and end including use of smooth transitions
  PO 3. Provide support through facts, details, examples or descriptions that are appropriate, directly related to the topic, and from a variety of cited sources
  PO 4. Use personal interpretation, analysis, evaluation or reflection to evidence understanding of subject

- **W-E6. Write formal communications, such as personal or business letters, messages, directions and applications, in an appropriate format and for a specific audience and purpose**

  (Grades 4-5)
  PO 1. Write a formal communication in an appropriate format for a specific audience and purpose
  PO 2. Organize ideas in a meaningful sequence using transitional words or phrases (e.g., *first*, *next*, *then*)
  PO 3. Express ideas that are clear and directly related to the topic

  (Grades 6-8)
  PO 1. Write a formal communication in an appropriate format for a specific audience and purpose
  PO 2. Organize ideas in a meaningful sequence using smooth transitions
  PO 3. Express ideas that are clear and directly related to the topic

- **W-E7. Write a response to a literary selection by supporting their ideas with references to the text, other works or experiences**

  (Grades 4-5)
  PO 1. Write a clear response supported with examples from the text, other works or experiences
  PO 2. Relate own ideas to supporting details in a clear manner
  PO 3. Organize response with a clear beginning, middle and end

  (Grades 6-8)
  PO 1. State clearly a position that is interpretive, analytic, evaluative or reflective
  PO 2. Support inferences and conclusions with examples from the text, personal experience, references to other works or reference to non-print media
  PO 3. Relate own ideas to supporting details in a clear and logical manner
  PO 4. Provide support adequate to the literary selection (e.g., short poem vs. novel)

- **W-E8. Demonstrate research skills using reference materials such as a dictionary, encyclopedia and thesaurus to complete effectively a variety of writing tasks**

  (Grades 4-5)
  PO 1. Implement a research strategy that includes
  - selecting appropriate source for a specific research purpose
  - utilizing reference materials (e.g., dictionary, thesaurus, encyclopedia, informational trade books, multimedia sources, Internet)
  - writing a paraphrase of information from a source
  - recording relevant information (e.g., notes, graphs, tables) taken from a research source
  - organizing notes and integrating notes into a finished product
  - incorporating notes into a finished product

(Grades 6-8)
PO 1. Implement a research strategy that includes
- selecting best source for specific research purpose
- taking notes that summarize and paraphrase information relevant to the topic
- incorporating notes into a finished product

STANDARD 3: LISTENING AND SPEAKING

Students effectively listen and speak in situations that serve different purposes and involve a variety of audiences.

- **LS-E1. Prepare and deliver an organized speech and effectively convey the message through verbal and nonverbal communications with a specific audience**

- **LS-E2. Prepare and deliver an oral report in a content area and effectively convey the information through verbal and nonverbal communications with a specific audience**

- **LS-E3. Interpret and respond to questions and evaluate responses both as interviewer and interviewee**

- **LS-E4. Predict, clarify, analyze and critique a speaker's information and point of view**

STANDARD 4: VIEWING AND PRESENTING

Students use a variety of visual media and resources to gather, evaluate and synthesize information and to communicate with others.

- **VP-E1. Analyze visual media for language, subject matter and visual techniques used to influence opinions, decision making and cultural perceptions**

- **VP-E2. Plan, develop and produce a visual presentation, using a variety of media such as videos, films, newspapers, magazines and computer images**

- **VP-E3. Compare, contrast and establish criteria to evaluate visual media for purpose and effectiveness**

LANGUAGE ARTS GLOSSARY

Acknowledge To cite the source of information in a written piece.

Address To speak to; to deal with.

Adequate Sufficient, competent, satisfactory.

Advance To put forward, propose.

Allusion An indirect reference to something assumed to be familiar.

Analytic Noting relationships; reasoning from the interrelations of a subject.

Anticipate To foresee, to realize beforehand.

Appropriate Consistent with accepted standards; suited to an end or purpose.

Cluster A group of the same or similar elements.

Cohesive Consistent, tending to unify.

Complex Composite, intricate, complicated.

Concrete Precise, specific.

Contain To have within, to include, to have as component parts.

Contemporary In existence now; present, current, present-day.

Convey To communicate or make known.

Craft To construct, create.

Create To produce through artistic or imaginative effort.

Creative Original, inventive, innovative.

Credible Worthy of belief because of precision; valid, convincing, true.

Credit To acknowledge work done; to cite.

Effective Producing a desired effect; efficient.

Exclude To reject; to prevent from being included or considered.

Expository Explanatory, interpretive.

Figurative Language Use of figures of speech; symbolic language.

Genre Type or class; classification of literature.

Good Penmanship Readable formation of letters; the art of handwriting.

High Frequency Word A word that appears many more times than others in ordinary reading materials.

Idiomatic Pertaining to expressions of language that do not mean what they literally say.

Interpretive Serving to explain; explanatory.

K-W-L A reading comprehension strategy to determine what a student knows, wants to know and has learned.

List To itemize; to make a list of.

Maintain To support, sustain.

Meaningful Effectively conveying meaning, feeling or mood; important, significant.

Metaphor A figure of speech in which a comparison is implied by analogy, but not stated.

Paraphrase To restate text or passage in another form or words.

Personal Experience First-hand experience.

Perspective View, outlook.

Preserve To keep or maintain intact.

Reflective Characterized by, or disposed to, serious thought; contemplative, deliberative.

Relate To give account of; describe, report.

Relevant Having a bearing on, or connection with, the matter at hand.

Résumé A brief written account of personal, educational and professional qualifications and experience.

Scaffold To build one idea upon another.

Sensory Pertaining to the senses.

Simile A figure of speech in which two essentially unlike things are compared.

Skim To look through reading matter casually.

Symbolism Attributing symbolic meanings or significance to objects, events or relationships.

Traditional Conventional.

Mathematics Standard Articulated By Grade Level 2003

Grade 8

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

GRADE 8

Strand 1: Number Sense and Operations

Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.

Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.
PO 1. Locate rational numbers on a number line.
PO 2. Identify irrational numbers.
PO 3. Classify real numbers as rational or irrational.

Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.
PO 1. Select the grade-level appropriate operation to solve word problems.
PO 2. Solve word problems using grade-level appropriate operations and numbers.
PO 3. Determine the square of an integer.
PO 4. Determine the square root of an integer.
PO 5. Identify squaring and finding square roots as inverse operations.
PO 6. Apply grade-level appropriate properties to assist in computation.
PO 7. Apply the symbols "√" to represent square root, "±" to represent roots, and "{}" as grouping symbols.
PO 8. Use grade-level appropriate mathematical terminology.
PO 9. Calculate the missing value in a percentage problem.
PO 10. Convert standard notation to scientific notation, and vice versa.
PO 11. Simplify numerical expressions using the order of operations with grade- appropriate operations on number sets.

Concept 3: Estimation Use estimation strategies reasonably and fluently.
PO 1. Solve grade-level appropriate problems using estimation. PO 2. Use estimation to verify the reasonableness of a calculation (e.g., Is 32 the square root of 64?). PO 3. Express answers to the appropriate place or degree of precision (e.g., time, money). PO 4. Verify the reasonableness of estimates made from calculator results within a contextual situation.

Strand 2: Data Analysis, Probability, and Discrete Mathematics

Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.

Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.
PO 1. Formulate questions to collect data in contextual situations. PO 2. Construct box-and-whisker plots. PO 3. Determine the appropriate type of graphical display for a given data set. PO 4. Interpret box-and-whisker plots, circle graphs, and scatter plots. PO 5. Answer questions based on box-and-whisker plots, circle graphs, and scatter plots. PO 6. Solve problems in contextual situations using the mean, median, mode, and range of a given data set. PO 7. Formulate reasonable predictions based on a given set of data. PO 8. Compare trends in data related to the same investigation. PO 9. Solve contextual problems using scatter plots, box-and-whiskers plots, and double line graphs of continuous data. PO 10. Evaluate the effects of missing or incorrect data on the results of an investigation (e.g., Susie's teacher recorded a 39 instead of a 93 for her last quiz, what will happen to Susie's average?). PO 11. Identify a line of best fit for a scatter plot. PO 12. Distinguish between causation and correlation.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

GRADE 8

Concept 2: Probability Understand and apply the basic concepts of probability.
PO 1. Determine the probability that a specific event will occur in a 2-stage probability experiment. PO 2. Solve contextual situations using probability (e.g., If the probability of Michelle making a free throw is 0.25, what is the probability that she will make three free throws in a row?). PO 3. Predict the outcome of a grade-level appropriate probability experiment. PO 4. Record the data from performing a grade-level appropriate probability experiment. PO 5. Compare the outcome of an experiment to predictions made prior to performing the experiment. PO 6. Distinguish between independent and dependent events. PO 7. Compare the results of two repetitions of the same grade-level appropriate probability experiment.

Concept 3: Discrete Mathematics – Systematic Listing and Counting Understand and demonstrate the systematic listing and counting of possible outcomes.
PO 1. Determine all possible outcomes involving the combination of two or more sets of objects (e.g., If you roll a six-sided number cube 4 times, how many possible outcomes are possible?). PO 2. Determine all possible arrangements given a set (e.g., How many ways can you arrange a set of 7 books on a shelf?).

Concept 4: Vertex-Edge Graphs Understand and apply vertex-edge graphs.
PO 1. Solve contextual problems represented by vertex-edge graphs.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

GRADE 8

Strand 3: Patterns, Algebra, and Functions

Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.

Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.
PO 1. Communicate a grade-level appropriate iterative or recursive pattern, using symbols or numbers. PO 2. Extend a grade-level appropriate iterative or recursive pattern. PO 3. Solve grade-level appropriate iterative or recursive pattern problems.

Concept 2: Functions and Relationships Describe and model functions and their relationships.
PO 1. Describe the rule used in a simple grade-level appropriate function (e.g., T-chart, input/output model). PO 2. Distinguish between linear and nonlinear functions, given graphic examples. PO 3. Determine whether a graph or table is related to a given equation of the form $y=ax^2$ where 'a' is a natural number. PO 4. Identify independent and dependent variables for a contextual situation.

Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.
PO 1. Evaluate algebraic expressions by substituting rational values for variables [e.g., $2(ab+ac+bc)$, when $a = 2$, $b = 3/5$, and $c = 4$]. PO 2. Use variables in contextual situations. PO 3. Translate a written sentence or phrase into an algebraic equation or expression, and vice versa (e.g., Three less than twice a number is $2n$-3.). PO 4. Translate a sentence written in context into an algebraic equation involving two operations. PO 5. Translate a contextual situation into an algebraic inequality (e.g., Joe earns more than $5.00 an hour; therefore, $x > 5$). PO 6. Identify an equation or inequality that represents a contextual situation. PO 7. Solve one-step equations with rational numbers as coefficients or as solutions. PO 8. Solve one-step equations that model contextual situations.

PO 9. Solve two-step equations with rational coefficients and integer solutions (e.g., $3x + 5 = 11$, $4x - 20 = 8$).

PO 10. Graph an inequality on a number line.

PO 11. Solve a simple algebraic proportion.

PO 12. Solve applied problems using the Pythagorean theorem.

Concept 4: Analysis of Change
Analyze change in a variable over time and in various contexts.
PO 1. Identify the slope of a line as the rate of change (the ratio of rise over run).

Strand 4: Geometry and Measurement

Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.

Concept 1: Geometric Properties
Analyze the attributes and properties of 2- and 3- dimensional shapes and develop mathematical arguments about their relationships.
PO 1. Draw a model that demonstrates basic geometric relationships such as parallelism, perpendicularity, similarity/proportionality, and congruence.
PO 2. Draw 3-dimensional figures by applying properties of each (e.g., parallelism, perpendicularity, congruency).
PO 3. Recognize the 3-dimensional figure represented by a net.
PO 4. Represent the surface area of rectangular prisms and cylinders as the area of their net.
PO 5. Draw regular polygons with appropriate labels.
PO 6. Identify the properties of angles created by a transversal intersecting two parallel lines (e.g., corresponding angles are congruent).
PO 7. Recognize the relationship between inscribed angles and intercepted arcs.
PO 8. Identify tangents and secants of a circle.
PO 9. Determine whether three given lengths can form a triangle.
PO 10. Identify corresponding angles of similar polygons as congruent and sides as proportional.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

GRADE 8

Concept 2: Transformation of Shapes Apply spatial reasoning to create transformations and use symmetry to analyze mathematical situations.
PO 1. Identify the planar geometric figure that is the result of a given rigid transformation. PO 2. Model a simple transformation on a coordinate grid (e.g., Translate right four units and down two units.).

Concept 3: Coordinate Geometry Specify and describe spatial relationships using coordinate geometry and other representational systems.
PO 1. Use a table of values to graph a linear equation. PO 2. Determine the midpoint given two points on a number line. PO 3. Determine the distance between two points on a number line.

Concept 4: Measurement - Units of Measure - Geometric Objects Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.
PO 1. Solve problems for the area of a trapezoid. PO 2. Solve problems involving the volume of rectangular prisms and cylinders. PO 3. Calculate the surface area of rectangular prisms or cylinders. PO 4. Identify rectangular prisms and cylinders having the same volume. PO 5. Find the measure of a missing interior angle in a triangle or quadrilateral. PO 6. Solve problems using ratios and proportions, given the scale factor. PO 7. Calculate the length of a side, given two similar triangles.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

GRADE 8

Strand 5: Structure and Logic

Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.

Concept 1: Algorithms and Algorithmic Thinking Use reasoning to solve mathematical problems in contextual situations.
PO 1. Describe how to use a proportion to solve a problem in context. PO 2. Analyze algorithms.

Concept 2: Logic, Reasoning, Arguments, and Mathematical Proof Evaluate situations, select problem-solving strategies, draw logical conclusions, develop and describe solutions and recognize their applications.
PO 1. Solve a logic problem given the necessary information. PO 2. Identify simple valid arguments using *if…then* statements (e.g., All squares are rectangles. If quadrilateral ABCD is a rectangle, is it a square?). PO 3. Model a contextual situation using a flow chart. PO 4. Verify the Pythagorean theorem using an area dissection argument.

Science Standard Articulated by Grade Level 2004

Grade 8

SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 8

The goal in the development of the standard was to assure that the six strands and five unifying concepts are interwoven into a fabric of science that represents the true nature of science. Students have the opportunity to develop both the skills and content knowledge necessary to be scientifically literate members of the community.

Strands 1, 2, and 3 are designed to be explicitly taught *and* embedded *within* each of the content Strands 4, 5, and 6, and are not intended to be taught in isolation. The processes, skills, and content of the first three strands are designed to "umbrella" and complement the content of Life Science, Physical Science, and Earth and Space Science.

Strand 1: Inquiry Process

Inquiry Process establishes the basis for students' learning in science. Students use scientific processes: questioning, planning and conducting investigations, using appropriate tools and techniques to gather data, thinking critically and logically about relationships between evidence and explanations, and communicating results.

Concept 1: Observations, Questions, and Hypotheses
Formulate predictions, questions, or hypotheses based on observations. Locate appropriate resources.

PO 1. Formulate questions based on observations that lead to the development of a hypothesis.
(See M08-S2C1-01)

PO 2. Use appropriate research information, not limited to a single source, to use in the development of a testable hypothesis.
(See W08-S3C6-01, R08-S3C1-06, and R08-S3C2-03)

PO 3. Generate a hypothesis that can be tested.

Concept 2: Scientific Testing (Investigating and Modeling)
Design and conduct controlled investigations.

PO 1. Demonstrate safe behavior and appropriate procedures (e.g., use and care of technology, materials, organisms) in all science inquiry.

PO 2. Design a controlled investigation to support or reject a hypothesis.

PO 3. Conduct a controlled investigation to support or reject a hypothesis.

PO 4. Perform measurements using appropriate scientific tools (e.g., balances, microscopes, probes, micrometers).

PO 5. Keep a record of observations, notes, sketches, questions, and ideas using tools such as written and/or computer logs.
(See W08-S3C2-01 and W08-S3C3-01)

Italics denote a repetition of a performance objective (learned in an earlier grade) that is to be applied to grade level content or at a higher level of complexity.
The bulleted items within a performance objective indicate specific content to be taught.

SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 8

Concept 3: Analysis and Conclusions
Analyze and interpret data to explain correlations and results; formulate new questions.

PO 1. Analyze data obtained in a scientific investigation to identify trends.
(See M08-S2C1-08)

PO 2. Form a logical argument about a correlation between variables or sequence of events (e.g., construct a cause-and-effect chain that explains a sequence of events).

PO 3. Interpret data that show a variety of possible relationships between two variables, including:
- positive relationship
- negative relationship
- no relationship

PO 4. Formulate a future investigation based on the data collected.

PO 5. Explain how evidence supports the validity and reliability of a conclusion.

PO 6. Identify the potential investigational error that may occur (e.g., flawed investigational design, inaccurate measurement, computational errors, unethical reporting).

PO 7. Critique scientific reports from periodicals, television, or other media.

PO 8. Formulate new questions based on the results of a previous investigation.

Concept 4: Communication
Communicate results of investigations.

PO 1. Communicate the results of an investigation.

PO 2. Choose an appropriate graphic representation for collected data:
- *line graph*
- *double bar graph*
- *stem and leaf plot*
- *histogram*

(See M08-S2C1-03)

PO 3. Present analyses and conclusions in clear, concise formats.
(See W08-S3C6-02)

PO 4. Write clear, step-by-step instructions for conducting investigations or operating equipment (without the use of personal pronouns).
(See W08-S3C3-01)

PO 5. Communicate the results and conclusion of the investigation.
(See W08-S3C6-02)

Italics denote a repetition of a performance objective (learned in an earlier grade) that is to be applied to grade level content or at a higher level of complexity.
The bulleted items within a performance objective indicate specific content to be taught.

SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 8

Strand 2: History and Nature of Science

Scientific investigation grows from the contributions of many people. History and Nature of Science emphasizes the importance of the inclusion of historical perspectives and the advances that each new development brings to technology and human knowledge. This strand focuses on the human aspects of science and the role that scientists play in the development of various cultures.

Concept 1: History of Science as a Human Endeavor

Identify individual, cultural, and technological contributions to scientific knowledge.

PO 1. Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Watson and Crick [scientists], support Strand 4; Rosalind Franklin [scientist], supports Strand 4; Charles Darwin [scientist], supports Strand 4; George Washington Carver [scientist, inventor], supports Strand 4; Joseph Priestley [scientist], supports Strand 5; Sir Frances Bacon [philosopher], supports Strand 5; Isaac Newton [scientist], supports Strand 5).

PO 2. Evaluate the effects of the following major scientific milestones on society:
- Mendelian Genetics
- Newton's Laws

PO 3. Evaluate the impact of a major scientific development occurring within the past decade.

PO 4. Evaluate career opportunities related to life and physical sciences.

Concept 2: Nature of Scientific Knowledge

Understand how science is a process for generating knowledge.

PO 1. Apply the following scientific processes to other problem solving or decision making situations:
- *observing*
- *questioning*
- *communicating*
- *comparing*
- *measuring*
- *classifying*
- *predicting*
- *organizing data*
- *inferring*
- *generating hypotheses*
- *identifying variables*

PO 2. Describe how scientific knowledge is subject to change as new information and/or technology challenges prevailing theories.

PO 3. Defend the principle that accurate record keeping, openness, and replication are essential for maintaining an investigator's credibility with other scientists and society.

PO 4. Explain why scientific claims may be questionable if based on very small samples of data, biased samples, or samples for which there was no control.

Italics denote a repetition of a performance objective (learned in an earlier grade) that is to be applied to grade level content or at a higher level of complexity.
The bulleted items within a performance objective indicate specific content to be taught.

SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 8

Strand 3: Science in Personal and Social Perspectives

Science in Personal and Social Perspectives emphasizes developing the ability to design a solution to a problem, to understand the relationship between science and technology, and the ways people are involved in both. Students understand the impact of science and technology on human activity and the environment. This strand affords students the opportunity to understand their place in the world – as living creatures, consumers, decision makers, problem solvers, managers, and planners.

Concept 1: Changes in Environments
Describe the interactions between human populations, natural hazards, and the environment.

PO 1. Analyze the risk factors associated with natural, human induced, and/or biological hazards, including:
- waste disposal of industrial chemicals
- greenhouse gases

PO 2. Analyze possible solutions to address the environmental risks associated with chemicals and biological systems.

Concept 2: Science and Technology in Society
Develop viable solutions to a need or problem.

PO 1. Propose viable methods of responding to an identified need or problem.

PO 2. Compare solutions to best address an identified need or problem.

PO 3. Design and construct a solution to an identified need or problem using simple classroom materials.

PO 4. Compare risks and benefits of the following technological advances:
- radiation treatments
- genetic engineering (See Strand 4 Concept 2)
- airbags (See Strand 5 Concept 2)

Italics denote a repetition of a performance objective (learned in an earlier grade) that is to be applied to grade level content or at a higher level of complexity.
The bulleted items within a performance objective indicate specific content to be taught.

SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 8

Strand 4: Life Science

Life Science expands students' biological understanding of life by focusing on the characteristics of living things, the diversity of life, and how organisms and populations change over time in terms of biological adaptation and genetics. This understanding includes the relationship of structures to their functions and life cycles, interrelationships of matter and energy in living organisms, and the interactions of living organisms with their environment.

Concept 1: Structure and Function in Living Systems Understand the relationships between structures and functions of organisms.
No performance objectives at this grade level

Concept 2: Reproduction and Heredity Understand the basic principles of heredity.
PO 1. Explain the purposes of cell division: • growth and repair • reproduction PO 2. Explain the basic principles of heredity using the human examples of: • eye color • widow's peak • blood type PO 3. Distinguish between the nature of dominant and recessive traits in humans.

Concept 3: Populations of Organisms in an Ecosystem Analyze the relationships among various organisms and their environment.
No performance objectives at this grade level

Italics denote a repetition of a performance objective (learned in an earlier grade) that is to be applied to grade level content or at a higher level of complexity.
The bulleted items within a performance objective indicate specific content to be taught.

SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 8

Concept 4: Diversity, Adaptation, and Behavior Identify structural and behavioral adaptations.
PO 1. Explain how an organism's behavior allows it to survive in an environment. PO 2. Describe how an organism can maintain a stable internal environment while living in a constantly changing external environment. PO 3. Determine characteristics of organisms that could change over several generations. PO 4. Compare the symbiotic and competitive relationships in organisms within an ecosystem (e.g., lichen, mistletoe/tree, clownfish/sea anemone, native/non-native species). PO 5. Analyze the following behavioral cycles of organisms: • hibernation • migration • dormancy (plants) PO 6. Describe the following factors that allow for the survival of living organisms: • protective coloration • beak design • seed dispersal • pollination

Italics denote a repetition of a performance objective (learned in an earlier grade) that is to be applied to grade level content or at a higher level of complexity.
The bulleted items within a performance objective indicate specific content to be taught.

SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 8

Strand 5: Physical Science

Physical Science affords students the opportunity to increase their understanding of the characteristics of objects and materials they encounter daily. Students gain an understanding of the nature of matter and energy, including their forms, the changes they undergo, and their interactions. By studying objects and the forces that act upon them, students develop an understanding of the fundamental laws of motion, knowledge of the various ways energy is stored in a system, and the processes by which energy is transferred between systems and surroundings.

Concept 1: Properties and Changes of Properties in Matter
Understand physical and chemical properties of matter.

PO 1. Identify different kinds of matter based on the following physical properties:
- states
- density
- boiling point
- melting point
- solubility

PO 2. Identify different kinds of matter based on the following chemical properties:
- reactivity
- pH
- oxidation (corrosion)

PO 3. Identify the following types of evidence that a chemical reaction has occurred:
- formation of a precipitate
- generation of gas
- color change
- absorption or release of heat

PO 4. Classify matter in terms of elements, compounds, or mixtures.

PO 5. Classify mixtures as being homogeneous or heterogeneous.

PO 6. Explain the systematic organization of the periodic table.

PO 7. Investigate how the transfer of energy can affect the physical and chemical properties of matter.

Italics denote a repetition of a performance objective (learned in an earlier grade) that is to be applied to grade level content or at a higher level of complexity.
The bulleted items within a performance objective indicate specific content to be taught.

SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 8

Concept 2: Motion and Forces Understand the relationship between force and motion.
PO 1. Demonstrate velocity as the rate of change of position over time. PO 2. Identify the conditions under which an object will continue in its state of motion (Newton's 1st Law of Motion). PO 3. Describe how the acceleration of a body is dependent on its mass and the net applied force (Newton's 2nd Law of Motion). PO 4. Describe forces as interactions between bodies (Newton's 3rd Law of Motion). PO 5. Create a graph devised from measurements of moving objects and their interactions, including: • position-time graphs • velocity-time graphs

Concept 3: Transfer of Energy Understand that energy can be stored and transferred.
No performance objectives at this grade level

Italics denote a repetition of a performance objective (learned in an earlier grade) that is to be applied to grade level content or at a higher level of complexity.
The bulleted items within a performance objective indicate specific content to be taught.

SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 8

Strand 6: Earth and Space Science

Earth and Space Science provides the foundation for students to develop an understanding of the Earth, its history, composition, and formative processes, and an understanding of the solar system and the universe. Students study the regularities of the interrelated systems of the natural world. In doing so, they develop understandings of the basic laws, theories, and models that explain the world (NSES, 1995). By studying the Earth from both a historical and current time frame, students can make informed decisions about issues affecting the planet on which they live.

Concept 1: Structure of the Earth Describe the composition and interactions between the structure of the Earth and its atmosphere.
No performance objectives at this grade level

Concept 2: Earth's Processes and Systems Understand the processes acting on the Earth and their interaction with the Earth systems.
No performance objectives at this grade level

Concept 3: Earth in the Solar System Understand the relationships of the Earth and other objects in the solar system.
No performance objectives at this grade level

Italics denote a repetition of a performance objective (learned in an earlier grade) that is to be applied to grade level content or at a higher level of complexity.
The bulleted items within a performance objective indicate specific content to be taught.

Social Studies Standards 2000

Essentials (Grades 4-8)

Social Studies Standards Rationale

To maintain the Union that supports our freedoms, citizens must rely on the knowledge, skills, and character of its citizens and those they elect to public office. Critical to the preservation and improvement of America's republican form of government is the study of America's founding principles, namely the principles as detailed in the United States Constitution, the Declaration of Independence, and in *The Federalist Papers*. The standards include study of the rich and diverse contributions people of many backgrounds have made to American life and institutions, and at the same time, emphasize our shared heritage as citizens and residents of the United States. They require that students acquire both core knowledge and a firm grasp of reasoning and practice in inquiry and research. Students must learn how to frame and test hypotheses, distinguish logical from illogical reasoning, frame reasoned options and arguments, and grasp reflective thinking and evaluation. The standards present the academic content and skills in the four interrelated disciplines of history, geography, civics/government, and economics that are essential to an understanding of human experience, past and present.

History

The study of history is essential in developing citizens who understand contemporary issues with a depth and wisdom drawn from the experience of the past. Through the study of history, which integrates the humanities (such as art and literature) and the social sciences (political science, economics, and geography), students will better understand their own society, as well as others. Because most United States institutions and ideals trace their origins through Europe, the study of Western civilizations is a central feature of the standards, although students are also expected to learn about the significant contributions of other non-Western civilizations. Analyzing patterns and relationships within and among world cultures such as economic competition and interdependence, age-old ethnic enmities, and political and military alliances, helps learners carefully examine policy alternatives that have both national and worldwide implications. The deep study of history is further informed and enlivened by considering current events and issues. Important as well, students will develop understanding of chronological thinking, the connection between causes and effects, and between continuity and change. They will see how people in other times and places have grappled with the fundamental questions of truth, justice, and personal responsibility, understand that ideas have real consequences, and realize that events are shaped both by ideas and the actions of individuals.

Civics/Government

The goal of the civics standards is to develop in all students the requisite knowledge and skills for informed, responsible participation in public life; to ensure, through instruction, that students understand the essentials, sources, and history of the constitutions of the United States and Arizona, American institutions and ideals (ARS 15-710). Through these standards, students will understand the foundations, principles, and institutional practices of the United States a representative democracy and constitutional republic. They will be aware of their rights as citizens and residents of the United States. They will understand the importance of each person as an individual, the importance of respect for the human and civil rights of all people, and our shared heritage as citizens and residents of the United States. The civics standards also reflect

the need to help students develop a basic understanding of politics and government and to practice the skills of good citizenship. Students should be able to obtain, understand, and evaluate information relating to the performance of public officials. Citizenship skills are also required for competent participation in the political process. These include the capacity to influence policies and decisions by working with others, clearly articulating interests and making them known to key decision and policy makers, building coalitions, negotiating, compromising, seeking consensus, and managing conflicts.

Geography

The goal of the geography standards is to provide an understanding of: 1) the human and physical characteristics of the Earth's places and regions, 2) how people of different cultural backgrounds interact with their environment, and 3) how the United States and the student's home state and community are affected by conditions and events in near and distant places. By learning to think spatially, students of geography will learn to analyze locations, places, and their myriad relationships. They will also have a framework to study local, regional, national, and global issues that concern them and understand their place in society. The essential skills of asking geographic questions; acquiring, presenting, and analyzing geographic information; and developing and testing geographic generalizations are central to the standards. The geographic reasoning that is represented is a way of studying human and natural features within a spatial perspective. Through geographic reasoning, students will understand the arrangement and interactions of human and physical systems on the surface of the Earth. As these patterns have changed over time and are important to governments and economies, geographic reasoning will help with students' understanding of history, civics, and economics.

Economics

The goal of the economics standards is to ensure that students understand economics well enough to make reasoned judgments about both personal economic questions and broader questions of economic policy. Through the standards, students will develop an economic way of thinking and problem solving in order to understand and apply basic economic principles to decisions they will make as consumers, members of the workforce, citizens, voters, and participants in a global marketplace. This type of critical thinking will prepare students to weigh not only the short-term effects of a decision, but also its long-term effects and possible unintended consequences. They will understand that because resources are scarce relative to wants, individuals and society must choose how to allocate goods and services among competing uses. Students will also understand that these choices and trade-offs significantly affect the quality of people's lives and explain historical developments and patterns, the results of trade, and the distribution of income and wealth in local, regional, national, and world economies. Understanding the process and components of economic reasoning also will provide a vital framework within which to analyze current issues and public policies, and to understand the complex relationships among economic, political, and cultural systems.

It is possible to spend a lifetime studying these areas without learning about every significant event. Our best hope in the years of formal schooling is that students learn to tell the important from the unimportant and to know enough about history, geography, economics, and civics and

government to inform themselves about the vital connections between the present and the past. Our very first priority is to prepare our young people for the office of citizen. In conjunction with standards frameworks in other disciplines, these standards are designed to help all schools ensure that they promote a high level of academic rigor and provide sound opportunities for all students to learn.

Table 1. Social Studies Standards

***STANDARD 1*: History**

Students analyze the human experience through time, recognize the relationships of events and people, and interpret significant patterns, themes, ideas, beliefs, and turning points in Arizona, American, and world history.

***STANDARD 2*: Civics/Government**

Students understand the ideals, rights, and responsibilities of citizenship, and the content, sources, and history of the founding documents of the United States, with particular emphasis on the Constitution and how the government functions at the local, state, national, and international levels.

***STANDARD 3*: Geography**

Students analyze locations, regions, and spatial connections, recognizing the natural and cultural processes that impact the way in which people and societies live and interact with each other and their environment.

***STANDARD 4*: Economics**

Students develop economic reasoning skills to apply basic economic concepts, assess problems, make choices, and evaluate the choices of others as consumers, workers, and citizens participating in local, national, and global economies.

SOCIAL STUDIES STANDARDS
BY LEVEL: ESSENTIALS (Grades 4-8)

STANDARD 1: HISTORY

Students analyze the human experience through time, recognize the relationships of events and people, and interpret significant patterns, themes, ideas, beliefs, and turning points in in Arizona, American, and world history.

(Grades 4-5)

- **1SS-E1. Understand and apply the basic tools of historical research, including chronology and how to collect, interpret, and employ information from historical materials.**

  Note: Historical research skills and analytical skills. These skills are to be learned and applied to the content standards for grades 4-5

  PO 1. Place key events on a timeline and apply chronological terms correctly, including B.C.E. (B.C.), C.E. (A.D.), decade, century, and generation
  PO 2. Identify primary and secondary sources historians use to construct an understanding of the past, using such sources as letters, diaries, newspaper articles, archaeological evidence, maps, and government records
  PO 3. Interpret historical data in the form of simple graphs and tables
  PO 4. Distinguish fact from fiction in historical novels and movies

FOCUS: **Arizona**

- **1SS-E2. Describe the legacy and cultures of prehistoric American Indians in Arizona, including the impact of, and adaptations to geography, with emphasis on:**

  PO 1. how archaeological and anthropological research gives us information about prehistoric people
  PO 2. characteristics of hunter-gatherer societies, including their development of tools and adaptation to environments
  PO 3. development of agriculture with the domestication of plants
  PO 4. the distinctive cultures of the Anasazi, Hohokam, and Mogollon, including where they lived, their agriculture, housing, decorative arts, and trade networks
  PO 5. how prehistoric cultures adapted to, and altered, their environment, including irrigation canals and housing

- **1SS-E3. Describe Spanish and Mexican colonization and economic, social, and political interactions with the first inhabitants of Arizona, with emphasis on:**

  PO 1. the location and cultural characteristics of the O'odham (Papagos and Pimas) and Apaches during the Spanish period
  PO 2. the reasons for the early Spanish explorations, including those of Fray Marcos de Niza, Estevan, and Francisco Vásquez de Coronado
  PO 3. the reasons for Spanish colonization, including the establishment of missions, presidios, and towns and impact on native inhabitants
  PO 4. the contributions of Father Kino
  PO 5. the creation of unique, strongly held cultural identities from the Spanish and Indian heritage
  PO 6. the change of governance from Spain to Mexico

- **1SS-E4. Describe the economic, social, and political life in the Arizona Territory and the legacy of various cultural groups to modern Arizona, with emphasis on:**

  PO 1. how Arizona became a part of the United States through the Mexican Cession and the Gadsden Purchase
  PO 2. the conflict of cultures that occurred between newcomers and Arizona Indian groups, including the Indian Wars
  PO 3. the lives and contributions of various cultural and ethnic groups, including American Indians, Hispanics, and newcomers from the United States and other parts of the world
  PO 4. the importance and contributions of various occupations to the growing Arizona communities, including soldiers (Buffalo soldiers), miners, merchants, freighters, homemakers, ranchers, cowboys, farmers, and railroad workers

FOCUS: American History from Discovery through the U.S. Constitution

- **1SS-E5. Describe the causes, course, and consequences of early European exploration of North America, with emphasis on:**

  PO 1. the reasons for European exploration of the Americas
  PO 2. the characteristics and results of various European expeditions, including those of Christopher Columbus, John Cabot, Hernando Cortés, and Hernando de Soto
  PO 3. the political, economic, and social impact on the indigenous peoples

- **1SS-E6. Describe the political, religious, and economic aspects of North American colonization, with emphasis on:**

  PO 1. the reasons for colonization, including religious freedom, desire for land, economic opportunity, and a new life
  PO 2. the meaning and importance of the Mayflower Compact

PO 3. the importance of the religious aspects of the earliest colonies in shaping the new nation and American principles
PO 4. key differences among the three colonial regions and the significance of key individuals who founded the colonies, including William Penn, Lord Baltimore, and Roger Williams
PO 5. interactions between American Indians and European settlers, including the agricultural and cultural exchanges and alliances and reasons for, and the results of, the conflicts
PO 6. the introduction and institutionalization of slavery, including the slave trade in Africa and the Middle Passage
PO 7. the early representative government and democratic practices that emerged, including town meetings and colonial assemblies

- **1SS-E7. Describe the causes, key individuals, and consequences of the American Revolution, with emphasis on:**

PO 1. the causes, including the Tea Act, the Stamp Act, and the formation of the Sons of Liberty
PO 2. major turning points in the Revolutionary War and the importance of aid from France
PO 3. the influence of key personalities, including King George III, John Adams, Thomas Jefferson, George Washington, Patrick Henry, and Thomas Paine

(Grades 6-8)

- **1SS-E8. Demonstrate and apply the basic tools of historical research, including how to construct timelines, frame questions that can be answered by historical study and research, and analyze and evaluate historical materials offering varied perspectives, with emphasis on:**

Note: Historical research skills and analytical skills. These are to be learned and applied to the content standards for grades 6-8

PO 1. constructing and interpreting graphs and charts using historical data
PO 2. constructing various timelines of key events, people, and periods of the historical era being studied
PO 3. framing questions that can be answered by historical study and research
PO 4. describing the difference between a primary source document and a secondary source document and the relationships between them
PO 5. assessing the credibility of primary and secondary sources and drawing sound conclusions from them
PO 6. analyzing a historical source and identifying the author's main points, purpose, opinions versus facts, and what other authors say about the same topic
PO 7. examining different points of view on the same historical events and determining the context in which the statements were made, including the questions asked, the sources used, and the author's perspectives
PO 8. recognizing the difference between cause and effect and a mere sequence of historical events

FOCUS: **World History (Ancient Civilizations through the Age of Exploration)**

- **1SS-E9. Describe the geographic, political, economic, and social characteristics of the ancient civilizations of Egypt, Mesopotamia, and China and their contributions to later civilizations, with emphasis on:**

  PO 1. the importance of river valleys to their development and, specifically, the Nile, Tigris and Euphrates, and the Huang
  PO 2. the forms of government they created, including the theocracies in Egypt and the dynasties in China
  PO 3. the religious traditions and how they shaped culture
  PO 4. the impact of irrigation, agriculture, and the domestication of animals
  PO 5. the cultural and scientific contributions, including writing systems, calendars, and building of monuments such as the Pyramids

- **1SS-E10. Describe the geographic, political, economic, and social characteristics of the Aztecs, Mayas, and Mound Builders and their contributions to later civilizations, with emphasis on:**

  PO 1. their locations, landforms, and climate, and their effect on the economies and trade systems
  PO 2. their forms of government
  PO 3. their traditions, customs and beliefs
  PO 4. the ways agriculture developed
  PO 5. the cultural and scientific contributions, including advances in astronomy, mathematics, and architecture; artistic and oral traditions; and development of writing systems and calendars

- **1SS-E11. Describe the major religions, including Hinduism, Buddhism, Judaism, Christianity, and Islam, with emphasis on:**

  PO 1. their geographic origins
  PO 2. the founding leaders and their teachings
  PO 3. their traditions, customs, and beliefs

- **1SS-E12. Describe the geographic, political, economic, and social characteristics of the Ancient Greek and Roman civilizations and their enduring impact on later civilizations, with emphasis on:**

  PO 1. the influence of the geography of the Mediterranean on the development and expansion of the civilizations
  PO 2. the development of concepts of government and citizenship, specifically democracy, republics, and codification of law

PO 3. scientific and cultural advancements, including networks of roads, aqueducts, art and architecture, literature and theatre, mathematics, and philosophy
PO 4. the contributions and roles of key figures, including Socrates, Alexander the Great, Cleopatra, Julius Caesar, and Augustus

- **1SS-E13. Describe the political and economic events and the social and geographic characteristics of Medieval European life and their enduring impacts on later civilizations, with emphasis on:**

PO 1. the creation and expansion of the Byzantine empire and the reasons for the fall of Rome
PO 2. the new forms of government, feudalism, and the beginning of limited government with the Magna Carta
PO 3. the role of the Roman Catholic church and its monasteries, including the affect on education and the arts
PO 4. the Crusades, including how they helped to introduce Muslim ideas and products to Europe
PO 5. the impact of the Black Plague, including how it contributed to an end to the feudal system
PO 6. contributions and roles of key figures, including Charlemagne, Joan of Arc, and Marco Polo

- **1SS-E14. Describe how the Renaissance and Reformation influenced education, art, religion, and government in Europe, with emphasis on:**

PO 1. the revival of classical learning and humanism
PO 2. the commerce developed by the Italian city-states
PO 3. the development of Renaissance artistic and literary traditions, including the works of Michelangelo, Leonardo da Vinci, and Shakespeare
PO 4. the impact of Gutenberg's invention of the printing press
PO 5. the development of Protestantism through the ideas and actions of Martin Luther and John Calvin
PO 6. religious conflicts and persecutions, including the Inquisition

- **1SS-E15. Analyze the origins, obstacles, and impacts of the Age of Exploration, with emphasis on:**

PO 1. improvements in technology, including the compass and the work of Prince Henry the Navigator
PO 2. the voyages of Columbus to the New World and the subsequent searches for the Northwest Passage
PO 3. the introduction of disease and the resulting population decline, especially to New World peoples
PO 4. Columbian exchanges of technology, ideas, agricultural products and practices

FOCUS: **United States and Arizona History (the American Revolution through Reconstruction)**

- **1SS-E16. Explain the economic and political reasons for the American Revolution, with emphasis on:**

  PO 1. the attempts to regulate colonial trade, including the Tea Act, Stamp Act, and Intolerable Acts
  PO 2. the colonists' reaction to British policy, including the boycotts, the Sons of Liberty, and petitions and appeals to Parliament
  PO 3. the ideas expressed in the Declaration of Independence

- **1SS-E17. Describe the aspirations, ideals, and events that served as the foundation for the creation of a new national government, with emphasis on:**

  PO 1. the Articles of Confederation and the Constitution, and the success of each in implementing the ideals of the Declaration of Independence
  PO 2. the major debates of the Constitutional Convention and their resolution
  PO 3. the contributions and roles of major individuals in the writing and ratification of the Constitution, including George Washington, James Madison, Alexander Hamilton, and John Jay
  PO 4. Struggles over ratification of the Constitution and the creation of the Bill of Rights

- **1SS-E18. Describe the actions taken to build one nation from thirteen states, with emphasis on:**

  PO 1. the precedents established by George Washington, including the cabinet and two terms of the presidency
  PO 2. Alexander Hamilton's actions to create a financially strong nation, including the creation of a National Bank and payment of debts
  PO 3. the creation of political parties, including the ideals of the Democratic Republicans and the Federalists

- **1SS-E19. Describe the successes and failures of the reforms during the Age of Jacksonian Democracy, with emphasis on:**

  PO 1. the extension of the franchise to all white men
  PO 2. Indian removal, including the Trail of Tears
  PO 3. the abolition movement, including the role of the Quakers, Harriet Tubman, and the Underground Railroad
  PO 4. Suffrage for women, including Seneca Falls and Elizabeth Cady Stanton

- **1SS-E20. Describe the aims and impact of the Western expansion and settlement of the United States, with emphasis on:**

  PO 1. how and from whom the United States acquired the Northwest Territory, Louisiana Territory, Florida, Texas, Oregon Country, the Mexican Cession and the Gadsden Territory
  PO 2. how geography and economic incentives influenced early American explorations, including those of Lewis and Clark, James O. Pattie and the fur trade
  PO 3. the American belief in Manifest Destiny, including how it led to the Mexican War
  PO 4. reasons for, and destination of, the major westward migrations, including Oregon, California, and the Mormon settlements of Utah and Arizona
  PO 5. the impact of westward expansion on American Indian nations, including broken treaties and the Long Walk of the Navajos

- **1SS-E21. Explain how sectionalism caused the Civil War, with emphasis on:**

  PO 1. the different natures of the economies of the North, South, and West
  PO 2. the addition of new states to the Union and the balance of power in the Senate, including the Missouri and 1850 Compromises
  PO 3. the extension of slavery into the territories, including the Dred Scott Decision, the Kansas-Nebraska Act, and the role of abolitionists such as Frederick Douglass and John Brown
  PO 4. the emergence of Abraham Lincoln as a national figure in the Lincoln-Douglas debates
  PO 5. the presidential election of 1860, Lincoln's victory, and the South's secession

- **1SS-E22. Explain the course and consequences of the Civil War and how it divided the American people, with emphasis on:**

  PO 1. the unique nature of the Civil War, including the impact of Americans fighting Americans, the high casualties caused by disease and the type of warfare, and the widespread destruction of American property
  PO 2. contributions and significance of key individuals, including Abraham Lincoln, Robert E. Lee, William Tecumseh Sherman, and Ulysses S. Grant
  PO 3. the major turning points of the Civil War, including Gettysburg
  PO 4. the role of African-Americans
  PO 5. the purpose and effect of the Emancipation Proclamation
  PO 6. the strategic importance of the Southwest as both sides attempted to secure a route to California

- **1SS-E23. Analyze the character and lasting consequences of Reconstruction, with emphasis on:**

  PO 1. Lincoln's plans for reconstruction of the South
  PO 2. Lincoln's assassination and the ensuing struggle for control of Reconstruction, including the impeachment of Andrew Johnson
  PO 3. attempts to protect the rights of, and enhance opportunities for, the freedmen, including the basic provisions of the Thirteenth, Fourteenth, and Fifteenth Amendments to the United States Constitution
  PO 4. the rise of the Ku Klux Klan and the development of Jim Crow laws following Reconstruction

STANDARD 2: CIVICS/GOVERNMENT

Students understand the ideals, rights, and responsibilities of citizenship, and the content, sources, and history of the founding documents of the United States, with particular emphasis on the Constitution and how the government functions at the local, state, national, and international levels.

(Grades 4-5)

FOCUS: America

- **2SS-E1. Describe the narrative of the people and events associated with the development of the United States Constitution and describe its significance to the foundation of the American republic, with emphasis on:**

  PO 1. the colonists' shared sense of individualism, independence, and religious freedom that developed before the Revolution
  PO 2. the Articles of Confederation
  PO 3. the purpose of the Constitutional Convention
  PO 4. the natural rights expressed in the Declaration of Independence
  PO 5. the contributions and roles of major individuals, including George Washington, James Madison, and Benjamin Franklin

- **2SS-E2. Describe political philosophies and concepts of government that became the foundation for the American Revolution and United States government, with emphasis on:**

  PO 1. the fundamental principles of American constitutional democracy, including how the government derives its power from the people and the primacy of individual liberty
  PO 2. how the Constitution is designed to secure our liberty by both empowering and limiting central government
  PO 3. struggles over ratification and the creation of the Bill of Rights
  PO 4. the separation of powers between the Congress, the president, and the Supreme Court

(Grades 6-8)

- **2SS-E3. Describe political philosophies and concepts of government that became the foundation for the American Revolution and United States government, with emphasis on:**

  PO 1. ideas of the nature of government and rights of individuals expressed in the Declaration of Independence with its roots in British philosophers such as John Locke
  PO 2. the concept of limited government and the rule of law established in the Magna Carta and the English Bill of Rights
  PO 3. the social covenant established in the Mayflower Compact
  PO 4. the characteristics of republican and representative governments
  PO 5. anti-Federalist and Federalist arguments for and against the new Constitution, including those expressed in *The Federalist Papers*
  PO 6. the concepts of federalism, democracy, bicameralism, separation of powers, and checks and balances

- **2SS-E4. Identify concepts of government as expressed in the United States Constitution and explain the powers granted to the three branches of government and those reserved to the states, with emphasis on:**

  PO 1. the federal system dividing sovereignty between the states and the federal government
  PO 2. the separation of powers through the development of the executive, legislative, and judicial branches of government
  PO 3. John Marshall's role in judicial review, including *Marbury* v. *Madison*

- **2SS-E5. Identify and describe a citizens' fundamental constitutional rights, with emphasis on:**

  PO 1. freedom of religion, expression, assembly, and press
  PO 2. right to a fair trial
  PO 3. equal protection and due process

- **2SS-E6. Describe the structure, functions, and powers of the Arizona state and local governments and their relationship to the federal government, with emphasis on:**

  PO 1. the purposes of the Arizona Constitution
  PO 2. the roles and methods of initiative, referendum, and recall processes
  PO 3. the function of multiple executive offices
  PO 4. the election process, including primaries and general elections
  PO 5. the criminal justice system, including juvenile justice
  PO 6. the roles and relationships of different levels of government, including federal, state, county, city/town, and tribal

- **2SS-E7. Explain the obligations and responsibilities of citizenship, with emphasis on:**

  PO 1. the obligations of upholding the Constitution, obeying the law, paying taxes, and registering for selective service and jury duty
  PO 2. involvement in political decision-making, including voting, petitioning public officials, and analyzing issues

- **2SS-E8. Explain the significance of famous speeches to the duties of citizenship, with emphasis on:**

  PO 1. George Washington's Farewell Address
  PO 2. Abraham Lincoln's Gettysburg Address
  PO 3. Martin Luther King, Jr.'s "I Have a Dream" speech

STANDARD 3: GEOGRAPHY[1]

Students analyze locations, regions, and spatial connections, recognizing the natural and cultural processes that impact the way in which people and societies live and interact with each other and their environment.

(Grades 4-5)

FOCUS: Arizona

- **3SS-E1. Demonstrate understanding of the physical and human features that define places and regions in Arizona, including the use of geographic tools to collect, analyze, and interpret data, with emphasis on:**

  PO 1. identifying Arizona as part of the Southwestern region of the United States
  PO 2. explaining and using map titles, symbols, scale, cardinal and intermediate directions, and elevation on maps of Arizona
  PO 3. locating and comparing the three landform regions of Arizona--the plateau, mountain, and desert regions--according to their physical features, plants, and animals
  PO 4. the location and description of the important physical features in each landform region, including the Grand Canyon, Colorado River, and Mogollon Rim
  PO 5. the location and significance of the important human features of Arizona, including those in Phoenix, Tucson, Flagstaff, and Yuma

- **3SS-E2. Describe the impact of interactions between people and the natural environment on the development of places and regions in Arizona, including how people have adapted to and modified the environment, with emphasis on:**

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[1] **See Appendix for reference to Physical Geography**

PO 1. the reasons for migration to, and the settlement and growth of, Phoenix, Mesa, Tucson, Flagstaff, Prescott and Yuma, including mining, ranching, agriculture, and tourism
PO 2. how places are connected by movement of people, goods, and ideas, including the connection of Mexico to Arizona
PO 3. routes to and through Arizona territory, including the Gila Trail
PO 4. how people have depended on the physical environment and its natural resources to satisfy their basic needs, including the consequences of Arizonans' adaptation to, and modification of, the natural environment

FOCUS: United States

- **3SS-E3. Describe and locate the major natural and human features that define places and regions in the United States, with emphasis on:**

PO 1. the concept of region as an area with unifying human or natural factors, including different geographic regions of the United States (e.g. Great Plains, Midwest, Northeast, Pacific Coast, Rocky Mountain, Southeast, and Southwest)
PO 2. interpreting information from a variety of maps and globes, including contour, population, natural resource and historical maps
PO 3. after being given the latitude and longitude of important features in the United States, locating these features on a map important in the United States
PO 4. the ways European colonists and American Indians viewed and used the environment
PO 5. how and why people create boundaries

(Grades 6-8)

- **3SS-E4. Demonstrate understanding of the characteristics, purposes, and use of geographic tools to locate and analyze information about people, places, and environments, with emphasis on:**

PO 1. ways to display geographic information and characteristics through maps, charts, and graphs
PO 2. purposes of, and differences among, maps, globes, aerial photographs, charts, and satellite images
PO 3. constructing and interpreting maps, charts, and geographic databases using geographic information
PO 4. drawing an accurate map after being given a description of a place
PO 5. identifying and locating physical and cultural features in the United States, and in regions of the world
PO 6. interpreting thematic maps, graphs, charts, and databases depicting various aspects of the United States and world regions studied

- **3SS-E5. Describe natural and human characteristics of places and use this knowledge to define regions, their relationships with other regions, and their patterns of change, with emphasis on:**

PO 1. common characteristics of regions at local, national, and international scales on the basis of climate, landforms, ecosystems, and culture
PO 2. the concept of region and how and why regions change
PO 3. relationships and interactions among regions
PO 4. influences and effects of regional images, including why Arizona attracts tourists, retirees, and businesses
PO 5. how culture and economics give a place identity and meaning and affect the perception of places and regions, including the role of media images
PO 6. how places and regions serve as cultural symbols, including Jerusalem as a sacred place for Jews, Christians, and Muslims

- **3SS-E6. Describe the economic, political, cultural, and social processes that interact to shape patterns of human populations, interdependence, and cooperation and conflict, with emphasis on:**

PO 1. the demographic structure of a population and reasons for variation between places, including developing and developed nations
PO 2. the causes and types of human migration and its effect on places
PO 3. the causes and effects of settlement patterns, including how rural-to-urban migration leads to urbanization
PO 4. the distributions of cultures and how they create a cultural landscape, both locally and in other parts of the world
PO 5. the factors that influence the location, distribution and interrelationships of economic activities in difference regions
PO 6. how cooperation and conflict contribute to political, economic and social divisions, including European Union and the Balkans
PO 7. how cultural norms influence different economic activities of men and women in different regions, including literacy, occupations, clothing and property rights
PO 8. how changes in technology, transportation, communication, and resources affect the location of economic activities

- **3SS-E7. Explain the effects of interactions between human and natural systems, including the changes in the meaning, use, and distribution of natural resources, with emphasis on:**

PO 1. the physical processes that influence the formation and location of resources, including water inequities in Arizona
PO 2. consequences to humans of earthquakes, hurricanes, tornadoes, flash floods, and other natural hazards
PO 3. how and why humans modify ecosystems, including deforestation and desertification

PO 4. how changes in the natural environment can increase or diminish its capacity to support human activities
PO 5. how technological modification in one place often leads to changes in other locations, including how the control of rivers impacts the development of Arizona
PO 6. ways that humans depend upon limited resources and adapt to, and affect, the natural environment
PO 7. changing ideas and disagreements on the best use of natural resources

- **3SS-E8. Use geographic knowledge, skills, and perspectives to explain past, present, and future issues, with emphasis on:**

PO 1. how places and environments influence events and conditions in the past
PO 2. how geography is used to improve quality of life, including urban growth and environmental planning
PO 3. using geographic knowledge and skills to analyze contemporary issues, including the debate over water use and availability in Arizona

STANDARD 4: ECONOMICS

Students develop economic reasoning skills to apply basic economic concepts, assess problems, make choices, and evaluate the choices of others as consumers, workers, and citizens participating in local, national, and global economies.

(Grades 4-5)

- **4SS-E1. Use basic economic concepts such as trade, opportunity costs, specialization, voluntary exchange, and price incentives to examine historical events, with emphasis on:**

PO 1. opportunity costs and their relationship to decision-making, including examples of decisions to send expeditions to the New World
PO 2. how price incentives affect peoples' behavior and choices, including examples of colonial decisions about what crops to grow and products to produce
PO 3. how specialization improves standards of living, including examples of how development of specific economies in the three colonial regions developed
PO 4. how voluntary exchange helps both buyers and sellers, including examples from prehistoric and colonial trade in North America
PO 5. how trade promoted economic growth in the colonies

- **4SS-E2. Describe the functions of the major institutions in the United States economy, with emphasis on:**

PO 1. the private business function in producing goods and services
PO 2. the bank function in providing checking accounts, savings accounts, and loans

PO 3. the government function in taxation and providing certain goods and services

- **4SS-E3. Describe how consumers and businesses interact in the United States economy, with emphasis on:**

PO 1. how competition, markets, and prices influence peoples' behavior
PO 2. how people earn income by selling their labor to businesses
PO 3. how entrepreneurs take risks to develop new goods and services to start a business

(Grades 6-8)

- **4SS-E4. Apply the economic concepts of scarcity and choice, with emphasis on:**

PO 1. how limited resources and unlimited human wants cause people to choose some things and give up others
PO 2. scarcity, opportunity costs, and trade-offs, and how these concepts influence decision-making
PO 3. how governments and businesses experience scarcity and must make choices
PO 4. how scarcity influences personal financial choices, including budgeting, saving, investing, and credit

- **4SS-E5. Describe the economic benefits of specialization and exchange, with emphasis on:**

PO 1. why specialization improves standards of living
PO 2. how money, as opposed to barter, facilitates trading, borrowing, saving, investing, and the ability to compare the value of goods and services

- **4SS-E6. Describe how people respond to positive and negative incentives, with emphasis on:**

PO 1. how profits provide incentives to sellers
PO 2. how market prices provide incentives to buyers and sellers
PO 3. how protection of private property rights provides incentives to conserve and improve property

- **4SS-E7. Describe the operation of a market economy, with emphasis on:**

PO 1. Adam Smith's ideas of a market economy, including private property, freedom of enterprise, competition, consumer choice, and the limited role of government
PO 2. how the interaction between buyers and sellers determines market prices
PO 3. how competition among sellers lowers costs and prices and encourages producers to produce what consumers are willing and able to buy
PO 4. how competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the seller's price

PO 5. why voluntary exchange benefits buyers and sellers
PO 6. the functions and relationships among various institutions that make up an economic system, including business firms, banks, government agencies, labor unions, and corporations
PO 7. how income for most people is determined by the value of the resources they sell and how the distribution of income affects public policy and standards of living

- **4SS-E8. Describe the factors that cause economic growth, with emphasis on:**

PO 1. investment in human capital, including the health, education, and training of people
PO 2. investment in real capital, including factories, machinery, and new technology
PO 3. the role of entrepreneurs in the free enterprise system who take the risks of organizing productive resources

APPENDIX

PHYSICAL GEOGRAPHY

Physical geography is the study of the natural processes that interact to produce the Earth's varying physical environments. These natural processes are subdivided into climate, landforms, biota (both plants and animals) and water – with the focus to develop an understanding of why places have particular physical characteristics. These physical geography processes are presented in Standard 4 (Life Science) and Standard 6 (Earth and Space Science) in Arizona's **Science Standards**. They are listed below, as they connect directly with and form the foundation for the rest of the geography standards.

ESSENTIALS (Grades 4-8)

Climate:

6SC-E1. Describe and model the motion of Earth in relation to the sun, including the concepts of day, night, season, and year

6SC-E8. Describe and model large-scale and local weather systems

6SC-E9. Describe the composition, properties, and structure of the atmosphere

Landforms:

6SC-E3. Describe the composition (including the formation of minerals, rocks, and soil) and the structure of the Earth

6SC-E5. Explain how Earth processes seen today, including erosion, movement of lithospheric plates, and changes in atmospheric composition, are similar to those that occurred in the past

Biota:

4SC-E7. Explain and model the interaction and interdependence of living and non-living components within ecosystems, including the adaptation of plants and animals to their environment

6SC-E4. Provide evidence of how life and environmental conditions have changed

Water:

6SC-E6. Describe the distribution and circulation of the world's water through ocean currents, glaciers, rivers, ground water and atmosphere

6SC-E7. Describe the composition and physical characteristics (including currents, waves, tides, and features of the ocean floor) of the Earth's bodies of water

SOCIAL STUDIES GLOSSARY*

Amendment (Constitutional) Changes in, or additions to, a constitution. Proposed by a two-thirds vote of both houses of Congress or by a convention called by Congress at the request of two-thirds of the state legislatures. Ratified by approval of three-fourths of the states.

Articles of Confederation The first constitution of the United States (1781). Created a weak national government; replaced in 1789 by the Constitution of the United States.

Balance of Payments A record of all economic transactions between the residents of a country and those of foreign countries for a one-year period. This includes the movement of goods (exports and imports), and also the flow of services and capital (e.g., purchases of tourists, investment income, gifts, pensions, and foreign aid).

Balance of Trade The difference between the total amount of exports and imports for a country in one year.

Barter The direct exchange of one good or service for another without the use of money.

B.C.E. and C.E. Before the Common Era (formerly known as B.C.) and Common Era (formerly known as A.D.).

Bicameral A legislative body composed of two houses.

Bill of Rights The first ten amendments to the Constitution. Ratified in 1791, these amendments limit governmental power and protect basic rights and liberties of individuals.

Bureaucracy Administrative organizations that implement government policies.

Business Cycle The periods of recession and expansion that an economy goes through because production does not increase continuously over time.

Cabinet Secretaries, or chief administrators, of the major departments of the federal government. Cabinet secretaries are appointed by the president with the consent of the Senate.

Capital Manufactured resources such as tools, machinery, and buildings that are used in the production of other goods and services (e.g., school buildings, books, tables, and chairs are some examples of capital used to produce education). This is sometimes called real capital.

Case Study The in-depth examination of an issue.

Checks and Balances The Constitutional mechanisms that authorize each branch of government to share powers with the other branches and thereby check their activities. For example, the president may veto legislation passed by Congress; the Senate must confirm major executive appointments; and the courts may declare acts of Congress unconstitutional.

Circular Flow Model A diagram showing how households, firms, and the government are interdependent. Circular flow of income diagrams are used to illustrate that there are several ways to measure national income flows.

Citizen A member of a political society who owes allegiance to the government and is entitled to its protection.

Civil Rights The protections and privileges of personal liberty given to all U.S. citizens by the Constitution and Bill of Rights.

Command Economy A type of economic system where the resources are state owned and their allocation and use is determined by the centralized decisions of a planning authority (e.g., the former Soviet Union).

Common or Public Good To the benefit, or in the interest, of a politically organized society as a whole.

Comparative Advantage The idea that countries gain when they produce those items that they are most efficient at producing.

Competitive Behavior When a business or individual acts in a self-interested way intending to increase wealth.

Concurrent Powers Powers that may be exercised by both the federal and state governments (e.g., levying taxes, borrowing money and spending for the general welfare).

Confederate Of, or pertaining to, a group of states more or less permanently united for common purposes.

Consumer A person or organization that purchases or uses a product or service.

Consumer Sovereignty The power consumers have in directing market economies because goods and services are produced and exchanged mostly to satisfy consumer wants.

Criminal Justice The branch of law that deals with disputes or actions involving criminal penalties. It regulates the conduct of individuals, defines crimes, and provides punishment for criminal acts.

Cultural Diffusion The adoption of an aspect (or aspects) of another group's culture, such as the spread of the English language.

Cultural Landscape The visual outcome of humans living in a place.

Culture The learned behavior of people, such as belief systems and languages, social relations, institutions, organizations, and material goods such as food, clothing, buildings, technology.

Deflation A general lowering of prices. The opposite of inflation.

Delegated Powers Powers granted to the national government under the Constitution, as enumerated in Articles I, II and III.

Demand How much a consumer is willing and able to buy at each possible price.

Democracy The practice of the principle of equality of rights, opportunity, and treatment.

Demographics The statistical data of a population (e.g., average age, income, education).

Developed Nation A country with high levels of well-being, as measured by economic, social, and technological sophistication.

Developing Nation A country with low levels of well-being, as measured by economic, social, and technological sophistication.

Diffusion The spread of people, ideas, technology and products between places.

Distribution The arrangement of items over an area.

Due Process of Law The right of every citizen to be protected against arbitrary action by government.

Eagle Feather A universal symbol among American Indian Nations embodying power, strength, and values.

Economic Growth An increase in an economy's ability to produce goods and services which brings about a rise in standards of living.

Ecosystem The interaction of all living organisms with each other and with the physical environment.

Emigration People leaving a country (or other political unit).

English Bill of Rights An act passed by Parliament in 1689 which limited the power of the monarch. This document established Parliament as the most powerful branch of the English government.

Entrepreneur A person who organizes, operates, and assumes the risk for a business venture.

Environment Everything near and on the Earth's surface. Natural or physical environment refers to climate, biosphere, hydrosphere, soil, and geology. Human or cultural environment refers to aspects of the environment produced by humans.

Equal Protection Clause The Fourteenth Amendment provision that prohibits states from denying equal protection of the laws to all people - that is, discriminating against individuals in an arbitrary manner, such as on the basis of race.

Equal Protection of the Law The idea that no individual or group may receive special privileges from, nor be unjustly discriminated by, the law.

Erosion The lowering of the land surface by physical processes such as flowing water, landslides, glacial ice, waves. and wind.

Exchange Rate The price of one currency in terms of another (e.g., pesos per dollar).

Ex Post Facto Law A law that makes criminal an act that was legal when it was committed. (Latin: "after the fact")

Federal Reserve System A system of 12 district banks and a Board of Governors that regulates the activities of financial institutions and controls the money supply.

Federal Supremacy Article VI of the Constitution providing that the Constitution and all federal laws and treaties shall be the "supreme Law of the Land." Therefore, all federal laws take precedence over state and local laws.

Federalism A form of political organization in which governmental power is divided between a central government and territorial subdivisions--in the United States, among the national, state, and local governments.

Federalist Papers A series of essays written by Alexander Hamilton, John Jay and James Madison that were published to support the adoption of the proposed United States Constitution.

Federalists Advocates of a strong federal government and supporters of the adoption of the U.S. Constitution.

Feudalism Political and economic system in which a king or queen shared power with the nobility, who required services from the common people in return for allowing them to use the noble's land.

Fiscal Policy How the government uses taxes and/or government expenditures to change the level of output, employment, or prices.

Foreign Policy Policies of the federal government directed to matters beyond U.S. borders, especially relations with other countries.

Founders People who played important roles in the development of the national government of the United States.

Framers Delegates to the Philadelphia Convention held in 1787, and those who wrote and ratified the Bill of Rights.

Free Enterprise The freedom of private businesses to operate competitively, for profit, and without government controls.

Freedom of Expression The freedoms of speech, press, assembly, and petition that are protected by the First Amendment.

Freedom of the Press Freedom to print or publish without governmental interference.

Geographic Grid A system to locate points on the Earth's surface (e.g., latitude and longitude).

Geographic Information System (GIS) A computer database that displays information like a map, but can do much more than just show patterns. A GIS database consists of "layers" of information about places (e.g., topography, vegetation, roads, buildings, sewers) that can be combined with a geographical perspective to solve societal problems.

Geographic Tool A device used to compile, organize, manipulate, store, report, or display geographic information, including maps, gazetteers, globes, graphs, diagrams, aerial photographs, satellite images, geographic information systems, and other computer databases and software.

Great Compromise An agreement made at the Constitutional Convention of 1787 that balanced the interest of the small and large states, resulting in the United States Senate being made up of two Senators from each state and a House of Representatives based on population.

Gross Domestic Product A measure of how much an economy produces each year, stated in the dollar value of final goods and services.

Human Capital The knowledge and skills that enable workers to be productive.

Human Characteristics The pattern that people make on the surface of the Earth, such as cities, roads, canals, farms, and other ways people change the Earth.

Immigration People moving to a country (or other political unit).

Impeachment The act of accusing a public official of misconduct in office by presenting formal charges against him or her by the lower house, with a trial to be held before the upper house.

Inalienable Rights Fundamental rights of the people that may not be taken away. A phrase used in the Declaration of Independence.

Incentive A benefit offered to encourage people to act in certain ways.

Inflation A general rise in the level of prices.

Initiative A form of direct democracy in which the voters of a state can propose a law by gathering signatures and having the proposition placed on the ballot.

Interdependence Reliance on people in other places for information, resources, goods, and services.

Isolationism The belief that the United States should not be involved in world affairs and should avoid involvement in foreign wars.

Judicial Review The doctrine that permits the federal courts to declare unconstitutional, and thus, null and void, acts of the Congress, the executive, and the states. The precedent for judicial review was established in the 1803 case of *Marbury* v. *Madison*.

Justice Fair distribution of benefits and burdens, fair correction of wrongs and injuries, or use of fair procedures in gathering information and making decisions.

Land Use How people use the Earth's surface (e.g., urban, rural, agricultural, range, forest); often subdivided into specific uses (e.g., retail, low-density housing, industrial).

Landform A description of the Earth's shape at a place (e.g., mountain range, plateau, flood plain).

Latitude The angular distance north or south of the equator, measured in degrees along a line of longitude.

Legend The map key that explains the meaning of map symbols.

Liquidity The ease and speed with which something can be turned into cash (e.g., one can more quickly sell a common stock than a house; therefore, the stock is a more liquid asset than a house).

Longitude Angular distance east or west, almost always measured with respect to the prime meridian that runs north and south through Greenwich, England.

Loyal Opposition The idea that opposition to a government is legitimate. Organized opponents to the government of the day.

Macroeconomics The branch of economics which considers the overall aspects and workings of a national economy such as national output, price levels, employment rates, and economic growth.

Magna Carta Document signed by King John of England in 1215 A.D. that limited the king's power and guaranteed certain basic rights. Considered the beginning of constitutional government in England.

Marginal Analysis Making decisions based on the impact of the next dollar spent or the change one more unit would bring about. For example, when a person doesn't make an all-or-nothing decision to eat a bag of potato chips but decides, instead, chip-by-chip, or at the margin, whether to eat another one.

Market Economic System A system in which most resources are owned by individuals and the interaction between buyers and sellers determines what is made, how it is made, and how much of it is made.

Market Price The price at which the quantity of goods and services demanded by consumers and the quantity supplied by producers are the same. This is sometimes called the equilibrium price.

Market Any setting in which exchange occurs between buyers and sellers.

Mayflower Compact The document drawn up by the Pilgrims in 1620, while on the Mayflower, before landing at Plymouth Rock. The Compact provided a legal basis for self-government.

Mercantilism An economic and political policy in which the government regulates the industries, trade, and commerce with the national aim of obtaining a favorable balance of trade.

Microeconomics The branch of economics concerned with the decisions made by individuals, households, and firms and how these decisions interact to form the prices of goods and services and the factors of production.

Monarchy A type of government in which political power is exercised by a single ruler under the claim of divine or hereditary right.

Monetary Policy Management of the money supply and interest rates to influence economic activity.

National Security Condition of a nation's safety from threats, especially threats from external sources.

Natural Hazard A process taking place in the natural environment that destroys human life, property, or both (e.g., hurricane, flooding).

Opportunity Cost The value of the next best alternative that must be given up when a choice is made (e.g., the opportunity cost of studying on a Saturday night is the fun you are missing by not going to the dance).

Price Ceilings Government policy which prevents the price of a good or service from exceeding a particular level (e.g., rent control or the price of gasoline during the 1970's).

Principle A basic rule that guides or influences thought or action.

Producers People who change resources into an output that tends to be more desirable than the resources were in their previous form (e.g., when people produce French fries, consumers are more inclined to buy them than the oil, salt, and potatoes individually).

Production Possibilities Curve The different combinations of various goods that a producer can turn out over a given period, given the available resources and existing technology.

Progressive Tax A tax structure where people who earn more are charged a higher percentage of their income (e.g., the federal income tax).

Projection A mathematical formula by which a geographic grid (and the shapes of land and water bodies) can be transferred from a sphere to a flat surface (e.g., a map or geographic information system).

Property Rights The rights of an individual to own property and keep the income earned from it.

Proportional Tax A tax structure where all people pay about the same percentage of their incomes in taxes (e.g., a flat rate tax).

Protectionism The practice of protecting domestic industries from foreign competition by imposing import duties or quotas.

Public Service Service to local, state, or national communities through appointed or elected office.

Quota A limit on how much of a good can be imported. The limit is set either by quantity or by the dollar value.

Ratify To confirm by expressing consent, approval, or formal sanction.

Referendum A form of direct democracy in which citizens of a state, through gathering signatures, can require that a legislative act come before the people as a whole for a vote. The process also allows the legislature to send any proposal for law to the people for a vote.

Region A larger-sized territory that includes many smaller places, all or most of which share similar attributes, such as climate, landforms, plants, soils, language, religion, economy, government or other natural or cultural attributes.

Regressive Tax A tax structure where people who earn more pay a smaller percentage of their income in taxes (e.g., sales taxes).

Representative Democracy A form of government in which power is held by the people and exercised indirectly through elected representatives who make decisions.

Republican Government A system of government in which power is held by the voters and is exercised by elected representatives responsible for promoting the common welfare.

Resources Land, labor, capital, and entrepreneurship used in the production of goods and services. A part of the natural environment that people value, such as soil, oil, iron or water.

Return How well you do by investing in one asset as opposed to another (e.g., if you buy a house in an up-and-coming neighborhood, you expect a better return when you sell it than if you buy a house next to where a new freeway is going to be built).

Revolution A complete or drastic change of government and the rules by which government is conducted.

Risk How much uncertainty accompanies your choice of investment (e.g., if you lend money to someone who has just escaped from prison, you are taking more of a risk than if you lend money to your mother).

Rule of Law The principle that every member of a society, even a ruler, must follow the law.

Scale The relationship between a distance on the ground and the distance on the map. For example, the scale 1:100,000 means that one unit of distance (e.g. an inch or millimeter) on the map equals 100,000 of these units on the Earth's surface.

Scarce A good or service that is insufficient in quantity to satisfy the demand or need for it.

Separation of Powers The division of governmental power among several institutions that must cooperate in decision making.

Sovereignty The ultimate, supreme power in a state (e.g., in the United States, sovereignty rests with the people).

Spatial Pertaining to distribution, distance, direction, areas and other aspects of space on the Earth's surface.

Specialization When a business focuses on producing a limited number of goods and leaves the production of other goods to other businesses. Specialization also describes how each person working to produce a good might work on one part of the production instead of producing the whole good (e.g., in a shoe factory one person cuts the leather, another person sews it, another glues it to the sole).

Standard of Living The overall quality of life that people enjoy.

Suffrage The right to vote.

Supply The quantity of a product or service a producer is willing and able to offer for sale at each possible price.

Tariff A tax on an imported good.

Thematic Map A map showing the distribution (or statistical properties) of cultural or natural features, such as a thematic map of unemployment or a thematic map of rainfall.

Theocracy Any government in which the leaders of the government are also the leaders of the religion and they rule as representatives of the deity.

Totalitarianism A centralized government that does not tolerate parties of differing opinion and that exercises dictatorial control over many aspects of life.

Treaty A formal agreement between sovereign nations to create or restrict rights and responsibilities. In the U.S., all treaties must be approved by a two-thirds vote in the Senate.

Unitary Government A government system in which all governmental authority is vested in a central government from which regional and local governments derive their powers (e.g., Great Britain and France, as well as the American states within their spheres of authority).

United Nations An international organization comprising most of the nations of the world, formed in 1945, to promote peace, security, and economic development.

Urbanization The process whereby more people live and work in cities.

Voluntary Exchange Trade between people when each one feels he or she is better off after the trade (e.g., if you sell your old exercise bike for cash, you gain because you would rather have the cash than the bike, but the other person gains because he or she would rather have the bike than the cash).

Technology Standards 2000

Essentials (Grades 4-8)

Technology Education Standards Rationale

Technology encompasses the tools and strategies for solving problems, using information, increasing productivity and enhancing personal growth. The word *technology* summons an image of a variety of tools ranging from shovels to gene splitters. When asked to develop the original Technology Standards, adopted in 1997, the Committee did so without the benefit of seeing the integration of various technologies into other curricular standards. Over the past four years, significant advances in technology have occurred. These changes have caused many national organizations to review what students need to know and be able to do in relation to technology. Therefore, when asked to review the current standards, the Revision Committee examined national standards (National Educational Technology Standards, Information Power, Information Technology in Education and Technology for All Americans), along with current Arizona standards. The Revision Committee also analyzed current research on technology skills important to business and industry. The Revision Committee reviewed technology that is currently integrated into other content area standards with the vision that as other standards are revised, technology will be seamlessly integrated.

The goal is to help students live, learn and work successfully and responsibly in an increasingly complex, technology-driven society. These Technology Standards are designed to provide foundational skills and processes that students need in order to work productively and creatively in their studies, at work and at home. Research on the transfer of learning strongly supports the position that instruction and educational activities should closely parallel the final desired behavior. It is essential that technology instruction be an integral part of a student's educational experience. Education's role is to help students meet the challenge of the future. Arizona must encourage, assist and provide all students with the required tools and instruction to enable them to acquire knowledge, develop skills and apply these tools successfully in our world.

The following definition of technology is supported in this document:

Technology is the application of tools to solve problems that extend human potential for the benefit of society

Table 1: Technology Education Standards

***STANDARD 1*: Fundamental Operations and Concepts**

Students understand the operations and function of technology systems and are proficient in the use of technology.

***STANDARD 2*: Social, Ethical and Human Issues**

Students understand the social, ethical and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information and software.

***STANDARD 3*: Technology Productivity Tools**

Students use technology tools to enhance learning, to increase productivity and creativity and to construct technology-enhanced models, prepare publications and produce other creative works.

***STANDARD 4*: Technology Communications Tools**

Building on productivity tools, students will collaborate, publish, and interact with peers, experts and other audiences using telecommunications and media.

***STANDARD 5*: Technology Research Tools**

Students utilize technology-based research tools to locate and collect information pertinent to the task, as well as evaluate and analyze information from a variety of sources.

***STANDARD 6*: Technology as a Tool for Problem Solving and Decision-making**

Students use technology to make and support decisions in the process of solving real-world problems.

TECHNOLOGY EDUCATION STANDARDS
BY LEVEL: ESSENTIALS (Grades 4-8)

STANDARD 1: FUNDAMENTAL OPERATIONS AND CONCEPTS

Students understand the operations and function of technology systems and are proficient in the use of technology.

- **1T-E1. Communicate about technology using developmentally appropriate and accurate terminology**

  *See: Language Arts (VP-E)**

  PO 1. Use basic vocabulary related to technology (e.g., FireWire, USB, parallel, serial, scanning, digitizing, OCR)
  PO 2. Use basic vocabulary related to systems (e.g., network, infrastructure, Internet, Intranet, LAN, WAN, Ethernet, firewall, server, TCP-IP)

- **1T-E2. Demonstrate increasingly sophisticated operation of technology components**

  See: Arts {Music} (1AM-E9-10), Mathematics (1M-E6, 2M-E1), Science (1SC-E2) and Workplace Skills (7WP-E1)

  PO 1. Use touch-typing strategies to reach a minimum of 25 words per minute with accuracy (e.g., meets school-identified standard for accuracy)
  PO 2. Retrieve and save information remotely (e.g., network servers, Internet, Intranet, peripheral devices)
  PO 3. Demonstrate functional operation of technology devices (e.g., presentation devices, digital cameras, scanners, document cameras, scientific probes) (*See Technology 3T-E2, PO1)*

The use of cross-references to the other Arizona Academic Standards is intended to emphasize that technology is seen as an **integrated component of the educational and learning process. Teachers may find additional opportunities for integrating the Technology Standards with other academic standards.*

- **1T-E3. When a system is not working properly, demonstrate an understanding of hardware, software and connectivity problem solving processes**

  See: Science (1SC-E1)

  PO 1. Use troubleshooting strategies to solve applications problems (e.g., file management strategies, online help strategies, documentation, collaboration with others)
  PO 2. Use troubleshooting strategies to solve basic hardware problems (e.g., use online help, use documentation, collaboration with others)
  PO 3. Use troubleshooting strategies to identify basic connectivity problems (e.g., use online help, use documentation, collaboration with others)

STANDARD 2: SOCIAL, ETHICAL AND HUMAN ISSUES

Students understand the social, ethical and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information and software.

- **2T-E1. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use**

  See: Comprehensive Health (4CH-E3), Science (2SC-E2) and Social Studies (2SS-E2, PO1, 2SS-E5, PO1, 2SS-E7, PO1)

  PO 1. Explain the purpose of an Acceptable Use Agreement/Policy and the consequences of inappropriate use
  PO 2. Describe and practice safe Internet/Intranet usage (e.g., do not post inappropriate or harmful material; do not reveal personal information; follow district Acceptable Use Policy)
  PO 3. Describe and practice "netiquette" when using the Internet and electronic mail (e.g., publish photographs of people only with their permission)

- **2T-E2. Exhibit legal and ethical behaviors when using technology and information and discuss consequences of misuse**

  PO 1. Follow the rules for deciding when permission is needed for using the work of others, (e.g., some sites specify whether permission is required or not, some work is in public domain)
  PO 2. Obtain permission to use the work of others (*See Technology 5T-E2, PO3)*
  PO 3. Provide complete citations from electronic media (e.g., use age-level appropriate, district developed standardized reference formats for citing source of information) (*See Technology 5T-E2, PO5)*
  PO 4. Explain copyright laws and "fair use" guidelines (e.g., in relationship to print, video, computer software, multimedia project, music)

PO 5. Describe copyright guidelines[1] for multimedia creation and Internet development
PO 6. State personal consequences (e.g., fines, loss of privileges, grade reduction, academic probation) related to violations of:
a) Copyright (e.g., sheet music, prerecorded music, print, video, images)
b) Password security
c) Privacy (e.g., student files on a network, floppy disk and hard drive)
d) Internet usage (e.g., inappropriate postings, accessing inappropriate material)
PO 7. Discuss the negative impact of unauthorized intrusions into networked data and describe actions to prevent these intrusions

- **2T-E3. Demonstrate knowledge of current changes in technologies and the effect those changes have on the workplace and society**

See: Comprehensive Health (4CH-E2) and Social Studies (3SS-E6, PO8, 3SS-E7, PO5)

PO 1. Compare information technologies from past to present and describe the implications of computer power doubling every 18 months (Moore's Law) (e.g., size, speed, cost)
PO 2. Describe the impact of technology use on individuals at home and in the workplace (e.g., computer has replaced the TV for some individuals; free time is spent using technology versus outdoor activities; jobs have been created and/or eliminated due to technological advances; possible infringement of privacy)
PO 3. Discuss the social implications of the "digital divide" (e.g., homes and schools with much technology and connectivity versus those with less or none)

[1] http://literacy.kent.edu/Oasis/Workshops/copytoc.html; and http://lcweb.loc.gov/copyright/circs/circ1.html

STANDARD 3: TECHNOLOGY PRODUCTIVITY TOOLS

Students use technology tools to enhance learning, to increase productivity and creativity, and to construct technology-enhanced models, prepare publications and produce other creative works.

- **3T-E1. Use formatting capabilities of technology tools for communicating and illustrating**

See: Language Arts (W-F1, PO5)

PO 1. Use word processing editing tools to revise a document (e.g., cut and paste, tabs and margins, font size, font style, delete and undo, selecting, spell check, click and drag)
PO 2. Design a word processing document with graphical elements (e.g., clip art, digital photographs, symbols, using text wrap, cropping, sizing, drawing tools)

- **3T-E2. Use a variety of technology tools for data collection and analysis**

  See: Mathematics (5M-E6) and Social Studies (1SS-E8, PO1)

  PO 1. Use technology device(s) to collect and record data (e.g., science probe, graphing calculator, PDA {personal digital assistant}, alternative keyboards, webcams, GPS and Internet)
  PO 2. Create and use a spreadsheet to analyze data (e.g., use formulas, create charts and graphs)
  PO 3. Create a database with multiple fields to manipulate data in a variety of ways (e.g., sort, merge, list and report)

- **3T-E3. Publish and present information using technology tools**

  See: Science (1SC-E3, PO2 grades 4-5, or PO1, grades 6-8)

  PO 1. Design and create a multimedia presentation or Web page using multiple digital sources (e.g., from camera, video, scanner, CD-ROM, Internet)
  PO 2. Publish or present the above production (*See Technology 4T-E2, PO1 or 4T-E3)*

- **3T-E4. Use technology tools to support system analysis and modeling**

  See: Mathematics (2M-E5,6M-E1), Science (1SC-E2, E5) and Workplace Skills(6WP-E1)

  PO 1. Manipulate several variables in a computer simulation to reach a desired outcome (e.g., simulation software, Web-based simulation, textbook support software)

STANDARD 4: TECHNOLOGY COMMUNICATIONS TOOLS

Building on productivity tools, students will collaborate, publish, and interact with peers, experts and other audiences using telecommunications and media.

- **4T-E1. Use telecommunications efficiently and effectively to access remote information and communicate with others in support of facilitated and independent learning**

  See: Language Arts (W-E3-E6)

  PO 1. Communicate independently via e-mail, Internet, and/or videoconference with people in a remote location *(For Internet safety see Technology 2T-E1)*

- **4T-E2. Use technology tools for individual and collaborative writing, communication and publishing activities to create curricular related products for audiences inside and outside the classroom**

  See: Language Arts (W-E2-E7, LS-E)

  PO 1. Plan, design and present an academic product using technology tools (e.g., multimedia authoring, presentation software, digital cameras, scanners, projection devices)

- **4T-E3. Collaboratively use telecommunications and online resources**

  See: Arts {Theatre} (2AT-E1) and Social Studies (1SS-E8, PO2, grades 6-8)

  (For Internet safety issues see Technology 2T-E1)

  PO 1. Request collaborative exchanges among people in local and/or remote locations (e.g., e-mail, online discussions, Web environments)
  PO 2. Communicate electronically to collaborate with experts, peers and others to analyze data and/or develop an academic product (e.g., e-mail, discussion group, videoconferencing)
  PO 3. Present an academic product to share data and/or solutions (e.g., Web site, multimedia presentation, video)

STANDARD 5: TECHNOLOGY RESEARCH TOOLS

Note: The performance objectives described in Standard 5 rely upon the mastery of skills and understanding of concepts from Standards 1-4 of this document

Students will utilize technology-based research tools to locate and collect information pertinent to the task as well as evaluate and analyze information from a variety of sources.

- **5T-E1. Locate information from electronic resources**

  See: Arts {Theatre} (2AT-E4), Language Arts (W-E8) and Mathematics (2M-E1, PO1)

  PO 1. Identify electronic research resources
  PO 2. Define subject searching and devise a search strategy to locate information using available electronic research resources (i.e., electronic card catalog, online or CD-ROM reference sources, grade level appropriate Internet resources)
  PO 3. Explain the difference between subject and keyword searching

PO 4. Construct keyword searches including basic Boolean logic using available electronic research resources (i.e., electronic card catalog, online or CD-ROM reference sources and grade level appropriate Internet resources)
PO 5. Identify the author, copyright date and publisher of information located in electronic resources, including Internet resources

- **5T-E2. Evaluate the accuracy, relevance, appropriateness, comprehensiveness and bias of electronic information sources**

  See: Social Studies (1SS-E1, PO2 and 1SS-E8, PO5-6)

  PO 1. Create citations for electronic research sources following a prescribed format (*See Technology 2T-E2,PO2)*
  PO 2. Gather research from a variety of electronic sources and identify the most appropriate information for answering the research question (*See Technology 5T-D2, PO2)*
  PO 3. Obtain permission, when appropriate, to use the work of others (*See Technology 2T-E2, PO3)*
  PO 4. Identify the components of a URL to determine the source of the information
  PO 5. Identify the author of the information found from electronic resources and determine whether the author is an authority, displays bias and is a primary or secondary source

STANDARD 6: TECHNOLOGY AS A TOOL FOR PROBLEM SOLVING AND DECISION-MAKING

Students use technology to make and support decisions in the process of solving real-world problems.

Note: Problem solving is inherent in all disciplines. Technology Standard 6 is designed to provide a cumulative (capstone) experience

- **6T-E1. Determine when technology is useful and select and use the appropriate tools and technology resources to solve problems**

  See: Science 3SC in its entirety and Workplace Skills 3WP in its entirety

  PO 1. Based on a problem selected by the student, identify and use appropriate technology tools to:
    a) collect data (e.g., counting versus using a probe, book index versus online index)
    b) interpret data (e.g., use of a spreadsheet instead of a graphic organizer)
    c) develop a solution to the problem (e.g., creating a model versus using a spreadsheet)
    d) present findings (e.g., create a poster versus an electronic presentation)

TECHNOLOGY EDUCATION STANDARDS GLOSSARY

Acceptable Use Agreement/Policy (AUA or AUP)

A form that is signed by an individual, and when appropriate, legal guardian/parent, that acknowledges responsible behavior and use for the technology provided by the district, including the legal implications of the use of the Internet.

Adaptive Devices

Devices that help people with visual impairments, hearing losses, severe speech impairments, physical disabilities and/or severe learning disabilities cope with demands that are placed upon them from their environment. (See also Assistive Technology)

Assistive Technology

Any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain or improve the functional capabilities of children with disabilities. (Federal Register, August 19, 1991, p. 41272.) (See also Adaptive Devices)

Alternative Keyboard

A self-contained word processing device with full-size keyboard and memory that allows editing, printing or direct transfer to a computer for storage and manipulation (brand names, e.g., AlphaSmart, Dream Writer).

Bit

A contraction of binary digit. It is the smallest unit of storage in a computer. The bit is represented by a zero (0) or one (1) for information; instructions and data may be represented by sets of bits. Compare byte.

Bookmark

A marker that allows a user to identify a site on the Internet to allow rapid access. Also, a marker that allows a user to mark a place in a word processing document.

Boolean (also Boolean Operator)

A system of logic that, when applied to searches, modifies search terms with the "operators" AND, OR and NOT. Boolean operators allow you to broaden or narrow the range of your search.

Browser

An application that allows people to scan and interact with a network. Netscape and Internet Explorer are examples of browsers.

Byte

A set of bits, typically eight, that comprises the smallest accessible unit in computer memory. It is the equivalent of one letter or one digit from 0 to 9.

CD (Compact Disc - Player/Reader)

A device attached to a computer that provides access to information such as encyclopedias, dictionaries, databases or music. These are devices that allow users to store or write to a CD.

CD-ROM (Compact Disc – Read Only Memory)

A CD-ROM format used to store large amounts of information. A flat round disc that is used to store digital data. The disc is read by a laser. You can only read information on a CD. You cannot record information on a CD.

Click

To press and release a mouse or trackball button once while the cursor is stationary.

Clip Art

Graphics that can be cut and pasted electronically into documents. Clip art can be photographs, diagrams, maps, illustration or cartoons.

Clipboard

A special file or memory area (buffer) where data is stored temporarily before being copied to another location. In Microsoft Windows and the Apple Macintosh operating systems, the Clipboard can be used to copy data from one application to another. The Macintosh uses two types of clipboards. The one it calls the Clipboard can hold only one item at a time and is flushed when you turn the computer off. The other, called the Scrapbook, can hold several items at once and retains its contents from one working session to another.

Copyright guidelines

Intellectual Property Rights (copyright) are guaranteed by the U.S. Constitution and Federal law. These protect the individual who produces creative works from the theft of their work by others. Within the U.S. (not necessarily a part of any international copyright agreements), Fair Use Guidelines provide limited privileges to educators. Legal citation: http://lcweb.loc.gov/. There are a number of additional sites that have helpful information on this topic, including: http://literacy.kent.edu/Oasis/Workshops/copytoc.html.

CPU (Central Processing Unit)

The CPU is the brains of the computer. Sometimes referred to simply as the processor or central processor, the CPU is where most calculations take place. In terms of computing power, the CPU is the most important element of a computer system.

Cropping

Used in computer graphics, cropping is a method used to cut off the sides of an image to make it the proper size or to remove unwanted parts. Most graphics applications allow you to crop images with a clip feature.

Cut

1) removes highlighted item and places a copy of it on the clipboard.
2) A process of replacing a video picture with another instantaneously, or making an abrupt change of image or sound.

Database

A collection of data arranged into categories. These can then be manipulated by the user to create reports.

Delete

Removing a character, word, line, paragraph or other specified amount of text from a document.

Digital Camera

A hardware product that captures an image and sends it to a computer.

Digital Photo

An image that is stored in bits and bytes on a computer. It can be manipulated and displayed on a computer screen.

Disc

A term used when referring to a compact disc or laser disc on which information is stored optically.

Disk

Media that stores computer information. There are two basic types: hard disks (or drives) and floppy disks.

Document

A file created by a program.

Drag

To hold down a mouse button while moving the mouse. It is a way to move objects, resize borders and objects or select text in blocks.

Drive

Any device that reads and writes information, such as a hard drive, floppy drive, CD ROM drive or tape drive.

Drawing Tools/Program

Software used to create any type of drawing, from a simple line sketch to a magnificent full-color poster. Drawing programs are used by graphic artists and designers.

E-mail (Electronic Mail)

The electronic transmission of letters, documents, messages and memos from one computer to another over a network.

Electronic Card Catalog

A computer-based version of the traditional library card catalog. A patron uses a computer to type in or select pre-determined search strategies to access items in a library's holdings.

Encryption Software

Encryption software puts data into a secret code so it is unreadable, except by authorized users. The most common form is public encryption, which is a way of encrypting messages in which each user has a public key and a private key. Messages are sent encrypted with the receiver's public key; the receiver decrypts them using the private key. Using this method, the private key never has to be revealed to anyone other than the user.

Enter Key/Return Key

A key located at the right end of the third row from the bottom on a keyboard. Pressing the Enter key performs a typed or highlighted command. In word processing, the Enter key starts a new paragraph.

Erase Disk

On the Macintosh, the term for formatting or initializing a disk.

Ergonomics

Science of body positioning to reduce physical, mental and emotional stress on the individual.

Ethernet

The most commonly used technology for networking computers.

Fair Use Guidelines

Support for educators and educational institutions within compliance of U.S. Intellectual Property Rights laws (copyright), Fair Use is an agreement between industry (copyright holders), education and the government allowing limited use without purchase of materials. http://fairuse.stanford.edu/

Filter

A device or program that separates data or signals in accordance to specific criteria. Currently, educational institutions are required to have some form of filter between students and the Internet. Compare to firewall.

Firewall

A system designed to prevent unauthorized access to or from a private network. Firewalls can be implemented in both hardware and software, or a combination of both, and are frequently used to prevent unauthorized Internet users from accessing private networks connected to the Internet, especially intranets. All messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria. There are several types of firewall techniques: packet filters, application gateways, circuit-level gateways and proxy servers.

FireWire

Industry standard. A "bus" (device) that can move large amounts of data between computers and peripheral devices. Manufacturers of multimedia devices use this technology because it speeds up the movement of multimedia data and large files, and enables the connection of digital devices (e.g., digital camcorders, digital video tapes and music systems) directly to a personal computer.

Floppy Disk Drive

A device used to write and read data to a floppy disk and transfer the information to the computer's memory.

Floppy Disk

A 3.5 inch removable disk that's flexible (although it's protected by a hard plastic case). Also called a diskette. Compare disk.

Flow chart

A flow chart is a graphical representation of a computer program or order of operations. The process of flow charting includes defining the project, determining the steps in the project, creating a graphical representation, and testing assumptions about the project (or process).

Folder

In graphical user interfaces such as Windows and the Macintosh environment, a folder is an object that can contain multiple documents. Folders are used to organize information.

Font

A single style of typeface and size (e.g., Times New Roman, 12pt).

Format/Formatting

1) (noun) The layout, presentation or arrangement of data on a screen or paper.
2) (verb) The process whereby a disk is made ready for storing data by organizing the surface into tracks and sectors. Synonymous with initialization. Compare Erase Disk.

FTP (File Transfer Protocol)

A method of transferring files between computers connected to the Internet.

GPS (Global Positioning System)

A system of satellites that transmit continually, which make it possible to identify each location through a receiving unit, by triangulation.

Graphic Calculator

A calculator that allows the user to program in a formula to present data visually in graph or chart form.

Graphic Organizer

Software that visually organizes the thought or creative process. Also known as storyboard software, these combine both icons (graphics) and text to give structure and logic to a project or presentation.

GUI (Graphical User Interface)

A program interface that takes advantage of the computer's graphics capabilities to make the program easier to use.

Hacking

Attempts to gain unauthorized entry into a computer system or network.

Hard Drive

The primary storage device for your computer. Also called hard disk. It is where applications, utilities and files are stored.

HTML (HyperText Markup Language)

A programming language for creating pages on the World Wide Web.

Hyperlink, Hypermedia, Hyperstack

Hyper – multi-dimensional. Media – text, graphics, sound, animation and video. Hypermedia was originally coined to describe how different forms of information can be linked in a non-linear fashion. Users move from one group of information to another by clicking on text or graphics on a computer screen. These "hyperlinks" allow users to individualize the way they move through and process the information being presented to them.

Initialization

The process whereby a disk is made ready for storing data by organizing the surface into tracks and sectors. Synonymous with formatting. Compare Erase Disk.

Input Device

A machine through which data and instructions are entered into the computer's main memory. A mouse, a graphics tablet, and detachable keyboards are examples of input devices.

Intelligent Agents

Programs, used extensively on the Web, that perform tasks such as retrieving and delivering information and automating repetitive tasks. Agents are designed to make computing easier. Currently they are used as Web browsers, news retrieval mechanisms and shopping assistants. By specifying certain parameters, agents will "search" the Internet and return the results directly back to the user's PC. Some intelligent agents are also used as tools to track Web behavior; they can even "watch" as the user surfs the 'Net and record how often he/she visits a certain site. Later, they can be used to automatically download the user's favorite sites, letting the user know when a favorite site has been updated, and even tailoring specific pages to suit the user's tastes.

Interactive

Refers to an application or system that provides information in response to the user's input.

Internet

A global communications network that is a collaborative effort among educational institutions, government agencies, various commercial and nonprofit organizations, and individual users. The Internet allows three primary functions: communications (e-mail and news), retrieval of information and transferring files (FTP).

Intranet

The term used for the implementation of Internet technologies (communications protocol/mail/file transfer/Web browsing/user interfaces/terminal emulation) within an organization, to enhance the organization's operation, efficiency, and development by providing all organizational resources to each employee's desktop with minimal cost and time. Intranets connect the different types of computers on a network, thus providing for open standards which allows flexibility.

Keyboard

The main input device for computers. Keyboards are derived from the typewriter but have additional keys that enhance their function.

Keyword Searching

A keyword is a predefined word or set of words that identifies a specific record or document. A keyword search uses these keywords to locate information in a database or on the Internet.

LAN (Local Area Network)

Programs, storage and graphic devices at multiple computer workstations over relatively small geographic areas for rapid communication. Compare WAN.

Menu

A list of commands or options from which choices are made. Most applications now have a menu-driven component.

Merge

In word processing, when information from a table or database is inserted into a document. In a spreadsheet, the combining of more than one cell to create a single cell.

Monitor

A screen used to display the data received from a processor, or data transmitted to the processor. A computer monitor does not have facilities to receive broadcast signals or process sound. A video monitor can receive broadcast signals and process sound.

Mouse

A pointing device for moving the cursor on the screen.

Netiquette

The rules of etiquette on the Internet.

Network

A collection of computers that are linked together for the purpose of sharing information.

OCR (Optical Character Recognition)

OCR involves reading text from paper and translating the images into a form that the computer can manipulate (for example, into ASCII codes). An OCR system enables the scanning of a book or a magazine article, feeding it directly into an electronic computer file, and then editing the file using a word processor.

Online

A common term used to refer to being connected to the Internet.

Output Device

A peripheral through which information from the computer is communicated to the outside world; for example, a display screen, printer or speakers.

Password

A code word of letters and/or numbers that allows a user to gain access to a secured system or piece of information. Compare to PIN.

Paste

A command that inserts text or graphics from the clipboard to the document at the location of the cursor. Requires that an item first be placed on the clipboard using Copy or Cut commands.

Peripheral

A device that can communicate directly with a computer, such as printers, scanners, cameras, CD-ROMs and laserdisc players.

PDA (Personal Digital Assistant)

A pocket-sized personal computer. PDAs usually can store phone numbers, appointments, and to-do lists. Some PDAs have a small keyboard, others have only a special pen that is used for input and output. A PDA can also have a wireless fax modem. Files can be created on a PDA which are later entered into a larger computer.

PIN (Personal Identification Number)

A privileged code that allows a user to gain access to a secured system or piece of information. May be assigned by the system operator or selected by the user. Compare Password.

Point and Click

A method of interacting with a computer using the mouse. The user moves a cursor on the screen based on the corresponding movement of the mouse. When the mouse is over the desired graphic or text on the computer screen, the mouse button is pressed or "clicked" to start a desired action.

Port

An interface on a computer used to connect a device. Personal computers have various types of ports. Internally, there are several ports for connecting disk drives, display screens and keyboards. Externally, personal computers have ports for connecting modems, printers, mice and other peripheral devices.

Preference

The selecting of one thing over another. In computer terms, it is a section of the operating system or software application that can be set as a "default."

Presentation Device

One of several devices that can be connected to a computer to display information to an audience. The most common devices are video projection units and video converters for television monitors.

Probe/Probeware

Probe: A variety of devices that can be connected to a computer or graphing calculator to collect data.

Probeware: The software that allows the probe or probes to interface with the computer or calculator.

RAM (Random Access Memory)

Memory used to run the operating system and applications in a computer. The more RAM a computer has, the more applications it can run simultaneously. The operating system and other software are *stored* on the computer's hard disk, but they *run* in RAM. Data stored in RAM is lost when the computer is turned off.

Remote Control

A wireless device used to control a piece of electronic equipment such as a television, tape or CD player, stereo or video camera.

ROM (Read Only Memory)

System memory not available to user, but used by the operating system. This memory is programmed only once by the manufacturer and cannot be changed.

Scanner

A device for converting text or graphics displayed on a sheet of paper into a digital image you can display on your computer screen and use with certain applications.

Scientific Probe/Science Probe

See probe/probeware

Search Engines

A program that searches documents for specified keywords and returns a list of the documents where the keywords were found. Although *search engine* is really a general class of programs, the term is often used to specifically describe systems like Alta Vista and Excite that enable users to search for documents on the World Wide Web and USENET newsgroups. Typically, a search engine works by sending out a spider to fetch as many documents as possible. Another program, called an indexer, reads these documents and creates an index based on the words contained in each document. Each search engine uses a proprietary algorithm to create its indices such that, ideally, only meaningful results are returned for each query.

Serial

One-by-one. Serial data transfer refers to transmitting data one bit at a time. The opposite of serial is parallel, in which several bits are transmitted concurrently.

Server

A computer that provides shared, centralized resources (such as files, e-mail, databases, modems and printers) to other computers on the network.

Simulation

An electronic imitation. SimCity is a game in which a simulation of a real city is created on a computer.

Software

The instructions that tell a computer what to do.

Sort

To place, separate or arrange according to common characteristics.

Spam

Unsolicited, unwanted junk e-mail with wide distribution.

Spell Check

A feature built into many applications that allows the user to check for spelling errors or look for synonyms.

Spreadsheet

Spreadsheets applications (sometimes referred to simply as spreadsheets) are computer programs that let you create and manipulate spreadsheets electronically. In a spreadsheet application, each value sits in a cell. Data can be defined in each cell and how different cells depend on one another. The relationships between cells are called formulas, and the names of the cells are called labels.

Streaming (Web Streaming)

Playing audio or video immediately as it is downloaded from the Internet, rather than storing it in a file on the receiving computer first. Streaming is accomplished by way of Web browser plug-ins, which decompress and play the file in real time; a fast computer and fast connection are necessary.

TCP-IP (Transmission Control Protocol/Internet Protocol)

The suite of communications "rules" used to connect hosts on the Internet.

Text

The letters or words of a written work.

Text Support Software

Materials available from a textbook publisher that support, supplement or replace print content for students. These may be on-line, in disk or CD-ROM format.

Text Wrap

A feature supported by many word processors that enables you to surround a picture or diagram with text. The text wraps around the graphic. Text wrap is also called text flow.

Undo

A command within many applications that reverses the most recent thing you did in the application.

URL (Uniform Resource Locator)

The global address of documents and other resources on the World Wide Web. The first part of the address indicates what protocol to use, and the second part specifies the IP address or the domain name where the resource is located.

USB (Universal Serial Bus)

A personal computer bus which can support up to 127 peripheral devices in a daisy chain configuration, and has a total bandwidth of l.5 megabytes per second. It uses inexpensive cable, which can be up to 5 meters long.

VCR

An analog video tape player and recorder which is usually connected to a television monitor to record or play tapes. One-half inch (1/2") video tape is the most commonly used format

Video

A visual recording of information.

Videoconferencing

Conducting a conference between two or more participants at different sites by using computer networks to transmit audio and video data. For example, a *point-to-point* (two person) videoconferencing system works much like a video telephone. Each participant has a video camera, microphone and speakers mounted on his/her computer. As the two participants speak to one another, their voices are carried over the network and delivered to the other's speakers and whatever images appear in front of the video camera appear in a window on the other participant's monitor. *Multipoint* videoconferencing allows three or more participants to sit in a virtual conference room and communicate as if they were sitting right next to each other.

Visualization

A variety of software packages that allows students to create a model of a real world system. These models are often three-dimensional in nature.

Virus

A program that infects and replicates itself in computer files, spreading from computer to computer. Some viruses can be relatively harmless, simply displaying a message on the screen. Other viruses can be extremely damaging, crashing the hard drive so all data is lost.

WAN (Wide Area Network)

A network that spans geographically separated areas, usually by using models and dedicated, high-speed telephone lines. Compare LAN.

Web Page

One page of a document on the World Wide Web. A Web page is usually a file written in Hypertext Markup Language (HTML), stored on a server. A Web page usually has links to other Web pages. Each Web page has its own address called a Uniform Resource Locator (URL) in the form: http://www.name.com/directory/page.htm.

Web Site

A site (location) on the World Wide Web. Each Web site contains a home page, which is the first document users see when they enter the site. The site might also contain additional documents and files. Each site is owned and managed by an individual, company or organization.

Wizard

A Microsoft term for pre-designed elements of a software package. Will "ask questions" and assist in the design of a document. For example, a "letter wizard," within a word processing application, would lead the user through the steps of producing different types of correspondence. (May also refer to an outstanding programmer or a system administrator.) Compare to Assistant in Macintosh.

Word Processor

Software that allows you to enter, edit and format text. Some software will allow the use of graphics.

Web or WWW (World Wide Web)

A global hypertext network that is part of the Internet. It is normally viewed through a browser that provides a Graphical User Interface.

Note: Many of these definitions were found at http://webopedia.internet.com

Workplace Skills 1997

Essentials (Grades 4-8)

Workplace Skills Standards Rationale

Most students will spend more than a third of their lives in a diverse and constantly changing workplace. Regardless of personal, career, or educational plans, students must demonstrate proficiency both in academics and the following workplace standards.

The Workplace Skills Standards are designed to be integrated into the traditional curriculum taught in schools at all levels and are most effectively learned in the context of an integrated effort involving parents, educators, business partners and members of the community. Student acquisition of critical workplace skills, with an emphasis on application, is a developmental process which encompasses an individual's entire lifetime. The demonstration of these skills is essential for individuals and contributes to the foundation of an educated citizenry.

Table 1. Workplace Skills Standards

STANDARD 1

Students use principles of effective oral, written and listening communication skills to make decisions and solve workplace problems.

STANDARD 2

Students apply computation skills and data analysis techniques to make decisions and solve workplace problems.

STANDARD 3

Students apply critical and creative thinking skills to make decisions and solve workplace problems.

STANDARD 4

Students work individually and collaboratively within team settings to accomplish objectives.

STANDARD 5

Students demonstrate a set of marketable skills which enhance career options.

STANDARD 6

Students illustrate how social, organizational and technological systems function.

STANDARD 7

Students demonstrate technological literacy for productivity in the workplace.

STANDARD 8

Students apply principles of resource management and develop skills that promote personal and professional well-being.

WORKPLACE SKILLS STANDARDS
BY LEVEL: ESSENTIALS (Grades 4-8)

STANDARD 1

Students use principles of effective oral, written and listening communication skills to make decisions and solve workplace problems.

- **1WP-E1. Deliver a speech clearly, with expression and in an organized fashion, making eye contact with audience, and convey the message through nonverbal as well as verbal communications**

  PO 1. Prepare a coherent speech with an introduction, body, and conclusion
  PO 2. Present verbal and nonverbal forms of communication in presenting the speech
  PO 3. Select a variety of forms of print and non-print material to convey the message

- **1WP-E2. Describe communications practices used with sensory-impaired individuals**

  PO 1. Describe more than one way to communicate with a visually-impaired individual
  PO 2. Describe more than one way to communicate with a hearing-impaired individual

- **1WP-E3. Demonstrate correct grammar and punctuation in writing**

  PO 1. Spell correctly
  PO 2. Punctuate correctly (e.g., sentence endings, commas, semicolons, colons)
  PO 3. Apply rules of capitalization correctly (e.g., sentence beginnings, titles, abbreviations, proper nouns)
  PO 4. Apply standard grammar and usage (e.g., subject/verb agreement, simple and compound sentence, appropriate verb tenses, plurals)
  PO 5. Organize paragraphs with a variety of sentence structures (e.g., simple, compound, complex)

- **1WP-E4. Respond to oral and written presentations by formulating relevant feedback, expressing opinions, discerning the main idea and distinguishing fact from opinion**

  PO 1. Summarize main ideas of an oral or written presentation
  PO 2. Differentiate between facts and opinions in a presentation ***(Grades 6-8)****
  PO 3. Formulate related questions in a presentation
  PO 4. Express opinions relating to the main idea in a presentation

**All POs considered grades 4-8 unless otherwise noted*

- **1WP-E5. Interpret, clarify, and evaluate a presenter's point of view**

  PO 1. Explain the presenter's point of view ***(Grades 4-5)***
  PO 2. Compare the presenter's point of view with personal point of view ***(Grades 6-8)***

- **1WP-E6. Speak in a content area (e.g., science, social studies, literature), using vocabulary of the subject accurately; locate and interpret information in documents such as manuals, graphs, and schedules**

  PO 1. Deliver a factual presentation using appropriate terminology
  PO 2. Use a variety of formats such as data, graphs and technical manuals to support a presentation

- **1WP-E7. Identify the relevant details and facts of written materials**

  PO 1. Identify the purpose of written material and response expected from reader
  PO 2. Identify relevant facts contained in selected written material

- **1WP-E8. Write formal communications that have a definite audience and clear purpose; contain no gaps, omissions or assumptions which impede comprehension; and follow the proper form whether it be a personal or business letter, message, memo, manual directions or applications**

  PO 1. Write a formal communication in an appropriate format for a specific audience and purpose
  PO 2. Organize ideas in a meaningful sequence using transitional words or phrases
  PO 3. Write ideas that are clear and directly related to the topic

STANDARD 2

Students apply computation skills and data analysis techniques to make decisions and solve workplace problems.

Note: The Essentials Level is central to preparation for the workplace and is adequately covered in the Mathematics Standards document.

- **2WP-E1. Apply math standards 1-6 to a variety of workplace scenarios**

STANDARD 3

Students apply critical and creative thinking skills to make decisions and solve workplace problems.

- **3WP-E1. Utilize information acquired from several sources and transfer information learned in one situation to another**

  PO 1. Research a designated topic using a wide array of information sources
  PO 2. Analyze the information obtained from the research
  PO 3. Classify the information obtained from the research
  PO 4. Compare the information to a new situation

- **3WP-E2. Devise and implement a plan of action by specifying goals and constraints**

  PO 1. Define goals and objectives
  PO 2. Develop appropriate time line
  PO 3. Identify constraints to achieving goals
  PO 4. Identify resources needed to accomplish goals
  PO 5. Develop criteria to evaluate plan of action

- **3WP-E3. Generate alternatives, consider risks, evaluate and choose solutions**

  PO 1. Select from possible solutions in a designated scenario
  PO 2. Evaluate possible solutions in a designated scenario
  PO 3. Identify risks in a designated scenario
  PO 4. Assess risks and risk factors in a designated scenario

- **3WP-E4. Monitor progress and make adjustment to meet stated objectives**

  PO 1. Identify activities for given objectives
  PO 2. Designate assessment tasks to measure progress towards objectives
  PO 3. Evaluate progress towards objective
  PO 4. Revise activities when necessary to achieve objective

- **3WP-E5. Reflect on the action taken to determine what has been gained, lost or achieved**

  PO 1. Evaluate what has been gained, lost or achieved

- **3WP-E6. Identify a need for data, obtain it and develop a validation instrument for determining its accuracy**

  PO 1. Compare the results with the criteria for accuracy
  PO 2. Collect data to analyze workplace problems

STANDARD 4

Students work individually and collaboratively within team settings to accomplish objectives.

- **4WP-E1. Identify ways to build mutual trust and respect and develop an action plan for negotiating concerns**

  PO 1. Identify characteristics of mutual trust
  PO 2. Identify characteristics of mutual respect
  PO 3. Describe ways to build mutual trust and respect
  PO 4. Design action plan for negotiating concerns

- **4WP-E2. Analyze the difference between individual and group decisions and accomplishments**

  PO 1. Identify the characteristics of individual decisions and accomplishments
  PO 2. Identify the characteristics of group decisions and accomplishments
  PO 3. Compare the characteristics of individual and group decisions and accomplishments

- **4WP-E3. Exert a high level of effort and perseverance toward goal attainment, as a team member**

  PO 1. Identify the team goal
  PO 2. Identify the team member roles and responsibilities
  PO 3. Develop tool to measure effort and perseverance of individual team members

- **4WP-E4. Assume leadership roles in team settings**

  PO 1. Define leadership skills
  PO 2. Examine self roles/skills in a group setting
  PO 3. Demonstrate leadership roles/skills in a group
  PO 4. Develop a tool to evaluate the roles/skills of self and group

STANDARD 5

Students will demonstrate a set of marketable skills that enhance career options.

- **5WP-E1. Evaluate areas of interest and/or potential career choices**

  PO 1. Identify areas of interest (such as personal, career)
  PO 2. Evaluate individual skills
  PO 3. Evaluate a variety of potential career choices

- **5WP-E2. Demonstrate work ethics and behaviors for success as defined by school and community**

  PO 1. Identify characteristics of work ethics and behavior as defined by school and community
  PO 2. Demonstrate identified work ethics and behaviors in your school and community

- **5WP-E3. Demonstrate the connection between academic skills and career pathways by identifying required education and training to achieve career choice(s)**

  PO 1. Identify academic preparation necessary for a variety of careers

- **5WP-E4. Identify careers which capitalize on individual strengths and interests**

  PO 1. Identify areas of interest (such as personal, career)
  PO 2. Evaluate individual skills
  PO 3. Evaluate a variety of potential career choices

- **5WP-E5. Apply the basic academic skills to develop a resume, job application and interviewing techniques**

  PO 1. Develop a résumé
  PO 2. Complete a job application
  PO 3. Participate in the interview process

STANDARD 6

Students illustrate how social organizational and technological systems function.

Definition: A system equals an organized framework made up of interrelated components acting together as a whole, in which a change in one component may affect the entire operation. Examples of systems are social (e.g., family, school) and technological (e.g., local area network, telephone).

- **6WP-E1. Identify the factors impacting the level of effectiveness of systems**

  PO 1. Define a system
  PO 2. Identify numerous systems that impact students' daily lives
  PO 3. Compare how systems vary in effectiveness
  PO 4. Identify how factors influence the effectiveness of a system

STANDARD 7

Students demonstrate technological literacy for productivity in the workplace.

- **7WP-E1. Demonstrate basic computer operation skills in a variety of applications to organize information**

  PO 1. Use technology to retrieve, organize and manipulate electronic information using media such as CD-ROM, videodisks and telecommunication systems

- **7WP-E2. Use technology to organize information resources such as library and interlibrary catalog databases**

  PO 1. Use organizational features of electronic information (e.g., microfiche headings and numbering; headings for accessing nested information in hypertext media, electronic media, library, interlibrary catalog databases)

STANDARD 8

Students apply principles of resource management and develop skills that promote personal and professional well-being.

- **8WP-E1. Set and prioritize a set of balanced goals related to school, home, education, and career planning and allocate sufficient time, materials and resources to each task**

  PO 1. Define a personal/professional goal
  PO 2. Create personal/academic goals
  PO 3. Develop a community service goal
  PO 4. Develop a time management program

- **8WP-E2. Describe the importance of balancing home, school and community activities to reduce stress**

  PO 1. Define personal stress factors
  PO 2. Identify how home, school, community activities can affect stress