ARIZONA ACADEMIC STANDARDS

GRADE 7

State of Arizona
Arizona Department of Education

ARIZONA ACADEMIC STANDARDS
GRADE 7

CONTENTS

Additional information about the Arizona Academic Standards including glossaries of terms may be found at http://www.ade.az.gov/standards/contentstandards.asp.

The Arts Standard 2006

Grade 7

Arizona Academic Standards in the Arts:
Articulation in Middle/High School

Philosophy and Rationale for the Arts

The arts are essential in education for they provide students with the means to think, feel, and understand the world around them in ways unique and distinct from other academic disciplines. These skills have been recognized as essential to lifelong success both in and out of school by a variety of education and civic leaders, including the National Association of State Boards of Education, the Education Commission of the States, the Arts Education Partnership, and *BusinessWeek*.

Arts Education in Arizona

Arizona has recognized the importance of arts education for its students in a variety of ways, including:

- Requiring music and visual arts be taught in grades K-8
- Creating high quality certifications (endorsements) for teachers in the areas of dance, music, theatre and visual arts
- Requiring a fine arts high school credit for admission to our state's universities
- Adopting Academic Standards in the Arts, with rigorous, sequential guidelines for creating quality arts education for Arizona's students.

Arts Standards Articulation for Middle and High Schools

- The Arts Standards are divided into four discipline areas: **dance**, **music**, **theatre** and **visual arts.**
- The Arts Standards (Dance, Music, Theatre, Visual Arts) are articulated by **skill level**, reflecting the variety of ways in which the arts are taught in Arizona schools. The skill levels are: **Beginning**, **Intermediate**, **Advanced**, **Distinction** (Honors).
- In **Music**, the skill levels are tied to **performing ensembles**, broken down by Band, Choral and Strings/Orchestra. In addition, there are grade level general music standards available for grades 7 and 8.
- Instead of guessing at the skill level of your student artists, the Department encourages you to view the arts standards in their entirety at http://www.ade.az.gov/standards/contentstandards.asp and choose the appropriate skill level for your students. For guidance on appropriate skill level "fit" please call the Arts Education Specialist at 602-364-1534.

Additional Resources for Arts Education

Additional resources on arts education can be accessed at http://www.ade.az.gov/asd/arts/ or by calling the Department's Arts Education Specialist at 602-364-1534.

Comprehensive Health Education/ Physical Activity Standards 1997

Essentials (Grades 4-8)

Comprehensive Health 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.

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
Essentials (Grades 6-8)

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**

   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**

   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**

   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**

   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**

   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**

   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**

  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**

  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**

  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)**

  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**

  PO 1. Describe similar health products' cost and effectiveness in treating health problems

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

  PO 1. Same as concept

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

  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**

    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**

    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)**

    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**

    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**

    PO 1. Choose five ways to reduce stress

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

    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**

    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**

    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**

    PO 1. Describe five ways that technology can hurt or improve your health

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

    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**

    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**

    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**

    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**

  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**

  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**

  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**

  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**

  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**

  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**

  PO 1. Name three barriers of communication about a health issue

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

  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**

  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 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.

Physical Activity Standards
Essentials (Grades 6-8)

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**

  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**

  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**

  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**

  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)**

  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**

  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**

  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**

  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**

  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**

  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**

  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**

    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**

    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**

    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**

    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**

    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**

    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**

    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**

    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**

    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**

    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**

    PO 1. Identify opportunities for participation in physical activity in the community

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

    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 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.

Foreign and Native Language Standards
Essentials (Grades 4-8)

STANDARD 1: COMMUNICATION
Students understand and interpret written and spoken communication on a variety of topics in the target language.

- **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.

- **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.

- **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.

- **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.

- **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.

- **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.

- **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 7

Reading Standard Articulated by Grade Level

INTRODUCTION

Reading is a complex skill that involves learning language and using it effectively in the active process of constructing meaning embedded in text. It requires students to fluently decode the words on a page, understand the vocabulary of the writer, and use strategies to build comprehension of the text. It is a vital form of communication in the 21st century and a critical skill for students of this "information age" as they learn to synthesize a vast array of texts.

The Reading Standard Articulated by Grade Level will provide a clear delineation of what students need to know and be able to do at each grade level. This allows teachers to better plan instructional goals for students at any grade.

BACKGROUND

The state Board of Education adopted the Arizona Academic Standards in 1996 to define what Arizona's students need to know and be able to do by the end of twelfth grade. Developed by committees comprised of educators, parents, students, and business and community leaders, these standards were written in grade-level clusters with benchmarks at grades 3, 5, 8, and high school.

RATIONALE

Requirements in the *No Child Left Behind Act of 2001* (NCLB) and the standard practice of conducting periodic review of the state academic standards prompted the decision by the Arizona Department of Education to refine and articulate the academic standards for mathematics and reading by grade level. This refinement and articulation project was started in July 2002, and was completed in March 2003.

METHODOLOGY

Work teams for reading consisted of a representative sample of educators from around the state designed to include large and small schools, rural and urban schools, and ethnic diversity. National reading consultants, university professors, and test company consultants advised the teams. The goal was to articulate, or align, the current academic standards by grade level (K-12).

The Reading Articulation Teams utilized information from the National Council of Teachers of English and the findings of the National Reading Panel, which promote quality instruction, based on current, pedagogical, and researched practices.

The articulation process included a restructuring of the Arizona Academic Content Standards to better facilitate the alignment of performance objectives by grade level, while maintaining the content integrity of the existing standards. Over a period of months, the articulation team and smaller sub-committees of the teams refined the documents. Reasonableness, usefulness, and appropriateness were the guidelines for the articulation process.

External reviews by nationally recognized consultants brought a broad perspective to the articulation process. Internal reviews by university and local experts provided additional validation.

Another important step in the project was the request for public comment. In December 2002, drafts of the Standards Articulated by Grade Level, along with a survey to gather feedback, were posted on the Arizona Department of Education website. This provided the public with easy access to the documents, and the survey allowed reviewers a means for submitting comments. The public and all educators had the opportunity to submit comments and suggestions, either electronically or in writing, until the survey closing date of January 31, 2003. In January, six public hearings were held throughout the state, offering further opportunities for public input.

After all the public comments were collected and organized by topic, the articulated teams met one last time to determine what modifications to the standards documents would be appropriate, based on this information. All public comments were given equal consideration.

The completion of the standards articulation process was followed by the development of rationales, glossaries, and crosswalks. These additional documents were designed to assist educators with the transition from the 1996 standards to the Reading Standard Articulated by Grade Level

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, or contrast).

PO 4. Determine the meaning of figurative language, including similes, metaphors, personification, and idioms in prose and poetry.

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.

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) of text to aid comprehension.

PO 7. Use reading strategies (e.g., drawing conclusions, determining cause and effect, making inferences, sequencing) to interpret text.

READING STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

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. Recognize multiple themes in 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 influence of setting (e.g., time of day or year, historical period, place, situation) on the problem and resolution.

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

PO 7. Identify the characteristics and structural elements of poetry (e.g., stanza, verse, rhyme scheme, line breaks, alliteration, consonance, assonance, rhythm, repetition, figurative language) in a given selection.

PO 8. Identify various genres of fiction (e.g., mysteries, science fiction, historical fiction, adventures, fantasies, fables, myths) based upon their characteristics.

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.

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 material. *(*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) 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.

READING STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

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 missing 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.

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. Identify the facts and details that support the 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.

Writing Standard Articulated by Grade Level 2004

Grade 7

Writing Standard Articulated by Grade Level

INTRODUCTION

The purpose of the Writing Standard Articulated by Grade Level is to equip students with the skills and knowledge needed to participate in society as literate citizens. The ability to communicate effectively in writing will be essential to their success in their communities and careers. Students may realize personal fulfillment and enjoyment as they learn to become proficient writers and continue as writers throughout their lives.

Writing is a complex skill that involves learning language and using it effectively to convey meaning through text. This standard recognizes that students' abilities in writing develop from their earliest stages with phonetic spelling; to limited understanding of a certain genre; to the ability to produce conventional, coherent, unified documents. Their ideas are expressed in various forms, such as notes, lists, letters, journal writing, stories, web postings, instant messaging, essays, and reports. Effective writing may be evaluated by examining the use of ideas, organization, voice, word choice, sentence fluency, and conventions.

The Writing Standard Articulated by Grade Level will provide a clear delineation of what students need to know and be able to do at each grade level. This allows teachers to better plan instructional goals for students at any grade.

BACKGROUND

The state Board of Education adopted the Arizona Academic Standards in 1996 to define what Arizona's students need to know and be able to do by the end of twelfth grade. Developed by committees comprised of educators, parents, students, and business and community leaders, these standards were written in grade-level clusters with benchmarks at grades 3, 5, 8, and high school.

RATIONALE

Requirements in the No Child Left Behind Act of 2001 (NCLB) and the standard practice of conducting periodic review of the state academic standards prompted the decision by the Arizona Department of Education to refine and articulate the academic standards for mathematics, reading, writing, and science by grade level. This refinement and articulation project was started in December 2003, and was completed in June 2004.

METHODOLOGY

Writing Standard refinement began in January 2004, expanding the standard to include performance objectives for all grade levels, kindergarten through twelfth grade. The writing articulation teams consisted of educators from around the state, representing large and small schools, rural and urban schools, and ethnic diversity. National consultants, university professors, and Arizona Department of Education staff advised the teams. The goal was to articulate and align the current academic standards by grade level (K-12).

The Writing Articulation Committee utilized resources and information from current, effective classroom practices, from other states' standards, and from the National Council of Teachers of English, which promotes quality literacy instruction.

The articulation process included a restructuring of the Arizona Academic Content Writing Standards to better facilitate the alignment of performance objectives by grade level, while maintaining the content integrity.

Over a period of months, the articulation team and smaller subcommittees of the teams refined the documents. Reasonableness, usefulness, and appropriateness were the guidelines for the articulation process.

External reviews by nationally recognized consultants brought a broad perspective to the articulation process. Internal reviews by university and local experts provided additional validation.

Another important step in the project was the request for public comment. In May 2004, a draft of the Writing Standard Articulated by Grade Level, along with a survey to gather feedback, was posted on the Arizona Department of Education website. This provided the public with easy access to the documents, and the survey allowed reviewers a means for submitting comments. The public and all educators had the opportunity to submit comments and suggestions, either electronically or in writing, until the public review closing date of May 27, 2004. In May, three public hearings were held throughout the state, offering further opportunities for public input.

Based on public comment and online survey results, the articulation team met to determine necessary modifications to the standard. All public comments were given equal consideration.

Included in the standard articulation process the development of a rationale, glossary, and a crosswalk (correlation between the 1996 Writing Standard and revised, articulated standard). These additional documents were designed to assist educators with the transition from the 1996 Writing Standards to the 2004 Writing Standard Articulated by Grade Level.

WRITING STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

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., outline, chart, table, graph, **Venn Diagram**, **web**, **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 7

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.*

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.

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 7

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 of writing (e.g., letter format, **narrative**, play, essay).* (See Strand 3)
PO 2. *Develop a strong beginning or introduction that draws in the reader.*
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 type of writing.*
PO 3. *Use language appropriate for the topic and purpose.*
PO 4. *Choose appropriate voice (e.g., formal, informal, **academic discourse**) for the audience and purpose.*

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 7

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 R07-S2C1)

PO 3. Use vocabulary that is original, varied, and natural.

PO 4. Use **literal** and **figurative language** where appropriate to purpose.
(See R07-S1C4-04)

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***

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 7

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**

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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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 type of writing, employ:
- a. ***figurative language***
- b. ***rhythm***
- c. ***dialogue***
- d. ***characterization***
- e. ***plot***
- f. *appropriate format*

Concept 2: Expository
Expository writing includes non-fiction writing that describes, explains, 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 R07-S3C1-02)

*PO 3. Write a **process essay** that includes:*
- a. *a **thesis statement***
- b. *supporting details*
- c. *introductory, body, and concluding paragraphs*

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The bulleted (lettered) items within a performance objective indicate specific content to be taught.
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WRITING STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

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 R07-S3C2; M07-S2C1*)*

*PO 2. Write a **friendly letter** that includes a:*
     a. *heading*
     b. *salutation*
     c. *body*
     d. *closing*
     e. *signature*

*PO 3. Write a **formal letter** that follows a conventional business letter format.*

PO 4. 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 R07-S3C3)

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Words shown in bold print are referenced in the glossary.

WRITING STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

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*
(See R07-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 R07-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 R07-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 Standards 1996

Standard 3: Listening and Speaking
Standard 4: 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 art

- 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.

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**

Mathematics Standard Articulated
by Grade Level 2003

Grade 7

Mathematics Standard Articulated By Grade Level

INTRODUCTION

Mathematics is a highly interconnected discipline. The need to understand and use a variety of mathematical strategies in multiple contextual situations has never been greater. Utilization of mathematics continues to increase in all aspects of everyday life, as a part of cultural heritage, the workplace, and in the scientific and technical communities. Today's changing world will offer enhanced opportunities and options for those who thoroughly understand mathematics.

The Mathematics Standard Articulated By Grade Level describes a connected body of mathematical understandings and competencies that provide a foundation for all students. They define the understanding, conceptual knowledge, and skills that students are to acquire.

Communication, problem solving, reasoning and proof, connections and representation are the process standards as described in the Principles and Standards for School Mathematics from the National Council of Teachers of Mathematics (NCTM). These process standards are interwoven within all the content strands of the Arizona Mathematics Standard. The process standards emphasize ways to acquire and use the content knowledge.

Mathematics education should enable students to fulfill personal ambitions and career goals in an informational age. In the NCTM Principles and Standards document it asks us to "Imagine a classroom, a school, or a school district where all students have access to high-quality, engaging mathematics instruction. There are ambitious expectations for all, with accommodations for those who need it".[1] The Arizona Mathematics Standard Articulated by Grade Level is intended to facilitate this vision.

BACKGROUND

The state Board of Education adopted the Arizona Academic Standards in 1996 to define what Arizona's students need to know and be able to do by the end of twelfth grade. Developed by committees comprised of educators, parents, students, and business and community leaders, these standards were written in grade-level clusters with benchmarks at grades 3, 5, 8, and high school.

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[1] National Council of Teachers of Mathematics, Principles and Standards for School Mathematics, NCTM Publications, Reston, VA, 2000, p. 3.

RATIONALE

Requirements in the No Child Left Behind Act of 2001 (NCLB) and the need to do a periodic review of the state academic standards prompted the decision by the Arizona Department of Education to refine and articulate the academic standards for mathematics and reading by grade level. This refinement and articulation project was started in July 2002, and was completed in March 2003.

METHODOLOGY

Work teams for mathematics were formed of a representative sample from around the state to include large and small schools, rural and urban schools, and ethnic diversity. Included were national mathematics consultants, university professors, community members, and test company consultants who advised the teams. The goal was to articulate, or align, the current academic standards by grade level. The mathematics standard was articulated K-10 to align with the state requirement of two years of high school mathematics.

The mathematics articulation team utilized the National Council of Teachers of Mathematics Principles and Standards as a reference in the development of the revised mathematics standards. Additionally, the ACHIEVE, Foundations for Success, Mathematics Expectations for the Middle Grades document, served as a guide to evaluate the level of achievement expectations for Arizona's students.

The articulation teams created draft documents with the existing standards and performance objectives articulated, or aligned, to the appropriate grade level. Over a period of months, these teams and smaller sub-committees of the teams refined the documents. Reasonableness, usefulness, and appropriateness were the guidelines for the articulation process. The measurability of each performance objective was considered.

External reviews by nationally recognized consultants brought a broader perspective to the articulation process. Internal reviews by university and local experts provided additional validation.

Another important step in the project was the gathering of public comment. In December 2002, drafts of the Standards Articulated By Grade Level, along with a survey to gather feedback, were posted on the Arizona Department of Education website. This provided the public with easy access to the documents, and a survey allowed reviewers a means for submitting comments. The public and all educators had the opportunity to submit comments and suggestions, either electronically or in writing, until the survey closing date of January 31, 2003. Additionally, six public hearings were held in January throughout the state offering further opportunities for public input.

After all the public comments were collected and organized by topic, the teams met one last time to determine what modifications to the standards documents would be appropriate. Upon completion of the refinements, glossaries, rationales, and crosswalks were developed to assist educators with the transition from the 1996 Arizona Academic Standards to the Mathematics Academic Standard Articulated By Grade Level.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

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.   Express fractions as terminating or repeating decimals.

PO 2.   Identify the greatest common factor for a set of whole numbers.

PO 3.   Determine the least common multiple for a set of whole numbers.

PO 4.   Choose the appropriate signed real number to represent a contextual situation.

PO 5.   Recognize the absolute value of a number used in contextual situations.

PO 6.   Locate integers on a number line.

PO 7.   Order integers.

PO 8.   Classify rational numbers as natural, whole, or integers.

Concept 2: Numerical Operations
Understand and apply numerical operations and their relationship to one another.

PO 1.   Add integers.

PO 2.   Subtract integers.

PO 3.   Select the grade-level appropriate operation to solve word problems.

PO 4.   Solve word problems using grade-level appropriate operations and numbers.

PO 5.   Multiply integers.

PO 6.   Divide integers.

PO 7.   Apply grade-level appropriate properties to assist in computation.

PO 8.   Apply the symbols + and – to represent positive and negative, and "│ │" to represent absolute value.

PO 9.   Use grade-level appropriate mathematical terminology.

PO 10. Calculate the percent of a given number.

PO 11. Convert numbers expressed in standard notation to scientific notation and vice versa (positive exponents only).

PO 12. 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 –2.5 x 18 about –50?).
PO 3.	Determine whether an estimation of an area is approximately equal to the actual measure.
PO 4.	Determine whether an estimation of an angle is approximately equal to the actual measure.
PO 5.	Determine whether an estimation of the circumference of a circle is approximately equal to the actual measure.
PO 6.	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 a circle graph with appropriate labels and title from organized data.
PO 3.	Determine when it is appropriate to use histograms, line graphs, double bar graphs, and stem-and-leaf plots.
PO 4.	Interpret data displays including histograms, stem-and-leaf plots, circle graphs, and double line graphs.
PO 5.	Answer questions based on data displays including histograms, stem-and-leaf plots, circle graphs, and double line graphs.
PO 6.	Find the mean, median, mode, and range of a given numerical data set.
PO 7.	Interpret trends from displayed data.
PO 8.	Compare trends in data related to the same investigation.
PO 9.	Solve contextual problems using histograms, line graphs of continuous data, double bar graphs, and stem-and-leaf plots.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

| **Concept 2: Probability** |
| Understand and apply the basic concepts of probability. |

PO 1.	Determine the probability that a specific event will occur in a single stage probability experiment (e.g., Find the probability of drawing a red marble from a bag with 3 red, 5 blue, and 9 black marbles.).
PO 2.	Compare probabilities to determine the fairness of a contextual situation (e.g. If John wins when two or greater shows after a six-sided number cube is rolled and Joaquin wins otherwise, is this a fair game?).
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.	Make predictions from the results of student-generated experiments using objects (e.g., coins, spinners, number cubes, cards).
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 up to three sets of objects (e.g., How many outfits can be made with 3 pants, 2 tee shirts and 2 pairs of shoes?). |
| PO 2. | Determine all possible arrangements of a given set, using a systematic list, table, tree diagram, or other representation. |

| **Concept 4: Vertex-Edge Graphs** |
| Understand and apply vertex-edge graphs. |

| PO 1. | Find the shortest circuit on a map that makes a tour of specified sites (vertex-edge graph). |

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

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 recursive pattern, using symbols or numbers.
PO 2. Extend a grade-level appropriate recursive pattern.
PO 3. Solve grade-level appropriate 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).

Concept 3: Algebraic Representations
Represent and analyze mathematical situations and structures using algebraic representations.
PO 1.   Evaluate an expression containing two variables by substituting integers for the variable (e.g., $7x + m$, when $x = -4$ and $m = 12$).
PO 2.   Use variables in contextual situations.
PO 3.   Translate a written sentence into a one-step, one-variable algebraic equation.
PO 4.   Translate a sentence written in context into an algebraic equation involving one operation.
PO 5.   Solve one-step equations using inverse operations with positive rational numbers (e.g., $\frac{2}{3}n = 6$).

Concept 4: Analysis of Change
Analyze change in a variable over time and in various contexts.
PO 1.   Analyze change in various linear contextual situations.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

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 geometric figure showing specified properties (e.g., Draw an obtuse triangle.).

PO 2.   Classify 3-dimensional solids by their configuration and properties (e.g., parallelism, perpendicularity and congruency).

PO 3.   Identify the net (2-dimensional representation) that corresponds to a rectangular prism, cone, or cylinder.

PO 4.   Distinguish between length, area, and volume, using 2- and 3-dimensional geometric figures.

PO 5.   Draw polygons with appropriate labels.

PO 6.   Identify the angles created by two lines and a transversal.

PO 7.   Recognize the relationship between central angles and intercepted arcs.

PO 8.   Identify arcs and chords of a circle.

PO 9.   Model the triangle inequality theorem using manipulatives.

PO 10. Identify corresponding parts of congruent polygons as congruent.

Concept 2: Transformation of Shapes
Apply spatial reasoning to create transformations and use symmetry to analyze mathematical situations.

PO 1.   Identify rotations about a point, using pictorial models.

PO 2.   Recognize simple single rotations, translations or reflections on a coordinate grid.

Concept 3: Coordinate Geometry
Specify and describe spatial relationships using coordinate geometry and other representational systems.

PO 1.   Graph data points in (x, y) form in any quadrant of a coordinate grid.

PO 2.   State the missing coordinate of a given figure in any quadrant of a coordinate grid using geometric properties (e.g., Find the coordinates of the missing vertex of a rectangle when two adjacent sides are drawn.).

Concept 4: Measurement - Units of Measure - Geometric Objects
Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.

PO 1.   Identify the appropriate unit of measure for the volume of an object (e.g., cubic inches or cubic cm).

PO 2.   Measure to the appropriate degree of accuracy.

PO 3.   Convert a measurement from U.S. customary to metric, and vice versa.

PO 4.   Solve problems involving the circumference of a circle.

PO 5.   Solve problems involving the area of a circle.

PO 6.   Solve problems for the areas of parallelograms, triangles, and circles.

PO 7.   Identify polygons having the same perimeter or area.

PO 8.   Compare estimated to actual lengths based on scale drawings or maps.

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.   Discriminate necessary information from unnecessary information in a given grade-level appropriate word problem.

PO 2.   Analyze algorithms for computing with fractions.

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 using multiple variables.

Science Standard Articulated
by Grade Level 2004

Grade 7

Science Standard Articulated by Grade Level

INTRODUCTION

Students are naturally curious about the world and their place in it. Sustaining this curiosity and giving it a scientific foundation must be a high priority in Arizona schools. Application of scientific thinking enables Arizona students to strengthen skills that people use every day: solving problems creatively, thinking critically, working cooperatively in teams, using technology effectively, and valuing lifelong learning.

Science education is much more than merely learning content. It is the active process of investigation and the critical review of evidence related to the world around us, both visible and invisible. Science is a dynamic process of gathering and evaluating information, looking for patterns, and then devising and testing possible explanations. Active engagement in scientific investigation leads students to think critically and to develop reasoning skills that allow them to become independent, lifelong learners. Science methods and thought processes have application well beyond the bounds of science and support learning goals in all subject areas.

The Arizona Science Standard Articulated by Grade Level has been written for ALL students. The science standard is set with the expectation that science instruction occurs at all grade levels – beginning in early grades with simple exploration, progressing to increasingly organized and sophisticated science investigations in higher grades.

Underlying all of the science standard strands are the five unifying concepts as identified in the National Science Education Standards (1995):

- Systems, Order, and Organization
- Evidence, Models, and Explanation
- Constancy, Change, and Measurement
- Evolution and Equilibrium
- Form and Function

This conceptual framework provides students with productive and insightful ways of considering and integrating a range of basic ideas that explain the natural world. Because the understanding and abilities associated with major conceptual and procedural schemes need to be developed over an entire education, the unifying concepts and processes transcend disciplinary boundaries.

These unifying concepts can be introduced in early grades and developed appropriately through the elementary grades and high school. Students should be explicitly shown how each of these unifying concepts apply to and connect life, physical, and Earth and space sciences. These science content areas can be taught in conjunction with each other, as well as with other subject areas in an interdisciplinary approach. The unifying concepts in science education help focus instruction and provide a link to other disciplines.

BACKGROUND

The state Board of Education adopted the Arizona Academic Standards in 1998 to define what Arizona's students need to know and be able to do by the end of twelfth grade. Developed by committees comprised of educators, parents, students, and business and community leaders, these standards were written in grade-level clusters with benchmarks at 3, 5, 8, and high school.

RATIONALE

Requirements in the *No Child Left Behind Act of 2001* (NCLB) and the need for periodic review of the state academic standards prompted the decision by the Arizona Department of Education (ADE) to refine and articulate the academic standard for science by grade level. This refinement and articulation project was started in April 2003, and was completed in May 2004.

METHODOLOGY

The Science Standard Revision Committee was composed of a statewide representation of scientists and science educators to reflect school districts large and small, rural and urban, as well as the ethnic diversity of Arizona. National science consultants, university professors, and community members advised the committee and provided valuable reviews of the work in progress. The goal was to articulate, or align, the current academic standards by grade level (K-8) and in high school with the state requirement of two years of high school science.

The committee utilized several nationally recognized publications to establish content guidelines during the development of the draft:
- National Research Council (NRC)
  - *National Science Education Standards*
  - *Inquiry and the National Science Education Standards*
  - *Designing Mathematics or Science Curriculum Programs*
- The American Association for the Advancement of Science
  - *Atlas of Science Literacy*
  - *Benchmarks for Science Literacy*
  - *Design for Science Literacy*
  - *Science for All Americans*
- *Science Framework for the 1996 and 2000 National Assessment of Educational Progress (NAEP)*

The committee created draft documents by first reviewing the existing standards. The performance objectives were articulated, or aligned, to the appropriate grade levels. Over a period of months, subcommittees, composed of representatives of the full committee, met to refine the documents. A guiding principle in the articulation process was whether a performance objective was reasonable, useful, and appropriate. The measurability of each performance objective was also considered.

External reviews by nationally recognized consultants and reviews by university and local experts provided additional guidance and perspective to the committees.

Public review of the Science Standard Articulated by Grade Level occurred during the month of February 2004. A draft of the standard was placed on the ADE website with the option for individuals to make comments online. Six public hearings occurred throughout the state to collect additional comments. After all public comments were collected and organized, the committee met to review them and to recommend appropriate modifications to the standard. This final draft was presented to the state Board of Education in May 2004 for adoption as the Arizona Science Standard Articulated by Grade Level.

SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

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 M07-S2C1-01)

PO 2. Select appropriate resources for background information related to a question, for use in the design of a controlled investigation.
(See W07-S3C6-01, R07-S3C1-06, and R07-S3C2-03)

PO 3. Explain the role of a hypothesis in a scientific inquiry.

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 an investigation to test individual variables using scientific processes.

PO 3. Conduct a controlled investigation, utilizing multiple trials, to test a hypothesis using scientific processes.

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 W07-S3C2-01 and W07-S3C3-01)

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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 M07-S2C1-07 and M07-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. Analyze results of data collection in order to accept or reject the hypothesis.

PO 4. Determine validity and reliability of results of an investigation.

PO 5. Formulate a conclusion based on data analysis.

PO 6. Refine hypotheses based on results from investigations.

PO 7. Formulate new questions based on the results of a previous investigation.

Concept 4: Communication
Communicate results of investigations.

PO 1. *Choose an appropriate graphic representation for collected data:*
- *line graph*
- *double bar graph*
- *stem and leaf plot*
- *histogram*

(See M07-S2C1-03)

PO 2. Display data collected from a controlled investigation.
(See M07-S2C1-03)

PO 3. Communicate the results of an investigation with appropriate use of qualitative and quantitative information.
(See W07-S3C2-01)

PO 4. Write clear, step-by-step instructions for following procedures (without the use of personal pronouns).
(See W07-S3C3-01)

PO 5. Communicate the results and conclusion of the investigation.
(See W07-S3C6-02)

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7
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., Rachel Carson [scientist], supports Strand 4; Luis Alvarez [scientist] and Walter Alvarez [scientist], support Strand 6; Percival Lowell [scientist], supports Strand 6; Copernicus [scientist], supports Strand 6).

PO 2. Describe how a major milestone in science or technology has revolutionized the thinking of the time (e.g., global positioning system, telescopes, seismographs, photography).

PO 3. Analyze the impact of a major scientific development occurring within the past decade.

PO 4. Analyze the use of technology in science-related careers.

Concept 2: Nature of Scientific Knowledge
Understand how science is a process for generating knowledge.

PO 1. Describe how science is an ongoing process that changes in response to new information and discoveries.

PO 2. Describe how scientific knowledge is subject to change as new information and/or technology challenges prevailing theories.

PO 3. 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*

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

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 environmental risks (e.g., pollution, destruction of habitat) caused by human interaction with biological or geological systems. PO 2. Analyze environmental benefits of the following human interactions with biological or geological systems: • reforestation • habitat restoration • construction of dams PO 3. Propose possible solutions to address the environmental risks in biological or geological 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. Describe a scientific discovery that influences technology.

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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.

No performance objectives at this grade level

Concept 3: Populations of Organisms in an Ecosystem
Analyze the relationships among various organisms and their environment.

PO 1. Compare food chains in a specified ecosystem and their corresponding food web.

PO 2. Explain how organisms obtain and use resources to develop and thrive in:
- niches
- predator/prey relationships

PO 3. Analyze the interactions of living organisms with their ecosystems:
- limiting factors
- carrying capacity

PO 4. Evaluate data related to problems associated with population growth (e.g., overgrazing, forest management, invasion of non-native species) and the possible solutions.

PO 5. Predict how environmental factors (e.g., floods, droughts, temperature changes) affect survival rates in living organisms.

PO 6. Create a model of the interactions of living organisms within an ecosystem.

Concept 4: Diversity, Adaptation, and Behavior
Identify structural and behavioral adaptations.

No performance objectives at this grade level

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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.

No performance objectives at this grade level

Concept 2: Motion and Forces
Understand the relationship between force and motion.

No performance objectives at this grade level

Concept 3: Transfer of Energy
Understand that energy can be stored and transferred.

No performance objectives at this grade level

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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.
PO 1. Classify rocks and minerals by the following observable properties: • grain • color • texture • hardness PO 2. Describe the properties and the composition of the following major layers of the Earth: • crust • mantle • core PO 3. Explain the following processes involved in the formation of the Earth's structure: • erosion • deposition • plate tectonics • volcanism PO 4. Describe how the rock and fossil record show that environmental conditions have changed over geologic and recent time.

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

Concept 2: Earth's Processes and Systems
Understand the processes acting on the Earth and their interaction with the Earth systems.

PO 1. Explain the rock cycle.

PO 2. Distinguish the components and characteristics of the rock cycle for the following types of rocks:
- igneous
- metamorphic
- sedimentary

PO 3. Analyze the evidence that lithospheric plate movements occur.

PO 4. Explain lithospheric plate movement as a result of convection.

PO 5. Relate plate boundary movements to their resulting landforms, including:
- mountains
- faults
- rift valleys
- trenches
- volcanoes

PO 6. Describe how earthquakes are measured.

Concept 3: Earth in the Solar System
Understand the relationships of the Earth and other objects in the solar system.

PO 1. Explain the phases of the Moon in terms of the relative positions of the Earth, Sun, and Moon.

PO 2. Construct a model for the relative positions of the Earth, Sun, and Moon as they relate to corresponding eclipses.

PO 3. Explain the interrelationship between the Earth's tides and the Moon.

PO 4. Explain the seasons in the Northern and Southern Hemispheres in terms of the tilt of the Earth's axis relative to the Earth's revolution around the Sun.

PO 5. Identify the following major constellations visible (seasonally) from the Northern Hemisphere:
- Orion
- Ursa Major (Great Bear)
- Cygnus
- Scorpius
- Cassiopeia

PO 6. Explain the relationship among common objects in the solar system, galaxy, and the universe.

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Social Studies Standard Articulated
by Grade Level 2006

Grade 7

Social Studies Standard Articulated by Grade Level

INTRODUCTION

To maintain the Union that supports our freedoms, we 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 our founding principles, namely those detailed in the United States Constitution, the Declaration of Independence, and *The Federalist Papers*. The standard includes the study of rich and diverse contributions that people of many backgrounds have made to American life and institutions while emphasizing our shared heritage. Well-informed citizens understand our political, cultural and economic interaction with the rest of the world. Geographic knowledge expands the understanding of our development and identity in the world. The standard requires that students attain knowledge of essential facts, concepts, people, and events as well as a firm grasp of reasoning, inquiry, and research skills. Students must learn how to frame and test hypotheses, distinguish logical from illogical reasoning, develop informed opinions based on different points of view, and employ reflective thinking and evaluation. In this way students will be prepared to fulfill their responsibilities as citizens of our democratic republic. The standard presents academic content and skills in the four interrelated disciplines of history, geography, civics/government, and economics that are essential to an understanding of our human experience, past and present.

BACKGROUND

The state Board of Education began the development process for the Arizona academic standards in 1996 to define what Arizona students need to know and be able to do by the end of twelfth grade. The Social Studies Standards were adopted in 2000 and partially revised in 2003. Developed by committees comprised of educators, subject matter experts, and business and community leaders, the Social Studies Standard was fully revised and written in articulated grade-specific performance objectives in 2004 - 2005.

RATIONALE

Requirements in the *No Child Left Behind Act of 2001* (NCLB) and the practice of periodic review of the state academic standards prompted the decision by the Arizona Department of Education to refine and articulate the academic standards for mathematics, reading, writing, and science by grade level. An articulation of the social studies standard was included in the process in order to provide consistency across content areas. The skills and content of social studies are not only a critical component of a comprehensive curriculum they also support student success in other areas.

METHODOLOGY

A committee to articulate the social studies standard was formed consisting of a representative sample of educators from around the state. It represented large and small schools, rural and urban districts, and ethnic diversity. Subject matter experts, university professors, and community members advised the committees. The goal was to articulate, or align, the current academic standards by grade level (K-12).

The Social Studies Articulation Committee utilized information from the National Council for the Social Studies, the National Council for Geographic Education, the Arizona Council on Economics Education, the Arizona Geographic Alliance, the Bill of Rights Institute, and other sources to promote quality instruction based on current, pedagogical, and research-based practices.

The articulation process included a restructuring of the Arizona Academic Content Standards to better facilitate the alignment of performance objectives by grade level, while maintaining the content integrity of the existing standards. Over a period of months, the articulation committees and smaller sub-committees refined the documents. Reasonableness, usefulness, and appropriateness were the guidelines for the articulation process.

External reviews by nationally recognized consultants and reviews by university and local experts provided additional guidance and perspective to the committee.

SOCIAL STUDIES STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

Seventh Grade History Strands emphasize American history from the Civil War through the Great Depression. They also study the impact of the Industrial Revolution and imperialism on world events.

Strand 1: American History

A study of American History is integral for students to analyze our national experience through time, to recognize the relationships of events and people, and to interpret significant patterns, themes, ideas, beliefs, and turning points in Arizona and American history. Students will be able to apply the lessons of American History to their lives as citizens of the United States.

Concept 1: Research Skills for History

Historical research is a process in which students examine topics or questions related to historical studies and/or current issues. By using primary and secondary sources effectively students obtain accurate and relevant information. An understanding of chronological order is applied to the analysis of the interrelatedness of events. These performance objectives also appear in Strand 2: World History. They are intended to be taught in conjunction with appropriate American or World History content, when applicable.

PO 1. Construct charts, graphs, and narratives using historical data.

PO 2. Interpret historical data displayed in graphs, tables, and charts.

PO 3. Construct timelines (e.g., presidents/world leaders, key events, people) of the historical era being studied.

PO 4. Formulate questions that can be answered by historical study and research.

PO 5. Describe the relationship between a primary source document and a secondary source document.

PO 6. Determine the credibility and bias of primary and secondary sources.

PO 7. Analyze cause and effect relationships between and among individuals and/or historical events.

PO 8. Describe two points of view on the same historical event.

Concept 2: Early Civilizations   Pre 1500

The geographic, political, economic and cultural characteristics of early civilizations made significant contributions to the later development of the United States.

No performance objectives at this grade.

Concept 3: Exploration and Colonization   1500s – 1700s

The varied causes and effects of exploration, settlement, and colonization shaped regional and national development of the U.S.

No performance objectives at this grade.

Concept 4: Revolution and New Nation   1700s – 1820

The development of American constitutional democracy grew from political, cultural, and economic issues, ideas, and events.

No performance objectives at this grade.

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Concept 5: Westward Expansion   1800 – 1860
Westward expansion, influenced by political, cultural, and economic factors, led to the growth and development of the U.S.

No performance objectives at this grade.

Concept 6: Civil War and Reconstruction   1850 – 1877
Regional conflicts led to the Civil War and resulted in significant changes to American social, economic, and political structures.

(Note: The Civil War was introduced in Grade 5.)

PO 1. Analyze the factors leading to the Civil War:
   a. role of abolitionists and Underground Railroad
   b. Sectionalism and States' Rights
   c. Westward expansion
   d. Missouri and 1850 Compromises
   e. Dred Scott Decision
   f. Kansas-Nebraska Act

PO 2. Determine the significance of the following events of the Civil War:
   a. firing on Fort Sumter
   b. major battles – Bull Run, Antietam, Vicksburg, Gettysburg
   c. Enactment of the Emancipation Proclamation
   d. Sherman's march
   e. surrender at Appomattox

PO 3. Describe significance of the following individuals or groups in the Civil War:
   a. political leaders (i.e., Abraham Lincoln Jefferson Davis)
   b. military leaders (e.g., Robert E. Lee, Ulysses S. Grant, William Tecumseh Sherman, Thomas "Stonewall" Jackson)
   c. role of African-Americans
   d. role of Women

PO 4. Analyze the impact of the Civil War on the following personal, social, and economic aspects of American life:
   a. Americans fighting Americans
   b. high casualties caused by disease and the type of warfare
   c. widespread destruction of American property
   d. change in status of freed slaves
   e. value of railroads and industry

PO 5. Describe the impact of various events and movements that influenced Reconstruction:
   a. Lincoln's assassination
   b. Ku Klux Klan and the development of Jim Crow laws
   c. Freedmen's Bureau
   d. Civil War Constitutional Amendments
   e. Industrialization

PO 6. Describe the basic provisions of the Thirteenth, Fourteenth, and Fifteenth Amendments.

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Concept 7: Emergence of the Modern United States   1875 – 1929
Economic, social, and cultural changes transformed the U.S. into a world power.

PO 1. Examine the reasons why people emigrated from their homelands to settle in the United States during the late 19th century.

PO 2. Describe how the United States was positively and negatively affected by factors and events resulting from the arrival of a large numbers of immigrants.

PO 3. Discuss how the Industrial Revolution in the United States was supported by multiple factors (e.g. geographic security, abundant natural resources, innovations in technology, available labor, global markets).

PO 4. Discuss the relationship between immigration and industrialization
.
PO 5. Analyze the impact of industrialization on the United States:
a.   rural to urban migration
b.   factory conditions
c.   unions
d.   influence of big businesses

PO 6. Describe the following Progressive Reforms that resulted from the Industrial Revolution:
a.   labor unions
b.   Women's Suffrage
c.   trust busting
d.   conservation of natural resources
e.   Temperance Movement

PO 7. Describe how innovations of the Industrial Revolution (e.g., manufacturing, textiles, transportation, improvements) contributed to U.S. growth and expansion.

PO 8. Identify the following groups' contributions to the changing social and political structure of the United States:
   a.   labor leaders (e.g., Samuel Gompers, Mother Jones)
   b.   social reformers (e.g., Susan B. Anthony, Elizabeth Cady Stanton)
   c.   industrialists (e.g., Andrew Carnegie, John D. Rockefeller)
   d.   inventors (e.g., Thomas Edison, Henry Ford)
   e.   Populists (e.g., William Jennings Bryan)
   f.   financiers (e.g., J.P. Morgan, Jay Gould)

PO 9. Describe the following factors that fostered the growth of American imperialism during the late 19th and early 20th centuries:
   a.   desire for military strength
   b.   interest in new markets
   c.   need for inexpensive source of raw materials

PO 10. Analyze the United States' expanding role in the world during the late 19th and early 20th centuries:
a.   Spanish American War
b.   Panama Canal
c.   Alaska and Hawaii
d.   Open Door Policy
e.   China – Boxer Rebellion

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PO 11. Describe major factors in Arizona history (e.g., territorial status, mining, constitutional convention) leading to statehood.

PO 12. Describe the following events that led to United States involvement in World War I:
a. shift away from isolationism
b. sinking of the Lusitania
c. Zimmermann Telegram

PO 13. Describe important events associated with World War I:
   a. anti-German feelings in the United States
   b. passing of the Selective Service Act
   c. migration of African-Americans to the north
   d. Wilson's Fourteen Points
   e. controversy over the Treaty of Versailles

Concept 8: Great Depression and World War II   1929 – 1945
Domestic and world events, economic issues, and political conflicts redefined the role of government in the lives of U.S. citizens.

PO 1. Identify economic policies and factors (e.g., unequal distribution of income, weaknesses in the farm sector, buying on margin, stock market crash) that led to the Great Depression.

PO 2. Determine the impact of natural and manmade crises (e.g., unemployment, food lines, the Dust Bowl and the western migration of Midwest farmers) of the Great Depression.

PO 3. Describe how the following New Deal programs affected the American people:
   a. works programs (e.g., WPA, CCC, TVA)
   b. farm subsidies
   c. Social Security

PO 4. Describe how Pearl Harbor led to United States involvement in World War II.

PO 5. Describe the impact of World War II on economic recovery from the Great Depression.

Concept 9: Postwar United States   1945 – 1970s
Postwar tensions led to social change in the U.S. and to a heightened focus on foreign policy.
No performance objectives at this grade.

Concept 10: Contemporary United States   1970s – Present
Current events and issues continue to shape our nation and our involvement in the global community.
PO 1. Describe current events using information from class discussions and various resources (e.g., newspapers, magazines, television, Internet, books, maps).

PO 2. Identify the connection between current and historical events and issues studied at this grade level using information from class discussions and various resources (e.g., newspapers, magazines, television, Internet, books, maps).

PO 3. Describe how key political, social, geographic, and economic events of the late 20th century and early 21st century affected, and continue to affect, the United States.

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Strand 2: World History

A study of World History is integral for students to analyze the human experience through time, to recognize the relationships of events and people, and to interpret significant patterns, themes, ideas, beliefs, and turning points in American and world history. Students should be able to apply the lessons of World History to their lives as citizens of the United States and members of the world community.

Concept 1: Research Skills for History

Historical research is a process in which students examine topics or questions related to historical studies and/or current issues. By using primary and secondary sources effectively students obtain accurate and relevant information. An understanding of chronological order is applied to the analysis of the interrelatedness of events. These performance objectives also appear in Strand 1: American History. They are intended to be taught in conjunction with appropriate American or World History content, when applicable.

PO 1. Construct charts, graphs, and narratives using historical data.

PO 2. Interpret historical data displayed in graphs, tables, and charts.

PO 3. Construct timelines (e.g., presidents/world leaders, key events, people) of the historical era being studied.

PO 4. Formulate questions that can be answered by historical study and research.

PO 5. Describe the relationship between a primary source document and a secondary source document.

PO 6. Determine the credibility and bias of primary and secondary sources.

PO 7. Analyze cause and effect relationships between and among individuals and/or historical events.

PO 8. Describe two points of view on the same historical event.

Concept 2: Early Civilizations

The geographic, political, economic and cultural characteristics of early civilizations significantly influenced the development of later civilizations.

No performance objectives at this grade.

Concept 3: World in Transition

People of different regions developed unique civilizations and cultural identities characterized by increased interaction, societal complexity and competition.

No performance objectives at this grade.

Concept 4: Renaissance and Reformation

The rise of individualism challenged traditional western authority and belief systems resulting in a variety of new institutions, philosophical and religious ideas, and cultural and social achievements.

No performance objectives at this grade.

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SOCIAL STUDIES STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

Concept 5: Encounters and Exchange
Innovations, discoveries, exploration, and colonization accelerated contact, conflict, and interconnection among societies world wide, transforming and creating nations.

No performance objectives at this grade.

Concept 6: Age of Revolution
Intensified internal conflicts led to the radical overthrow of traditional governments and created new political and economic systems.

PO 1. Describe how innovations and inventions during the Industrial Revolution impacted industry, manufacturing, and transportation.

PO 2. Determine the effect of the Industrial Revolution on the Western World:
    a. growth of cities
    b. rise of middle class
    c. spread of industrialism
    d. rise of imperialism
    e. foundation for future technological advances
    f. labor issues

Concept 7: Age of Imperialism
Industrialized nations exerted political, economic, and social control over less developed areas of the world.

PO 1. Describe the effects of the following factors on the rise of imperialism:
    a. increased need for raw materials
    b. increased need for consumers
    c. nationalism – countries increased power

PO 2. Describe how areas in the world (e.g., Africa, India, China) were impacted by the imperialism of European countries.

PO 3. Describe how industrialization in Japan led to its rise as a world power.

PO 4. Describe the impact of American interests in the following areas during the late 19th century and the early 20th century:
    a. Philippines, Cuba, Puerto Rico and the Spanish American War
    b. China and the Boxer Rebellion
    c. Colombia and the building of the Panama Canal
    d. Hawaiian annexation

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SOCIAL STUDIES STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

Concept 8: World at War

Global events, economic issues and political ideologies ignited tensions leading to worldwide military conflagrations and diplomatic confrontations in a context of development and change.

PO 1. Explain how the following world movements led to World War I:
   a. militarism
   b. imperialism
   c. nationalism
   d. formation of alliances

PO 2. Summarize the outcomes of World War I:
   a. Treaty of Versailles (e.g., restrictions on Germany, end of the Ottoman Empire, redrawing of European boundaries)
   b. economic issues (e.g., national debt, spread of socialism)

PO 3. Describe the rise of totalitarianism in Europe following World War I:
   a. Italy under Mussolini
   b. Germany under Hitler
   c. Soviet Union under Stalin

Concept 9: Contemporary World

The nations of the contemporary world are shaped by their cultural and political past. Current events, developments and issues continue to shape the global community.

PO 1. Describe current events using information from class discussions and various resources (e.g., newspapers, magazines, television, Internet, books, maps).

PO 2. Identify the connection between current and historical events and issues identified in Concept 8 above using information from class discussions and various resources (e.g., newspapers, magazines, television, Internet, books, maps).

PO 3. Analyze how world events of the late 20th century and early 21st century (e.g., terrorism, globalization, conflicts, interdependence, natural disasters, advancements in science and technology, environmental issues) affected, and continue to affect, the social, political, geographic, and economic climate of the world.

PO 4. Compare the economic, political, and social aspects of a country identified in Concept 8 above during the first half of the 20th century to its contemporary economic, political, and social aspects.

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SOCIAL STUDIES STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

Strand 3: Civics/Government

The goal of the civics strand is to develop the requisite knowledge and skills for informed, responsible participation in public life; to ensure, through instruction, that students understand the essentials, source, and history of the constitutions of the United States and Arizona, American institutions and ideals (ARS 15-710). Students will understand the foundations, principles, and institutional practices of the United States as a representative democracy and constitutional republic. They will understand the importance of each person as an individual with human and civil rights and our shared heritage in the United States. Students will understand politics, government, and the responsibilities of good citizenship. Citizenship skills include the capacity to influence policies and decisions by clearly communicating interests and the ability to build coalitions through negotiation, compromise, and consensus. In addition, students will learn that the United States influences and is influenced by global interaction.

Concept 1: Foundations of Government
The United States democracy is based on principles and ideals that are embodied by symbols, people and documents.

PO 1. Analyze the significance of the principles and ideals of the following documents:
- a. Bill of Rights (as related to specific time periods)
- b. Emancipation Proclamation

PO 2. Analyze Arizona's transition from territory to statehood:
- a. locations of capital
- b. founding people
- c. Arizona's constitution

Concept 2: Structure of Government
The United States structure of government is characterized by the separation and balance of powers.

PO 1. Describe how the powers of checks and balances are used in the following:
- a. impeachment
- b. declaring war
- c. treaties
- d. veto
- e. judicial review

Concept 3: Functions of Government
Laws and policies are developed to govern, protect, and promote the well-being of the people.

PO 1. Analyze the significance of the following judicial decisions:
- a. Dred Scott
- b. Plessy v. Ferguson
- c. Scopes Trial

PO 2. Identify the government's role in progressive reforms (e.g., women's suffrage, labor unions, temperance movement, civil rights).

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Concept 4: Rights, Responsibilities, and Roles of Citizenship

The rights, responsibilities and practices of United States citizenship are founded in the Constitution and the nation's history.

PO 1. Describe the benefits of community service.

PO 2. Discuss the character traits (e.g., respect, responsibility, fairness, involvement) that are important to the preservation and improvement of constitutional democracy in the United States

PO 3. Describe the importance of citizens being actively involved in the democratic process (i.e., voting, student government, involvement in political decision making, analyzing issues, petitioning public officials).

PO 4. Explain the obligations and responsibilities of citizenship:
  a. upholding the Constitution
  b. obeying the law
  c. paying taxes
  d. registering for selective service
  e. jury duty

PO 5. Describe the impact of Constitutional Amendments and laws (i.e., Thirteenth, Fourteenth, Fifteenth, Eighteenth, Nineteenth, and Twenty-first Amendments, Jim Crow Laws, Black Codes, Dawes Act) that came about during the historical time periods studied.

Concept 5: Government Systems of the World

Different governmental systems exist throughout the world. The United States influences and is influenced by global interactions.

PO 1. Discuss how negotiations with foreign governments have led to the development of foreign policy initiatives (e.g., Treaty of Versailles, Fourteen Points, League of Nations).

PO 2. Compare different types of governments:
  a. dictatorship
  b. totalitarian
  c. monarchies

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Strand 4: Geography

The goal of the geography strand is to provide an understanding of the human and physical characteristics of the Earth's places and regions and how people of different cultural backgrounds interact with their environment. Geographic reasoning is a way of studying human and natural features within a spatial perspective. Through the study of geography, students will be able to understand local, national, regional, and global issues. Students will interpret 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 enhance students' understanding of history, civics, and economics.

Concept 1: The World in Spatial Terms
The spatial perspective and associated geographic tools are used to organize and interpret information about people, places and environments.

PO 1. Construct maps, charts, and graphs to display geographic information.

PO 2. Identify purposes and differences of maps, globes, aerial photographs, charts, and satellite images.

PO 3. Interpret maps, charts, and geographic databases using geographic information.

PO 4. Locate physical and cultural features (e.g., continents, cities, countries, significant waterways, mountain ranges, climate zones, major water bodies, landforms) throughout the world.

PO 5. Interpret thematic maps, graphs, charts, and databases depicting various aspects of the United States and world regions. (Apply to regions studied.)

Concept 2: Places and Regions
Places and regions have distinct physical and cultural characteristics.

PO 1. Describe the human and physical characteristics of places and regions.

PO 2. Explain the concept of regions and why they change.

PO 3. Compare the historical and contemporary interactions among people in different places and regions.

PO 4. Describe how a place changes over time. (Connect with content studied.)

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SOCIAL STUDIES STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

Concept 3: Physical Systems

Physical processes shape the Earth and interact with plant and animal life to create, sustain, and modify ecosystems. These processes affect the distribution of resources and economic development. Science Strands are summarized as they apply to Social Studies content in Grades K-8. In High School, the Performance Objectives are a summary of skills and content for grades 9 -12. These concepts are reinforced in Social Studies classes, but assessed through Science.

(Science Strands are summarized below as they apply to Social Studies content in Grades K-8. These concepts are reinforced in Social Studies classes, but assessed through Science.)

Connect with:

Science Strand 3 Concept 1 Analyze environmental benefits and risks of human interactions.

Science Strand 4 Concept 3 Analyze relationships in the environment (food chains, food webs, carrying capacity, problems associated with population growth, environmental factors) affecting living organisms.

Science Strand 6 Concept 1 Describe the basic properties of earth materials (rocks, fossils, layers of the earth) and how change over time is estimated.

Science Strand 6 Concept 2 Relate plate tectonics to the resulting landforms and earthquakes.

Science Strand 6 Concept 3 Explain the relationships between the Earth and other objects in the solar system.

Concept 4: Human Systems

Human cultures, their nature, and distribution affect societies and the Earth.

PO 1. Discuss the implications of the demographic structure of places and regions.

PO 2. Describe the push and pull factors (e.g., need for raw materials, enslavement, employment opportunities, impact of war, religious freedom, political freedom) that cause human migrations.

PO 3. Describe the effects of human migration (e.g., imperialism, quota system, changing of political boundaries, multiculturalism) in the U.S. and regions of the world.

PO 4. Analyze how social (e.g., family), physical (e.g., good climate, farmland, water, minerals), and economic (e.g., jobs) resources influence where human populations choose to live.

PO 5. Analyze the effects of settlement (e.g., quality of life, transportation, population density) on places.

PO 6. Describe the distributions and patterns of cultural characteristics (e.g., religions, language, standards of living) over time.

PO 7. Describe the factors (e.g., nearness to transportation routes, markets, raw materials, labor force) that influence the location, distribution and interrelationships of economic activities in different places and world regions.

PO 8. Explain how cooperation and conflict contribute to political, economic, and social activities.

PO 9. Identify cultural aspects (e.g., literacy rates, occupations, property rights) based on social and political factors.

PO 10. Describe how changes in technology, transportation, communication, and resources affect the location of economic activities in places and world regions.

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Concept 5: Environment and Society

Human and environmental interactions are interdependent upon one another. Humans interact with the environment- they depend upon it, they modify it; and they adapt to it. The health and well-being of all humans depends upon an understanding of the interconnections and interdependence of human and physical systems.

PO 1. Identify the physical processes (e.g., conservation of natural resources, mining, water distribution in Arizona) that influence the formation and location of resources.

PO 2. Describe the consequences of natural hazards (e.g., Dust Bowl hurricanes, droughts, earthquakes).

PO 3. Describe how humans modify environments (e.g., conservation, deforestation, dams) and adapt to the environment.

PO 4. Describe the positive and negative outcomes of human modification on the environment.

PO 5. Explain how modification in one place (e.g., canals, dams, farming techniques, industrialization) often leads to changes in other locations.

PO 6. Describe the ways human population growth can affect environments and the capacity of environments to support populations.

PO 7. Compare different points of view and research on environmental issues (e.g., land use, natural resources, wildlife, biomes).

Concept 6: Geographic Applications

Geographic thinking (asking and answering geographic questions) is used to understand spatial patterns of the past, the present, and to plan for the future.

PO 1. Describe ways geographic features and conditions influence history.
(Connect to time periods studied as well as current events.)

PO 2. Describe how environments (e.g., Sun Belt, urban areas) influence living conditions.

PO 3. *Use geographic knowledge and skills (e.g., recognizing patterns, mapping, graphing) when discussing current events.*

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SOCIAL STUDIES STANDARD ARTICULATED BY GRADE LEVEL
GRADE 7

Strand 5: Economics

The goal of the economics strand is to enable students to make reasoned judgments about both personal economic questions and broader questions of economic policy. Students will develop an economic way of thinking and problem solving 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 will prepare students to weigh both short-term and long-term effects of decisions as well as possible unintended consequences. The study of economics explains historical developments and patterns, the results of trade, and the distribution of income and wealth in local, regional, national, and world economies. Students will be able to analyze current issues and public policies and to understand the complex relationships among economic, political, and cultural systems.

Concept 1: Foundations of Economics
The foundations of economics are the application of basic economic concepts and decision-making skills. This includes scarcity and the different methods of allocation of goods and services.

PO 1. Explain how limited resources and unlimited human wants cause people to choose some things and give up others.

PO 2. Analyze how scarcity, opportunity costs, and trade-offs influence decision making.

PO 3. Identify how governments and businesses make choices based on the availability of resources.

PO 4. Describe the characteristics of a market economy:
   a. property rights
   b. freedom of enterprise
   c. competition
   d. consumer choice
   e. limited role of government

Concept 2: Microeconomics
Microeconomics examines the costs and benefits of economic choices relating to individuals, markets and industries, and governmental policies.

PO 1. Identify the functions and relationships among various institutions (e.g., business firms, banks, government agencies, labor unions, corporations) that make up an economic system.

PO 2. Describe how (private) investment in human capital such as health (e.g. immunizations), education (e.g., college), and training of people (e.g., on the job experience), leads to economic growth.

PO 3. Describe how investment in physical capital (e.g., factories, machinery, new technology) leads to economic growth**.**

PO 4. Describe the role of entrepreneurs (e.g., Carnegie, Ford, Rockefeller, J. P. Morgan, Vanderbilt) in the free enterprise system.

PO 5. Describe the function of private business in producing goods and services.

PO 6. Describe how the interaction between buyers and sellers determines market prices.

PO 7. Explain how the (unequal) distribution of income affects public policy and standards of living.

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PO 8. Describe the government's investment in human capital:
    a.   health
    b.   education
    c.   training of people

PO 9. Describe the government's investment in physical capital (e.g., NASA, transportation).

PO 10. Describe the government's role in economic recovery for the individual (e.g., farm subsidy, securities, Social Security, exchange regulations).

Concept 3: Macroeconomics
Macroeconomics examines the costs and benefits of economic choices made at a societal level and how those choices affect overall economic well being.

PO 1. Describe the effects of inflation (e.g., higher prices, rising interest rates, less business activity) on society.

PO 2. Analyze the effects (e.g., inflation, unemployment) of the Great Depression.

PO 3. Analyze the government's role (e.g., FDIC, Securities and Exchange Commission) in national economic recovery.

PO 4. Describe how scarcity influences the choices (e.g., war time rationing, women in the work force, reallocation of resources) made by governments and businesses.

Concept 4: Global Economics
Patterns of global interaction and economic development vary due to different economic systems and institutions that exist throughout the world.

PO 1. Explain how voluntary exchange benefits buyers and sellers.

PO 2. Identify the patterns of economic interaction (e.g., national debt, balance of trade) between countries.

Concept 5: Personal Finance
Decision-making skills foster a person's individual standard of living. Using information wisely leads to better informed decisions as consumers, workers, investors and effective participants in society.

PO 1. Describe how scarcity influenced the historical times studied.

PO 2. Describe how scarcity influences personal financial choices (e.g., buying on-margin, budgeting, saving, investing, credit).

PO 3. Describe how income for most people is determined by the value of the goods and services they sell.

PO 4. Describe types of personal investments (e.g., saving accounts, stocks, bonds).

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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

Technology Education Standards
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*)

- **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 in appropriate 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 guidelines3 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)

[3] 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
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.

> *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*

- **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*
> *See: Science 3SC in its entirety and Workplace Skills 3WP in its entirety*

- **6T-E1. Determine when technology is useful and select and use the appropriate tools and technology resources to solve problems**

    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)

Workplace Skills Standards 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.

Workplace Skills Standards
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 non-verbal 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

- **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. The Proficiency and Distinction Levels include additional references to what students need to know and do as it relates to the workplace.*

- **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 (e.g., 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 (e.g., 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 resume
  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