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#### ABSTRACT

This publication from the Department of Defense Education Activity (DoDEA) is designed to inform parents about the department's Grade Six curriculum standards in four major areas: language arts/reading, mathematics, science, and social studies. The integrated language arts/reading standards emphasize the student's evaluation of the effect of common stereotypes and propaganda techniques. Students will cite evidence to support generalizations in all content areas. They will write to summarize and to review prior learning. They will explain the role of cultural and historical periods on a piece of literature. Mathematics standards enable students to identify fractions and decimals and use them to add, subtract, multiply, and divide. Students will solve problems involving geometry, measurement, and probability. They will explore algebraic thinking and solve simple algebraic equations. The science standards include the study and use of methods for testing the validity of predictions and conclusions. Students will compare and contrast the relationship among living things. They will explore the concept of change through the study of transformations of energy, matter, forces, electricity, and magnetism. The social studies standards build on the study of the world and include lessons relative to early civilizations and to the countries of the world. Students will compare ancient civilizations and cultures, create various maps, locate various geographic features and explain their relationships within the ecosystem. They will describe ways that historical events have influenced national and global settings. (KB)



# GRADE SIX

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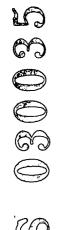


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Department of Defense Education Activity





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#### **Message From The Director**

#### Dear DoDEA Parents:

DoDEA is committed to providing your children with the best education possible. One of the ways that we intend to accomplish this is with an effective curriculum of high quality. DoDEA has developed rigorous curriculum standards aligned with national guidelines and with the standards of the finest school systems throughout the Nation. Even with the most rigorous curriculum standards, it is the understanding and support of parents that will help make our schools and our students successful. At DoDEA, we want parents to know what educational standards have been established in the four major subject areas of Language Arts/Reading, Mathematics, Science, and Social Studies.

This publication is designed to inform you about what your children are learning in these four major curriculum areas for this grade level. This publication provides you with samples of what students are learning and what they should know and be able to do when they complete this grade. This is only a sample of the complete curriculum standards that are used by teachers to determine instruction in the classroom. To see the entire curriculum in these four areas, consult the teacher or the school principal.

I hope that you find this publication informative in assisting us in the education of your child. Working together we can ensure your child's success now and well into the future.

Ray Tolleson Interim Director

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#### **STANDARDS**

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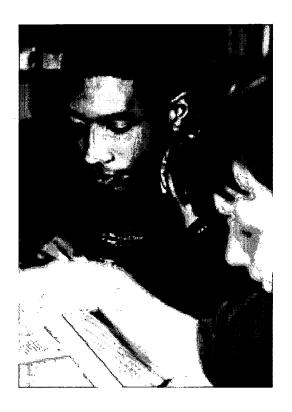
#### INTRODUCTION

Language arts/reading standards emphasize the student's evaluation of the effect of common stereotypes and propaganda techniques. Students cite evidence to support generalizations in all content areas. They write to summarize and to review prior learning. They explain the role of cultural and historical periods on a piece of literature. The social studies standards build on the study of the world and include lessons relative to early civilizations to the countries of the world. Students compare ancient civilizations and cultures, create various maps, locate various geographic features and explain their relationships within the ecosystem. They describe ways that historical events have influenced national and global settings.

The mathematics standards enable students to identify fractions and decimals and use them to add, subtract, multiply, and divide. Students solve problems involving geometry, measurement, and probability. They explore algebraic thinking and solve simple algebraic equations. Science standards include the study and use of methods for testing the validity of predictions and conclusions. The relationship among living things is contrasted and compared. The concept of change is explored through the study of transformations of energy, matter, forces, electricity, and magnetism.



## GRADE





#### Reading

Students judge the effect of common stereotypes and propaganda techniques. They give evidence to support generalizations in all academic areas. Students will:

- Increase vocabulary through interactions with media and technological resources
- Explain author's choice of exact words
- Increase personal vocabulary through reading experiences
- Explain meaning of abstract words such as "love," "peace," and "beauty"
- Form generalizations
- Evaluate the effect of common stereotypes and propaganda techniques
- Cite evidence to support generalizations in all content areas

#### Writing

Students use process writing to reflect on experiences and ideas, and use note taking in their academic work. Students will:

- Use technological aids throughout the writing process as appropriate
- Develop an idea into a complete piece with a distinct beginning, middle, and end
- Use a variety of lead sentences, sentence patterns, audiences, and purposes in creating first draft
- Write frequently for practical and academic purposes
- Write to review personal experiences and to reflect on ideas
- Use note-taking strategies

#### Listening, Speaking, and Viewing

Students present a personal point of view on a complex subject. They paraphrase information clearly and concisely. Students will:

• Give detailed, well-organized oral reports on information learned



- Discuss variations of vocabulary in different dialects, idioms, and levels of usage
- Write responses to questions heard
- Paraphrase information
- Plan and present a personal point of view on a complex subject, using technology as appropriate

#### Literature

Students explain the characteristics of literary types and identify universal literary themes. Students will:

- Explain cultural differences of various types of literature
- Identify climax and resolution of a story
- Explain story themes
- Understand that a single text may bring forth a variety of responses
- Identify universal themes
- Explain the characteristics of various types of literature
- Respond to increasingly complex literature
- Use specific aspects of literature to understand better own and others' thoughts

#### The English Language

Students master conventional spelling, using spelling rules and exceptions, and use correct language usage and structure when appropriate. Students will:

- Understand and respect the cultural diversities in our language
- Explain the history of selected words
- Develop specific vocabulary to suit different purposes; i.e., scientific, technological, content specific
- Identify specific ways in which language varies
- Show evidence of mastery of conventional spelling, using phonetic rules and exceptions
- Use correct language usage and syntax to convey a specific message





#### **Accessing and Processing Information**

Students use electronic research tools and use multimedia technology to assess their work. Students will:

- Use parents and community members as resources for learning
- Use tools, procedures, and language to organize and present information orally and visually using text, artistic elements, lists, diagrams, tables, graphs, and maps
- Use available technology to research and produce an end product that is accurately documented
- Use multimedia technology as a tool for self-assessment; e.g., video portfolios, videos, and audio recordings
- Use electronic research; e.g., CD ROMs, Internet and World Wide Web







#### Mathematics as Problem Solving

Students should be engaged in problem solving activities so they can show proficiency in being able to:

• Solve multistep realistic problems using a variety of logical processes and problem solving strategies such as writing lists, constructing charts, tables, and graphs, looking for patterns, or using concrete objects, etc.

#### **Mathematics as Communication**

Students should experience numerous opportunities for communication so they can show proficiency in being able to:

- Express, discuss, and justify mathematical processes in oral and written form
- Generate definitions and explanations of mathematical terms

#### **Mathematics as Reasoning**

Reasoning is throughout the mathematics curriculum so that students can show proficiency in being able to:

- Determine and discuss similarities and differences in patterns
- Construct and draw similar geometric figures

#### **Mathematical Connections**

Students should have opportunities to make connections so they can show proficiency in being able to:

- Discuss the use of math in the media
- Interpret data from science experiments and predict future outcomes



#### **Computation and Estimation**

Students should develop computation and estimation skills so they can show proficiency in being able to:

- Estimate the amount of money spent in everyday living using tables, graphs, or charts
- Solve problems in which the remainder influences the reasonableness of the answer

#### Number Sense, Number Operations, and Number Relationships

Students should develop number and number relationships so they can show proficiency in being able to:

- Perform arithmetic operations with positive and negative numbers
- Evaluate powers of numbers
- Solve word problems that involve writing proportions and solving for unknown quantities

#### Patterns, Relationships, and Functions

Students should study and explore patterns, relationships, and functions so they can be able to:

- Complete patterns in a variety of sequences and operations
- Describe and graph the relationship between two variables
- Write rules or formulas to express the patterns illustrated in input/output tables

#### **Probability and Statistics**

Students should experience data analysis and probability so they can show proficiency in being able to:

- Interpret charts and tables and make inferences based on the information
- Find the mean, mode, and median for collected data
- Combine concrete objects to form all possible combinations from 4 object sets



#### Geometry

Students will study one, two, and three dimensional geometry so they can be able to:

- Estimate the number of degrees in given angles and measure the angles and construct, measure, and bisect angles using protractors and compasses
- Identify, name, and discuss similarities and differences in different types of triangles
- Calculate the radii, diameters, circumferences and areas of circles when one of the measurements is given

#### Measurement

Students will have extensive concrete experiences using measurement so they can be able to:

- Choose appropriate metric or English units to determine the length, width, volume, area, or weight of objects
- Use scales in map reading

#### Algebra

Students should experience algebraic concepts and processes so they can be able to:

- Solve simple linear equations
- Graph and identify ordered pairs (points) in a coordinate system





#### **Inquiry Skills**

Students will design and conduct scientific investigations. Students will:

- Identify questions that can be answered through scientific investigations
- Use appropriate tools, technology, and techniques to gather, analyze, and interpret data
- Demonstrate effective methods to organize and display science data and concepts

#### **Physical Science**

Students will apply the principles of motion and forces, and explain transfer of energy. Students will:

- Design and conduct investigations to calculate the speed (rate of travel) of moving objects
- Demonstrate how energy is transferred (examples: electrical energy to mechanical energy, mechanical energy to electrical energy)
- Construct both series and parallel circuits and trace the flow of electrical energy through each

#### Life Science

Students will explain the relationship between structure and function, reproduction, and heredity, and describe the diversity and adaptations of organisms in an ecosystem. Students will:

- Explain the structures and functions of the circulatory and respiratory systems
- Compare traits that are inherited with traits that are learned
- Describe how environmental changes may cause endangerment and extinction



#### Earth and Space Science

Students will explain structures of the earth and its position in the solar system. Students will:

- Design and construct a model to explain the water cycle
- Explain the importance of the oceans in forming weather patterns and how this affects climate
- Create a 3 dimensional model to demonstrate the relationships of earth to the sun and moon

#### Science and Technology

Students will demonstrate ability to design and build things, and explain how science and technology are interdependent. Students will:

- Identify products or examples of technology that are commonly used
- Describe how technology is constantly changing (examples: computers, medical equipment, automobiles)

#### Science in Personal and Social Perspectives

Students will practice safety and conduct risk/benefit analysis. Students will:

- Demonstrate personal and group safety when engaged in science activities
- Demonstrate the safe use of electricity in the home and school
- Evaluate the risks, costs, and benefits of human decisions related to natural hazards (examples: fires, earthquakes, floods, and tornadoes)

#### History and Nature of Science

Students will understand that science is a human endeavor. Students will:

- Describe methods that scientists use to develop and test their explanations
- Describe the scientific contributions of ancient societies (examples: Egyptians, Chinese, and Arabs)



#### Citizenship

Social studies programs should include experiences that provide for the study of ideals, principles, and practices of citizenship in a democratic republic, so that the learner can:

- Participate in activities with a variety of persons from different backgrounds
- Participate in activities to strengthen the common good by advising others of possible options for citizen action

#### Culture

Social studies programs should include experiences that provide for the study of culture and cultural diversity, so that the learner can:

- Explain conditions of a given culture that are a direct influence of religion
- Describe how cultural contributions are passed from one group to the next
- Identify the cultural contributions of ethnic individuals and groups

#### Time, Continuity, and Change

Social studies programs should include experiences that provide for the study of ways human beings view themselves in and over time, so that the learner can:

- Use sources of historical information
- Identify the contribution of ancient civilizations to the development of world civilizations
- Analyze social change resulting from social conflict

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#### **Space and Place**

Social studies programs should include experiences that provide for the study of space and place, so that the learner can:

- Use the following map skills: keys and symbols, directions, latitude and longitude, scales, elevation, climate, land and water formations and Great Circles
- Describe how geographic factors have influenced historical events, patterns of change, and daily life for specified regions

#### **Individual Development and Identity**

Social studies programs should include experiences that provide for the study of individual development and identity, so that the learner can:

- Identify how controls and changes directed by society influence personal growth
- Describe the role of self concept in conflict within one's beliefs and values
- Describe how regional, ethnic, and national cultures influence individual development

#### Individual, Groups, and Institutions

Social studies programs should provide for the study of interaction among individuals, groups, and institutions, so that the learner can:

- Identify major groups and institutions that have played important roles in the development of civilizations
- Explain concepts such as role, status, and social class in describing the actions of individuals and social groups

#### Production, Distribution, and Consumption

Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services, so that the learner can:

• Discuss jobs that have been created because of economic, technological, and social changes



Give examples of some resources used to meet economic needs

#### Power, Authority, and Governance

Social studies programs should include experiences that provide for the study of how people create and change structures of power, authority, and governance, so that the learner can:

- Identify the historic events that have led to an increase in people's participation in government
- Explain the need for laws and policies to govern scientific and technological applications

#### Science, Technology, and Society

Social studies programs should include experiences that provide for the study of relationships among science, technology, and society, so that the learner can:

- Describe the changes that have occurred in individuals and societies as a result of technological and scientific change
- Describe how science and technology have changed society's perceptions of the human and natural world

#### **Global Connections**

Social studies programs should include experiences that provide for the study of global connections and interdependence, so that the learner can:

 Describe how cultural elements such as language, art, music, and belief systems can both connect people and cause misunderstandings





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