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A Guide for Parents and Families About What Your SIXTH GRADER Should Be Learning In School This Year

SC EDUCATION OVERSIGHT COMMITTEE

This guide shares important information about the South Carolina Academic Standards. These standards outline state requirements for your child's learning program and what students across the state should be able to do in certain subjects.

A good educational system provides many tools that help children learn. Academic standards are useful for making sure:

- teachers know what is to be taught;
- children know what is to be learned; and
- parents and the public can determine how well the concepts are being learned.

The following pages provide information about the South Carolina Academic Standards for mathematics, English language arts, science and social studies for Sixth Grade. The information can help you become familiar with what your child is learning at school and may include activities to reinforce and support your child's learning, selected book titles for additional reading, and Web site addresses for extended learning. Because sites change, please preview before students begin work. This version does not include every standard taught in Sixth Grade. The complete South Carolina Academic Standards for each subject area can be found at www.ed.sc.gov.

The state-developed test, Palmetto Assessment of State Standards (PASS), is based on the South Carolina Academic Standards. Sample PASS Test items can be viewed online at www.eoc.sc.gov/informationforeducators/TestItems.htm.

South Carolina Academic Standards

Here are seven key reasons parents should be in the know about the academic standards:

1. Standards set clear, high expectations for student achievement. Standards tell what students need to do in order to progress through school on grade level.
2. Standards guide efforts to measure student achievement. Results of tests (PASS) on grade-level academic standards show if students have learned and teachers have taught for mastery.
3. Standards promote educational equity for all. Instruction in every school in the state will be based on the same academic standards.
4. Standards help parents determine if children in South Carolina are taught the same subject content as children across the nation. South Carolina Academic Standards have been compared with and matched to national standards as well as standards of other states to make sure that they are challenging.
5. Standards inform parents about the academic expectations for their child. Standards give parents more specific information for helping their child at home. Parents no longer have to guess the type of help their child needs to do better in school.
6. Standards enable parents to participate more actively in parent/teacher conferences. Knowledge of the academic standards helps parents understand more about what their child is learning and what they can do at each grade level. Parents are able to have conversations with teachers about student progress in specific areas and understand more completely the progress of their child.
7. Standards help parents see how the current grade level expectations are related to successive years' expectations. Parents are able to see how their child's knowledge is growing from one year to the next.

WEB RESOURCES

South Carolina Department of Education (SCDE):
www.ed.sc.gov

South Carolina Education Oversight Committee (EOC):
www.eoc.sc.gov

South Carolina Education Television (SCETV):
www.knowitall.org

Sample PASS Test Items:
www.eoc.sc.gov/informationforeducators/TestItems.htm

ENGLISH LANGUAGE ARTS

Students should be able to:

Reading

- Explain how cause-and-effect relationships impact characters, setting, and conflict in stories
- Explain how an author uses flashback and foreshadowing
- Compare and contrast the main idea in multiple texts
- Write, act, draw, and make presentations in response to reading
- Describe the use of stage directions and monologues in plays
- Read independently
- Analyze the central idea in nonfiction texts
- Describe how authors show bias, (for example, leaving out relevant facts or not supporting their opinions)
- Understand the use of propaganda techniques, including bandwagon and testimonials
- Analyze the meaning of words by using knowledge of their Greek or Latin parts
- Distinguish between what a word really means (the dictionary definition) and what people think a word means

Writing

- Use a logical structure to organize writing
- Create a variety of sentences by using phases and clauses
- Use pronouns correctly, including indefinite pronouns (for example each, anybody, and either)
- Use a consistent verb tense within one piece of writing
- Combine two sentences into one sentence by using a semicolon
- Use a comma to separate introductory or non-essential information from the main sentence
- Use revision and editing strategies to correct and improve writing
- Create brochures, pamphlets, and reports
- Create advertisements or commercial scripts to persuade the audience

Research

- Use direct quotations, paraphrases, or summaries to incorporate information from other sources into writing or speaking
- Use a variety of print or electronic sources including supporting graphics into written or oral presentations
- Create research projects by asking guiding questions, using a variety of resources, and organizing information

Activities

- Encourage your child to interview older relatives or neighbors about a topic of interest
- Have your child orally persuade you to do something
- Gather information about a topic using a variety of sources. Determine which information is most useful and relevant to the topic
- Read books aloud to your child discussing the conflict found in a story
- Select a historical fiction novel (a novel based on a particular time in history) your child finds interesting. Compare the book to an encyclopedia or Internet account of that period in time
- Create a television show or movie with friends
- Write a newspaper or magazine article about your family
- Have your child create a brochure about your neighborhood
- When watching commercials or reading advertisements, identify propaganda techniques including testimonials and bandwagon
- Compare several books about the same topic
- Take your child to the local theater
- Point out foreshadowing or flashback to your child when watching television or reading together
- Have your child read a newspaper or magazine article and summarize what he/she reads
- Have your child analyze advertisements on television or in magazines to determine the persuasive techniques used

Books

- Creech, Sharon. *Heartbeat*
- Curtis, Christopher Paul. *The Watsons Go to Birmingham*
- Haddix, Margaret. *Running Out of Time*
- Levine, Gail. *Ella Enchanted*
- Ryan, Pam. *Esperanza Rising*
- Young, Ronder Thomas. *Moving Mama to Town*
- Zindel, Paul. *Raptor*

Web Sites

- National Parent Teacher Association – http://www.pta.org
- Surfing the Net with Kids – http://www.surfnetkids.com
- United States Department of Education – http://www.ed.gov/parents
- Internet Public Library – http://www.ipl.org/div/kidspace/
- Stories from the Web – http://www.storiesfromtheweb.org

MATHEMATICS

Students should be able to:

Numbers and Operations

- Understand the concepts of percentages and integers (the set of whole numbers and their opposites)
- Compare rational numbers (fractions) and percentages
- Apply an algorithm (method to solve a problem) to add and subtract fractions
- Generate strategies to multiply and divide fractions and decimals
- Understand the concepts of exponents and powers of ten

Algebra

- Apply order of operations
- Use inverse operations to solve one-step equations

Geometry

- Represent location of points in all four quadrants
- Construct two-dimensional shapes with rotational symmetry (when a shape has rotational symmetry it can be turned less than 360 degrees about a point and still fit exactly on itself)
- Classify shapes as similar
- Identify pairs of angles that are complementary (sum of angles is 90 degrees) or supplementary (sum of angles is 180 degrees)

Measurement

- Apply strategies and formulas to approximate circumference and area of a circle
- Apply strategies and procedures to estimate and determine perimeters and areas of irregular shapes
- Use proportions to determine unit rates
- Use a scale to determine distance

Data Analysis and Probability

- Apply procedures to calculate the probability of complementary events

Activities:

Have your child:

- Use the newspaper to find examples of percent-off sales
- Compare the fraction 1/2 to 33% using the symbols <, >, or =. Explain the answer using a real-world example, such as an hour or a dollar
- Play an order of operations game. Label several index cards with one operation, symbol or number per card, including parentheses and exponents (e.g., x , +, 3, ^{2}, –). Separate the cards into operations and numbers, shuffle and turn upside down. Select a few cards from each pile. Lay out the operations and the numbers to make an expression. Calculate the result using the correct order of operations
- Make a grid on a piece of graph paper. Represent the point (-3, 2) by plotting it on the grid. Explain why it is not the same as (2, -3)
- Look at a map of your home state. Use the scale in the map legend to calculate the distance between the city that you live in and any other city in the state

Books:

- Dryk, Marti. *The Fraction Family Heads West*
- Gonzales, Nancy A., Merle Mitchell and Alexander P. Stone. *Mathematical History: Activities, Stories, Puzzles, and Games, 2nd ed.*
- Kawamura, Miyuki. *Polyhedron Origami for Beginners*
- *Math on Call.* (Published by Great Source Education Group; 1-800-289-4490)
- Wyatt, Valerie. *The Math Book for Girls and Other Beings Who Count*

Web Sites:

- www.figurethis.org – Challenging and engaging activities for middle school students

SCIENCE

Students should be able to:

Inquiry

- Use appropriate tools and instruments safely and accurately when conducting a controlled scientific investigation
- Differentiate between observation and inference during the analysis and interpretation of data
- Classify organisms, objects, and materials according to their physical characteristics by using a dichotomous key
- Use a technological design process to plan and produce a solution to a problem or a product (including identifying a problem, designing a solution or a product, implementing the design, and evaluating the solution or the product)
- Use appropriate safety procedures when conducting investigations

Structures, Processes and Responses of Plants

- Summarize the characteristics that all organisms
- Recognize the hierarchical structure of the classification (taxonomy) of organisms
- Compare the characteristic structures of various groups of plants
- Summarize the basic functions of the structures of a flowering plant for defense, survival, and reproduction
- Summarize each process in the life cycle of flowering plants
- Differentiate between the processes of sexual and asexual reproduction of flowering plants
- Summarize the processes required for plant survival
- Explain how plants respond to external stimuli
- Explain how disease-causing fungi can affect plants

Structures, Processes, and Responses of Animals

- Compare the characteristic structures of invertebrate animals and vertebrate animals
- Summarize the basic functions of the structures of animals that allow them to defend themselves, to move, and to obtain resources
- Compare the response that a warm-blooded animal makes to a fluctuation in environmental temperature with the response that a cold-blooded animal makes to such a fluctuation
- Explain how environmental stimuli cause physical responses in animals
- Illustrate animal behavioral responses to environmental stimuli
- Summarize how the internal stimuli of animals ensure their survival
- Compare learned to inherited behaviors in animals

Earth's Atmosphere and Weather

- Compare the composition and structure of Earth's atmospheric layers
- Summarize the interrelationships among the dynamic processes of the water cycle
- Classify shapes and types of clouds according to elevation and their associated weather conditions and patterns
- Summarize the relationship of the movement of air masses, high and low pressure systems, and frontal boundaries to storms and other weather conditions
- Use appropriate instruments and tools to collect weather data
- Predict weather conditions and patterns based on weather data collected from direct observations and measurements, weather maps, satellites, and radar
- Explain how solar energy affects Earth's atmosphere and surface (land and water)
- Explain how convection affects weather patterns and climate
- Explain the influence of global winds and the jet stream on weather and climatic conditions

Conservation of Energy

- Identify the sources and properties of heat, solar, chemical, mechanical, and electrical energy
- Explain how energy can be transformed from one form to another in accordance with the law of conservation of energy
- Explain how magnetism and electricity are interrelated by using descriptions, models, and diagrams of electromagnets, generators and simple electrical motors
- Illustrate energy transformations in electrical circuits
- Illustrate the directional transfer of heat energy through convection, radiation, and conduction
- Recognize that energy is the ability to do work
- Explain how the design of simple machines helps reduce the amount of force required to do work
- Illustrate ways that simple machines exist in common tools and in complex machines

Activities:

Have your child:

- Move a plant away from the light and observe with him or her how the plant responds
- Dissect several different types of flowers and seeds and identify the structures and functions in each part
- Observe various examples of vertebrate animals (fish, amphibians, reptiles, birds, and mammals). Conduct Internet research or visit the local library and research the characteristics that make each of these categories similar and different (type of skin covering, how the animal bears its young, how the animal "breathes," and the environment the animal group would most likely be found)
- Collect and examine weather maps for a week, identifying temperature, air pressure, and fronts and predicting weather conditions
- Design an electromagnet (using a large nail/wire and batteries) to explore ways to make the electromagnet as strong as possible

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SOCIAL STUDIES

Students should be able to:

Ancient Cultures to 1600

- Analyze the characteristics of hunter-gatherer communities
- Explain the emergence of agriculture and its effect on early human communities
- Use maps, globes, and models to explain the role of the natural environment in shaping early civilizations
- Compare the features and contributions of civilizations in the Tigris and Euphrates, Nile, Indus, and Huang He river valleys
- Explain the role of economics in the development of early civilizations
- Compare major religions and philosophies as they emerged and expanded
- Summarize the significant features of classical Greek civilization
- Summarize the significant features of classical Roman civilization
- Explain the expansion and the decline of the Roman Empire
- Summarize the significant features of classical Indian civilization
- Summarize the significant features of classical Chinese civilization
- Explain feudalism and its relationship to the development of European nation states and monarchies
- Explain the development of English government and legal practices
- Summarize the course of the Crusades and explain their effects
- Explain the influence of the Roman Catholic Church in Europe
- Use a map to illustrate the origins and the spread of the bubonic plague and explain the impact of the plague on society
- Explain the contributions that the Byzantine Empire made to the world
- Compare the features and major contributions of the African civilizations of Ghana, Mali, and Songhai
- Summarize the features and major contributions of Chinese civilization
- Summarize the features and major contributions of Japanese civilization
- Compare the significant features and major contributions of Aztecan, Mayan, and Incan civilizations
- Summarize the characteristics of Islamic civilization and the geographic aspects of its expansion
- Summarize the origins of the Renaissance and its spread throughout Europe
- Summarize the features and contributions of the Italian Renaissance
- Explain the significance of humanism and the revival of classical learning in daily life during the Renaissance
- Identify the key figures of the Renaissance and the Reformation and their contributions
- Provide examples of developments in the Renaissance that had a lasting impact on culture, politics, and government in Europe
- Explain the principal causes and key events of the Reformation
- Use a map to illustrate the principal routes of exploration and trade between Europe, Asia, Africa, and the Americas during the age of European exploration
- Compare the incentives of the various European countries to explore and settle new lands
- Illustrate the exchange of plants, animals, diseases, and technology throughout Europe, Asia, Africa, and the Americas (known as the Columbian Exchange) and explain the effect on the people of these regions

Activities:

Have your child:

- Chart the similarities and differences of early civilizations in Egypt, Mesopotamia, India, and China
- Create a tour brochure that shows the cultural attractions of a place related to a classical civilization (Greek, Roman, Indian, Chinese)
- Create a timeline of people and events from early civilizations
- Identify items in the home that were used or invented by ancient civilizations (for example, baskets, clocks, paper, calendars)
- Label a map of the locations of Aztecan, Mayan, and Incan civilizations Discuss the geographic influences on these civilizations
- Make flashcards of important facts about African or Asian civilizations
- Read the world section of the newspaper and discuss countries related to early and/or classical civilizations
- Visit exhibits at local museums about early and/or classical civilizations
- Watch programs on public television or history channels related to early and/or civilizations. Discuss how content in these programs relates to topics being studied in school
- Write a newspaper article about the spread of the bubonic plague and its effects from the perspective of someone living then
- Write a poem about an important person of the Renaissance or Reformation
- Identify a non-native plant or animal in the local community or region. Research its origins, probable course of introduction and effects on the local environment

Books:

- Adler, Karen. *The King's Shadow*
- Caselli, Giovanni. *The Renaissance and the New World*
- Goodman, Joan Elizabeth. *The Winter Hare*
- Gravett, Christopher. *World of the Medieval Knight*
- Hill, Mary C. *The King's Messenger*
- Powell, Anton and Philip Steele. *The Greek News*

Series:

- *Cultural Atlas for Young People*
- *Eyewitness Books*
- *History of the World*

Web Sites:

- Ancient Egypt at British Museum - www.ancientegypt.co.uk
- CIA's Homepage for Kids - http://www.cia.gov/kids-page/index.html
- History for Kids - www.historyforkids.org
- Smithsonian National Museum and Natural History - www.mnh.si.edu/africanvoices
- The Knighthood, Chivalry and Tournament Resource Library - www.chronique.com
- National Geographic - www.nationalgeographic.com

SCIENCE

Continued

Books:

- Amato, Carol. *Backyard Pets: Activities for Exploring Wildlife Close to Home*
- Beller, Joel and Carl Raab. *Hands-on Science Series: Plants*
- Bundey, Nikki. *Storms and the Earth: The Science of Weather Series*
- Elsom, Derek. *Weather Explained: A Beginners Guide to the Elements*
- Galiano, Dean. *Clouds, Rain and Snow*
- Haber, Louis. *Black Pioneers of Science and Invention*
- Hickman, P. *Starting with Nature: Plant Book*
- Hickman, Pamela. *Animals and Their Mates: How Animals Attract, Fight for, and Protect Each Other*
- Kaner, Etta and Pat Stephens. *Animals at Work: How Animals Build, Dig, Fish, and Trap*
- McKinney, Barbara. *A Drop Around the World*
- Nankivell-Aston, Sally and Dorothy Jackson. *Science Experiments with Simple Machines*
- Van Cleave, Janice. *Physics for Every Kid*

Web Sites:

- AAAS Science Netlinks - www.sciencenetlinks.com
- Bill Nye, The Science Guy - www.billnye.com
- Biology4Kids - www.biology4kids.com
- Learning Network Parent Channel - www.familyeducation.com
- Physics for Kids - http://www.physics4kids.com/
- The Franklin Institute - www.fi.edu/learn
- The Weather Channel - www.weather.com/

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