2007-2008

A Guide for Parents and Families About What Your SEVENTH 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 **Seventh 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 **Seventh Grade**. The complete South Carolina Academic Standards for each subject area can be found at www.sctlc.com or at http://ed.sc.gov.

The state-developed test, Palmetto Achievement Challenge Test (PACT), is based on the South Carolina Academic Standards. The most current released PACT questions for all subject areas can be found online at http://www.ed.sc.gov/agency/offices/assessment/PACT/PACT ReleaseItems.html.

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 (PACT) 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 (SDE):
http://ed.sc.gov/agency/offices/cso/

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

South Carolina: Teaching, Learning, and Connecting (SCTLC):
www.sctlc.com

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

ENGLISH LANGUAGE ARTS

Students should be able to:

Reading

- Explain the effect that point of view has on a story
- Understand the use of metaphors throughout a piece of writing and phrases that contradict themselves
- Determine if the characters in a story change or remain the same
- Understand the use of imagery, symbolism, and irony
- Identify the theme(s) in a story
- Write, act, draw, or make a presentation in response to what is read
- Read independently for various reasons
- Draw conclusions and make inferences about information in one text or across several texts
- Understand that an author can reveal his opinion about a subject by including or leaving out relevant information
- Analyze how the use of print styles, chapter headings, and other formats impact the meaning of nonfiction texts
- Analyze the information presented in charts and graphs
- Understand that subtle meanings of words can change the meaning of a text
- Analyze the meaning of words by using knowledge of their Greek or Latin parts

Writing

- Organize writing by using planning strategies
- Use a wide variety of sentence types and lengths
- Use correct grammar, punctuation, and spelling
- Use ellipses and parentheses correctly
- Improve writing by editing and revising
- Create books, movies, product reviews, and news reports
- Write personal essays or poems about a story or issue of personal importance
- Write descriptions to include in essays
- Create persuasive writings with a stated opinion such as essays and letters to the editor

Research

- Use direct quotations, paraphrases, or summaries to incorporate information from multiple sources into writing or speaking
- Use vocabulary appropriate for a particular audience or purpose
- Use organizational strategies to prepare information for writing or speaking assignments
- Design and carry out research projects by selecting a topic, asking guiding questions, finding resources, and organizing information

Activities

- Encourage your child to keep a journal and write for extended periods of time
- Help your child select and narrow research topics by asking specific questions about topics of interest
- Access electronic encyclopedias and other reliable electronic information from a computer
- Have your child use language appropriate for different audiences and purposes
- Encourage your child to write about personal experiences and explain why they are important to him/her
- Discuss your child's opinion about a topic addressed on a television show or from something read
- Use charts or graphs, such as instructions or the television guide, to gather information
- Discuss the theme(s) of movies or books
- Discuss the characters in television shows, movies, or books and what makes them different. Discuss how a character changes or stays the same.
- Identify instances of irony when watching television shows or reading books

Books

- Bauer, Joan. *Backwater*
- Curtis, Christopher Paul. *Bud, Not Buddy*
- Freedman, Russell. *Eleanor Roosevelt: A Life of Discovery*
- Hiaasen, Carl. *Hoot*
- Korman, Gordon. *No More Dead Dogs*
- Paulsen, Gary. *Hatchet*
- Rinaldi, Ann. *Cast Two Shadows: The American Revolution in the South*
- Sachar, Louis. *Holes*
- Spinelli, Jerry. *Crash*
- Thompson, Kate. *Switchers*

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
- Stories from the Web –http:// www.storiesfromtheweb.org
- American Library Association – http://www.ala.org/ala/booklist/booklist.htm
- Internet Public Library – http://www.ipl.org/div/kidspace/

MATHEMATICS

Students should be able to:

Numbers and Operations

- Understand fractional percentages and percentages greater than 100
- Understand the concept of square roots and the inverse relationship between squaring and finding square roots of perfect squares
- Understand the meaning of absolute value (the distance between zero and a number on a number line)
- Generate strategies to add, subtract, multiply, and divide integers (the set of whole numbers and their opposites)
- Apply an algorithm (method to solve a problem) to multiply and divide fractions and decimals

Algebra

- Use inverse operations to solve two-step equations and inequalities
- Classify and explain proportional relationships

Geometry

- Translate between two-dimensional and three-dimensional representations of compound figures
- Create tessellations (completely covering a surface with no gaps or overlaps) with transformations (slide, flip, and turn) and explain the angle-measure relationships among shapes that tessellate

Measurement

- Apply strategies and formulas to determine the surface area and volume of three-dimensional shapes
- Use one-step unit analysis to convert between and within U.S. Customary System and the metric system

Data Analysis and Probability

- Apply procedures to calculate the interquartile range and the probability of mutually exclusive events

Activities:

Have your child:

- Draw a number line that has both negative and positive numbers. Explain why the distance from -3 to 0 is the same as the distance from 0 to +3.
- Plan a picnic. A given amount of money must cover the cost of food, napkins, and plastic utensils. Give examples of direct proportion (e.g., the amount of money you spend on napkins varies directly with the amount of guests you have), inverse proportion (e.g., the number of people you invite will vary inversely with the amount of food each guest will be able to eat) and non-proportion situations (e.g., the number of people who will also bring their children). Repeat the activity with a new real-world situation.
- Use a tape measure to measure the circumference and height of an empty soda can. Then use a formula to determine the surface area of the can using the measurements. Compute the surface area a second way by cutting the top and bottom of the can off and cutting the can so that it lays flat in the shape of a rectangle. Measure the sides of the rectangle and calculate its area, as well as the area of the top and bottom of the can. Compare this result with the previous calculation. This should be done with adult supervision because the cut can will have sharp edges.
- Go on a pretend shopping spree using sale papers and select as much merchandise for a given dollar amount. Please be sure to include percent discounts and sales tax.

Books:

- Barlow, Bob. *Bob Barlow's Book of Brain Boosters!*
- Fitzgerald, Theresa. *Math Dictionary for Kids: The Essential Guide to Mathematical Terms, Strategies and Tables*
- *Geometry To Go.* (Published by Great Source Education Group; 1-800-289-4490)
- Johnson, Art. *Famous Problems and Their Mathematicians*
- Lasky, Katherine. *The Librarian Who Measured the Earth*
- Neuschwander, Cindy. *Sir Cumference and the Great Knight of Angleland: A Math Adventure*
- Suiter, Mary and Sarapage McCorkle. *Money Mathematics: Lessons for Life*

Web Sites:

- www.figurethis.org – Challenging and engaging activities for middle school students
- www.scetv.org/education/index.cfm - Site has parent and student activities and ideas
- www.vrd.org/locator/sites/drmath.shtml - Dr. Math answers all math related questions

SCIENCE

Students should be able to:

Inquiry

- Use appropriate tools and instruments safely and accurately when conducting a controlled scientific investigation
- Generate questions that can be answered through scientific investigation
- Explain the reasons for testing one independent variable at a time in a controlled scientific investigation
- Explain the importance that repeated trials and a well-chosen sample size have with regard to the validity of a controlled scientific investigation
- Explain the relationships between independent and dependent variables in a controlled scientific investigation through the use of appropriate graphs, tables, and charts
- Critique a conclusion drawn from a scientific investigation
- Use appropriate safety procedures when conducting investigations

Cells and Heredity

- Summarize the structures and functions of the major components of plant and animal cells
- Compare the major components of plant and animal cells
- Compare the body shapes of bacteria and the body structures that protists use for food gathering and locomotion
- Explain how cellular processes essential to the survival of the organism
- Summarize how genetic information is passed from parent to offspring by using the terms *genes*, *chromosomes*, *inherited traits*, *genotype*, *phenotype*, *dominant traits*, and *recessive traits*
- Use Punnett squares to predict inherited monohybrid traits
- Distinguish between inherited traits and those acquired from environmental factors

Human Systems and Disease

- Summarize the levels of structural organization within the human body
- Recall the major organs of the human body and their function within their particular body system
- Summarize the relationships of the major body systems
- Explain the effects of disease on the major organs and body systems

Ecology – the Biotic and Abiotic Environment

- Summarize the characteristics of the levels of organization within ecosystems
- Illustrate energy flow in food chains, food webs and energy pyramids
- Explain the interaction among changes in the environment due to natural hazards, changes in populations, and limiting factors
- Explain the effects of soil quality on the characteristics of an ecosystem
- Summarize how the location and movement of water on Earth's surface through groundwater zones and surface-water drainage basins, called watersheds, are important to ecosystems and to human activities
- Classify resources as renewable or nonrenewable and explain the implications of their depletion and the importance of conservation

The Chemical Nature of Matter

- Recognize that matter is composed of extremely small particles called atoms
- Classify matter as element, compound, or mixture on the basis of its composition
- Compare the physical properties of metals and nonmetals
- Use the periodic table to identify the basic organization of elements and groups of elements
- Translate chemical symbols and the chemical formulas of common substances to show the component parts of the substances (including NaCl [table salt], H_2O [water], $C_6H_{12}O_6$ [simple sugar], O_2 [oxygen gas], CO_2 [carbon dioxide], and N_2 [nitrogen gas])
- Distinguish between acids and bases and use indicators (including litmus paper, pH paper, and phenolphthalein) to determine their relative pH
- Identify the reactants and products in chemical equations
- Explain how a balanced chemical equation supports the law of conservation of matter
- Compare physical properties of matter to the chemical property of reactivity with a certain substance
- Compare physical changes to chemical changes that are the result of chemical reactions

Activities:

Have your child:

- Make a model of one of the human body systems using common household items (such as balloons, wires, or flexible pipes)
- Collect samples of soil from several different environments, analyze the soil for moisture content, pH, organic matter, etc. and compare the biotic life found with each soil sample
- Research the possible effects on human body systems of air, water, or soil pollution
- Start a recycling project in his/her home or school
- Identify examples of chemical and physical changes in your home or environment such as rusting, food spoilage, and the freezing and thawing of water
- Create an acid/base indicator solution by boiling red cabbage in water. Use the indicator solution to test the pH of various household substances (such as lemon juice, ammonia, vinegar, etc.).

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SOCIAL STUDIES

Students should be able to:

Contemporary Cultures: 1600 to Present

- Use maps to identify the colonial expansion of European powers through 1770
- Explain how technological and scientific advances affected various parts of the world and contributed to the power of European nations
- Compare how European nations exercised political and economic influence differently in the Americas
- Summarize the characteristics of European colonial power and explain its effects on African nations
- Summarize the characteristics of European colonial powers in Asia and their effects on Asia
- Explain the emergence of capitalism
- Summarize the essential characteristics of the limited government in England following the Glorious Revolution and the unlimited governments in France and Russia
- Summarize the influential ideas of the Enlightenment
- Outline the role and purposes of a constitution
- Summarize the achievements and contributions of the scientific revolution
- Explain the causes, key ideas, and effects of the French Revolution
- Compare the development of Latin American independence movements
- Explain the causes and course of the Industrial Revolution in Europe, Japan, and the United States
- Explain the impact of the new technology that emerged during the Industrial Revolution
- Compare the emergence of nationalist movements across Europe in the nineteenth century
- Summarize the economic origins of European imperialism
- Use a map to illustrate where European imperialism took place in various regions
- Explain the causes and effects of the Spanish-American War and how it reflected the United States' interest in imperial expansion
- Compare differing views of colonization and the reactions of people under colonial rule in the late nineteenth and early twentieth centuries
- Summarize the significant features and explain the causes of Japan's imperial expansion in East Asia
- Explain the causes and key events of World War I
- Explain the outcome and effects of World War I
- Explain the worldwide depression that took place in the 1930s
- Summarize aspects of the rise of totalitarian governments in Germany, Italy, Japan, and the Soviet Union
- Explain the causes, key events, and outcomes of World War II
- Summarize the Holocaust and its impact on European society and Jewish culture
- Summarize the political and economic transformation of Western and Eastern Europe after World War II
- Summarize the events of the Cold War
- Explain the causes and major features of change that occurred in the Middle East in the post-World War II period
- Compare nationalist and independence movements in different regions in the post-World War II period
- Illustrate on a time line the events that contributed to the collapse of the Soviet Union and other communist governments in Europe
- Explain the significance and impact of the information, technological, and communications revolutions
- Explain global influences on the environment
- Summarize global efforts to advance human rights
- Compare the opportunities for women around the world
- Explain the impact of increasing global economic interdependence in the late twentieth century and the early twenty-first century
- Summarize the dangers to the natural environment that are posed by population growth, urbanization and industrialization

Activities:

Have your child:

- Watch and discuss the local and national news. Have a map with you and locate the places mentioned in the nightly news. Make a game of it. Relate news stories about different places to history studied, such as global economic interdependence or human rights issues.
- Use the Internet to find information about women's rights and opportunities in foreign countries
- Visit museums or memorials related to World War I and/or World War II
- Interview a family or community member who remembers the events of the Cold War
- Identify items in the home that are products of the information and communications revolution (Internet, satellite dish, computer, television). Discuss how these products have changed people's lifestyles and the workplace.
- Name actions he/she and friends could take that would contribute to protecting the environment

Books:

- Filipovic, Zlata. *Zlata's Diary: A Child's Life in Sarajevo*
- Mead, Alice. *Adem's Cross*
- Naidoo, Beverly. *Journey to Jo'burg*
- Richter, Hans Peter. *Friedrich*
- Siegal, Aranka. *Upon the Head of the Goat*
- Watkins, Yoko K. *So Far from the Bamboo Grove*
- Westall, Robert. *Blitzcat*
- *World Almanac*
- *World Atlas*

Web Sites:

- CIA's Homepage for Kids – https://www.cia.gov/cia/ciakids
- History for Kids - www.historyforkids.org
- Library of Congress Country Studies - http://lcweb2.loc.gov/frd/cs/cshome.html
- National Geographic - www.nationalgeographic.com
- United States Holocaust Museum -www.usholocaustmuseum.com

SCIENCE

Continued

Books:

- Beres, Samantha. *101 Things Every Kid Should Know about the Human Body*
- Bial, Raymond. *A Handful of Dirt*
- Carson, Rachel. *Silent Spring – 40th Anniversary Edition*
- The Earthworks Group. 50 *Simple Things Kids Can Do To Save the Earth*
- Friedlander, Mark P, Jr. *Outbreak: Disease Detectives at Work*
- Kalumuck , Karen E. and The Exploratorium Teacher Institute. *Human Body Explorations: Hands-On Investigations of What Makes Us Tick*
- Morgan, Sally. *Life Science In Depth: Cells and Cell Function*
- Nardi, James. *World Beneath Our Feet: A Guide to Life in the Soil*
- Van Cleave, Janice. *Biology for Every Kid: 101 Easy Experiments that Really Work*
- Winner, Cherie. *Erosion*
- Walker, Richard. *Genes and DNA*

Web Sites:

- AAAS Science Netlinks - www.sciencenetlinks.com
- Biology4Kids - www.biology4kids.com
- Chem4Kids - www.chem4kids.com/
- EPA for Kids - http://www.epa.gov/students/
- Learning Network Parent Channel - www.familyeducation.com
- Science Made Simple - www.sciencemadesimple.com
- SC Department of Natural Resources - www.dnr.state.sc.us

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A collaborative project sponsored by South Carolina Department of Education & South Carolina Education Oversight Committee, Spring 2007