



A Guide for Parents and Families About What Your 8th Grader Should Be Learning in School This Year

It's no longer a secret...

This guide shares important information about the South Carolina Curriculum 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. Curriculum 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 Curriculum Standards for mathematics, English language arts, science and social studies for **8th Grade**. The information can help you become familiar with what your child is learning at school and may include sample assessment questions, 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 **8th Grade**. The complete South Carolina Curriculum Standards for each subject area can be found at www.sctlc.com or at www.myschools.com.

The state-developed test, Palmetto Achievement Challenge Test (PACT), is based on the South Carolina Curriculum Standards.

South Carolina Curriculum Standards.

Here are seven key reasons parents should be in the **know** about the curriculum 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 curriculum 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 curriculum standards.
4. Standards help parents determine if children in South Carolina are being taught the same subject content as children across the nation. South Carolina Curriculum 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 curriculum 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.

MATHEMATICS

Students should be able to:

Number and Operations

- Use fractions, decimals and integers (rational numbers) to solve real-world problems.
- Explore a variety of methods to solve proportions.
- Use proportions to solve practical problems.

Algebra

- Find the values of algebraic expressions by substituting numbers for variables and using the order of operations.
- Simplify a variety of algebraic expressions.
- Solve one- and two-step linear equations and inequalities.
- Use tables, graphs or simple equations to determine if a relationship is linear or nonlinear.

Geometry

- Describe how a change in the edge length of different sizes of regular polygons (polygons with equal angles and equal sides) affects the angle measures, perimeters and areas.
- Use the Pythagorean Theorem to find the missing length of a side of a right triangle.
- Given the coordinates (location) of one vertex (point) of a square, rectangle or triangle and the length of the adjacent sides, draw and name the other vertices (points) of the shape.
- Determine the changes in volume and surface area of three-dimensional figures when one or more measurements is changed.

Measurement

- Find the area of irregular shapes.
- Use proportions of corresponding angles and/or sides (properties) of similar figures to find the length of a missing side.

Data Analysis and Probability

- Identify patterns in graphs to determine if a relationship exists between two sets of data.
- Use relationship between two sets of data to make predictions.
- Compute the probability (likelihood) of two dependent events.

Sample PACT Question

A rectangular hot tub is 6 foot long, 5 foot wide and 2.5 foot deep. If water runs in at a rate of 2 cubic feet per minute, how long will it take for the tub to be half full?

- A. 18 minutes 45 seconds
- B. 37 minutes 30 seconds
- C. 75 minutes
- D. 18 minutes 75 seconds
- E. 150 minutes

Answer A. 18 minutes 45 seconds

Activities:

Have your child:

- Determine which 3-digit and 4-digit palindromes when squared also result in palindromes. (Palindromes have the same arrangement of digits from right to left as from left to right, such as 1991 and 2002.) Determine whether a method exists to predict which 3-digit and 4-digit palindromes when squared also result in palindromes.
- Determine how close the shapes of your family members are to the golden ratio which is used in art and architecture. To do this, measure the navel height (navel to floor) of each family member and divide by that person's total height. Record this in a chart. How close is each to the golden ratio 0.618?
- Using a map of the southeastern United States, determine the least number of colors needed to color a map so that bordering states are not the same color.

Books:

- *Algebra To Go.* (Published by Great Source Education Group; 1-800-289-4490).
- Blatner, David. *The Joy of π .*
- Currah, Joanne, Jane Felling, and Norma Lachance. *Radical Math: Math Games Using Cards and Dice.*
- DiSpezio, Michael A. *Critical Thinking Puzzles.*
- Gavin, M. Katherine, Carole E. Greenes, Carol R. Findell, and Linda Jensen. *Awesome Math Problems for Creative Thinking.*
- Peterson, Ivars and Nancy Henderson. *Math Trek: Adventures in the MathZone.*
- Stickels, Terry. *Are You As Smart As You Think?*

Software:

- *Algebra Stars* by Sunburst Technology



Web Sites:

- www.figurethis.org – This site has fun and engaging mathematics activities for middle school students.
- www.math.com – This site has on-line calculators, games, and tutoring assistance.
- www.myschools.com or www.sctlc.com – Web sites where parents can view the complete curriculum standards.
- www.scetv.org/education/index.cfm - This site has parent and student activities and ideas.
- www.vrd.org/locator/sites/drmath.shtml - at this site, Dr. Math answers all math related questions.

ENGLISH LANGUAGE ARTS

Students should be able to:

Reading

- Read and apply knowledge of the elements of various literary forms to evaluate them.
- Analyze main ideas and themes in literature that are not actually stated in the reading.
- Read all types of print materials including technical and career materials.
- Evaluate what is read for bias, opinions, and propaganda techniques.
- Use reading techniques such as skimming and scanning.
- Summarize what is read.
- Analyze media messages such as advertisements and editorials.
- Select materials and read independently for extended periods of time.
- Determine when statements of fact and statements of opinion are not adequately supported in the text.
- Identify the speaker (narrator) in what is read.
- Compare and contrast themes in what is read.
- Describe how an author uses imagery and symbolism.
- Summarize, paraphrase, analyze, and evaluate what is read.
- Identify the details that support the thesis (main idea) of what is read.
- Draw conclusions and make inferences.
- Describe and analyze cause and effect and its impact on the plot, character, and theme of what is read.
- Follow multi-step directions such as those for preparing applications and completing forms.
- Use graphic representations such as charts, graphs, pictures, and graphic organizers as sources of information and as a means of organizing information and events logically.
- Compare and contrast information from two or more pieces of written material.
- Analyze an author's use of characters, the structural elements of plot, flashback and foreshadowing, and point of view and tone.
- Identify elements of poetry such as rhyme scheme, stanza, and refrain.
- Determine pronunciations, meanings, alternate word choices, the parts of speech, or the origins of words by using a dictionary and a thesaurus.
- Use knowledge of roots and affixes to analyze the meaning of complex words.
- Use the structure of a sentence and its context to determine the meaning of unfamiliar words and words with more than one meaning.
- Make simple and complex analogies.

Communication

- Use listening skills to gain information in interviews.
- Participate and respond appropriately in activities that involve listening such as discussions and oral presentations.
- Increase vocabulary through listening experiences.
- Adjust language according to audience and purpose.
- Revise and edit final oral presentations for effectiveness.
- Plan and present information creatively.
- Examine and determine validity, bias and opinion in what is heard.
- Ask questions to clarify perspectives and viewpoints in discussions and interviews.
- Use visual aids, props, and technology to support meaning and enhance oral presentations.
- Present dramatic readings of literary selections.
- Make appropriate statements to indicate agreement or disagreement with others' ideas.

- Summarize information received from non-print sources.
- Analyze details, characters, setting, and cause and effect in material from non-print sources.

Writing

- Use techniques to develop and organize ideas before and during writing.
- Select vocabulary to make writing clear and interesting.
- Revise writing for word choice and clarity, details, consistency, logical order, and smooth transitions from one idea to another.
- Edit final copies for grammar, spelling, capital letters, punctuation, agreements, sentence structure, and word usage.
- Write for extended periods of time.
- Write multiple-paragraph compositions, friendly letters, and creative and informational pieces.
- Write business letters.
- Write essays, reports, articles, and proposals.
- Use writing to explain, inform, learn, entertain, describe, persuade, analyze, and transact business.

Research

- Continue to use knowledge learned about conducting research to plan and prepare written and oral research presentations/projects.
- Combine and organize information from several sources and communicate it clearly to others.
- Compare information sources for research projects.
- Combine research from a variety of sources including technology.
- Document sources using a standardized system of documentation.
- Evaluate sources of information for accuracy, bias, and credibility.

Sample PACT Question

Time to Write Sample

Many people collect things. Write an essay in which you describe a collection. Give several details about this collection. You might include information such as how long it has taken to build the collection and where and how it is stored or displayed. Also you might discuss what the collection says about the person who has the collection. How does it define the collector?

- Write your essay on the writing pages in your test booklet. You may make a graphic organizer (such as a web, list, or outline) on the prewriting pages in your test booklet.
- You do not have to write a rough draft. If you do write a rough draft, you should use scratch paper. You must write the final draft on the pages in your test booklet.
- You may use a dictionary or thesaurus.
- You must write only one essay on the pages in your test booklet.
- You should read over your essay and make neat changes on the final draft in your test booklet.

Does your essay:

- have an introduction, a body, and a conclusion?
- stay on topic?
- have interesting and clear ideas?
- use details and descriptions?
- have correct spelling?
- have correct punctuation and capital letters?

SCIENCE

Students should be able to:

Inquiry and Process Skills

- Make observations of objects and events distinguishing between qualitative and quantitative observations.
- Arrange data in sequential order and use scientific and dichotomous keys for classification.
- Select and use appropriate tools, units of measurement and technology to collect data.
- Make inferences and predictions based on prior knowledge and observable patterns, and discriminate between observations, inferences and predictions.
- Design and conduct scientific investigations, identifying the independent, dependent and controlled variables and collecting, recording, organizing, analyzing, communicating and interpreting data.
- Use mathematical thinking during investigations.
- Identify and implement the four stages of problem solving: problem identification, solution design, implementation, and evaluation.
- Research contributions people have made to science and technology, and investigate the relationship between science and technology.
- Investigate and describe factors that affect technological design, risk versus benefit factors and constraints on technological designs.

Life Science

- Investigate the diversity and adaptations of organisms over time; determine the factors that contribute to a species becoming extinct and examine ways to prevent the extinction of a species.
- Examine how natural selection increases population variability.
- Investigate fossils to explore how life and environmental conditions have changed over time.
- Investigate the use of technology in the study of rocks and fossils to identify their age, type and formation.
- Investigate the geologic time scale.

Earth Science

- Investigate, describe and compare the components of our solar system and the effect of gravity on orbits.
- Describe the sun's atmosphere, energy and effects on the Earth.
- Compare the effects of the Earth's rotation and revolution.
- Understand the relationships among the sun, moon and Earth and their effects on tides and eclipses.
- Compare and contrast the contributions of Copernicus and Galileo.
- Identify and describe the structure of the Earth and investigate major geologic events (earthquakes, volcanoes, and mountain building).
- Investigate the rock cycle and classify and identify common rock types and minerals that form them.
- Describe the geologic history of South Carolina and the formation of the major landform regions according to the geologic time scale.
- Interpret geological features using imagery and topographic maps.
- Investigate and explain the theory of plate tectonics.

Physical Science

- Investigate the motion of objects (speed, velocity, acceleration and momentum).
- Investigate Newton's Laws of Motion.
- Investigate and analyze space explorations.
- Investigate the properties, behavior and uses of light.
- Investigate the use of prisms, lenses, mirrors and telescopes and analyze how the eye functions.

Sample PACT Question

PACT questions are available at <http://www.myschools.com/offices/assessment/pact/releaseitems/science.htm>

Activities:

Have your child:

- Research an extinct plant or animal and why or how it became extinct.
- Create a fossil collection (fossils can often be found on beaches and in quarries).
- Make a model of the solar system, a volcano or the Earth's layers.
- Go night-sky gazing to observe and discuss the phases of the moon, changes in the position of constellations from season to season, and watch for meteors and comets.
- Start a rock or mineral collection and create a field guide to identify the samples.
- Conduct Internet research or visit the local library and research the contributions of Copernicus and Galileo.
- Design a model rocket.

Books:

- Atwater, Mary, et al. *Wave Energy*.
- Brewer, Duncan. *Planet Earth*.
- Downs, Sandra. *Earth's Fiery Fury*.
- Heinlein, Robert. *Have Spacesuit - Will Travel*.
- Kittinger, Jo. *Stories in Stone: The World of Animal Fossils*.
- Lafferty, P. *Force and Motion*.
- Levy, Matthys and Mario Salvadori. *Earthquake Games*.
- Morgan, Sally. *The Super Science Book of the Environment*.
- Paul, Richard. *A Handbook to the Universe: Explorations of Matter, Energy, Space, and Time For Beginning Scientific Thinkers*.
- Simon, Seymour. *Einstein Anderson Lights Up the Sky*.
- Stacy, Tom. *Earth, Sea, and Sky*.
- Sussman, Art. *Dr. Art's Guide to Planet Earth*.

Web Sites:

- AAAS Science Netlinks – www.sciencenetlinks.com
- Franklin Institute – www.fi.edu
- Force and Motion – www.physics4kids.com
- SC Department of Education – www.myschools.com or www.sctlc.com
- South Carolina ETV's Resources for Teachers, Students and Parents – www.knowitall.org
- Space Science – <http://www.spacelink.nasa.gov>.
- Virtual Solar System – www.nationalgeographic.com/solarsystem

SOCIAL STUDIES

South Carolina: One of the United States

Students should be able to:

- Summarize the culture, political systems, and daily life of the Native Americans of the Eastern Woodlands.
- Categorize events according to the ways they improved or worsened relations between Native Americans and European settlers.
- Summarize the history of European settlement in Carolina.
- Explain the growth of the African American population during the colonial period and the significance of African Americans in the developing culture (for example, Gullah) and economy of South Carolina.
- Summarize the significant changes to South Carolina's government during the colonial period.
- Explain how South Carolinians used resources to gain economic prosperity.
- Summarize the involvement of South Carolina in the French-British colonial rivalry.
- Explain the interests and roles of South Carolinians in the events leading to the American Revolution.
- Compare the perspectives and roles of different South Carolinians during the American Revolution.
- Summarize the course and key conflicts of the American Revolution in South Carolina and its effects on the state.
- Summarize events related to the adoption of South Carolina's first constitution, the role of South Carolina and its leaders in the Continental Congress, and the ratification of the United States Constitution.
- Explain the economic and political tensions between the people of the Upcountry and the Lowcountry of South Carolina.
- Explain the importance of agriculture in antebellum South Carolina.
- Explain the impact of key events leading to South Carolina's secession from the Union.
- Draw conclusions about the causes of sectionalism.
- Compare the attitudes of the unionists, cooperationists, and secessionists in South Carolina and summarize why the South Carolina secession convention in 1860 voted unanimously to secede from the Union.
- Compare the military strategies of the North and South with regard to specific events and geographic locations in South Carolina.
- Compare the effects of the Civil War on daily life in South Carolina.
- Explain the purposes of Reconstruction with attention to problems facing the South.
- Summarize Reconstruction in South Carolina and its effects on daily life in South Carolina.
- Summarize the events and the process that led to the ratification of South Carolina's constitution of 1868.
- Explain how events during Reconstruction at first improved opportunities for African Americans but created a backlash that, by the end of Reconstruction, negated the gains African Americans had made.
- Summarize the successes and failures that occurred in South Carolina during Reconstruction.
- Summarize the conditions in South Carolina following the end of Reconstruction.
- Compare key aspects of the Populist movement in South Carolina.
- Summarize the changes that occurred in South Carolina agriculture and industry during the late nineteenth century.
- Compare migration patterns within South Carolina and in the United States as a whole in the late nineteenth century.
- Summarize the costs of natural disasters and wars that occurred in South Carolina or involved South Carolinians in the late nineteenth century.
- Explain the significance that the increased immigration into the United States in the late nineteenth century had for the state of South Carolina.
- Summarize the progressive reform movement in South Carolina.
- Explain the impact of World War I on South Carolina.
- Summarize the situation in South Carolina following World War I.
- Explain the causes and the effects of changes in South Carolina culture during the 1920s.
- Explain the effects of the Great Depression and the lasting impact of New Deal programs on South Carolina.
- Summarize the significant aspects of the economic growth experienced by South Carolina during and following World War II.
- Provide examples of the expanding role of tourism in South Carolina's economy.
- Explain causes and effects of agricultural decline in South Carolina.
- Explain the factors that influenced the economic opportunities of African American South Carolinians during the latter twentieth century.
- Explain the economic impact of twentieth century events on South Carolina.

Activities:

Have your child:

- Label sites of Native American lands, important settlements, colonies, and battles on a map. Discuss the importance of these sites in South Carolina history.
- Tour the state capital in Columbia to learn about state government, including the adoption of South Carolina's first state constitution.
- Visit and interview a state member of Congress or the General Assembly about current issues affecting South Carolina's economic development.
- Visit historical museums such as the State Museum to see how South Carolina society developed and changed over the years.
- Visit Native American, Colonial settlement, Revolutionary War and Civil War sites and memorials within South Carolina.
- Watch historical videos or television programs on Native Americans, colonial settlement, Revolutionary War and Civil War. Discuss how content shown in programs are related to historical topics being studied in school.
- Read a local and the state newspapers. Look for articles related to tourism and its role in South Carolina's economy.
- Visit Charleston and the downtown area to see the influence of the English and Irish on its society and architecture.



REMEMBER:

- Do not write a poem or a song. If you do, it will not be scored.
- Make your essay long enough for others to your ideas.
- Read your essay and make any changes neatly on your final draft.
- Use only the pages in your test booklet to write your final essay. Do not add any pages to your test booklet. Added pages will not be scored.

Activities:

- Read the same book your child is reading and talk about what is read with your child.
- Take your child to a movie or play.
- Compare and contrast movies and plays to books read.
- Read editorials in the newspaper. Determine the writer's bias or slant.
- Encourage your child to keep a journal.
- Engage in written conversations with your child.
- Read and follow directions to put something together.
- Encourage your child to write letters or send email to family and friends.
- Use skimming and/or scanning techniques when reading.
- Reward your child with books or a journal.
- Get your child a library card and regularly go to the library or bookstore.
- When watching television or a video, discuss the conflict in the episode.
- Discuss the point of view of a character.
- Discuss how a problem was solved.

Books:

- Bauer, Joan. *Rules of the Road.*
- Draper, Sharon. *Tears of a Tiger.*
- Ewing, Lynne. *Drive-By.*
- Fletcher, Susan. *Shadow Spinner.*
- Hesse, Karen. *Out of the Dust.*
- Ingold, Jeanette. *Pictures, 1918.*
- Mikaelson, Ben. *Touching Spirit Bear.*
- Philbrick, Rodman. *Freak the Mighty.*
- Spinelli, Jerry. *Stargirl.*

Web Sites:

- International Reading Association - www.reading.org
- Media Literacy Clearinghouse – <http://medialit.med.sc.edu>
- National Council of Teachers of English – www.ncte.org
- National Parent Teacher Association – www.pta.org
- South Carolina Department of Education – www.myscschools.com
- Surfing The Net with Kids – www.surfnetkids.com
- United States Department of Education – www.ed.gov/parents

SOCIAL STUDIES CONTINUED

Books:

- King, David C. *First Facts About U.S. History.*
- McKissack, Patricia C. and Fredrick McKissack. *Rebels Against Slavery.*
- Patrick, Diane. *The New York Public Library Amazing African-American History.*
- Swagert, Christine. *Black Crows and White Cockades.*
- Thomas, David Hurst and Lorann Pendleton. *Exploring Native North America.*

Web Sites:

- American Local History Network - www.alhn.org
- The Gilder Lehrman Institute of American History - www.gilderlehrman.org
- Library of Congress American Memory - <http://memory.loc.gov/>
- National Archives and Records Administration - www.nara.gov
- North by South - www.northbysouth.org
- Public Broadcast System (PBS) - www.pbs.org
- SCETV Resources - www.knowitall.org
- South Carolina Teaching, Learning and Connecting
- SCETV - www.knowitall.org
- South Carolina Department of Education - www.myscschools.com
- South Carolina Teaching, Learning and Connecting - www.sctlc.com
- Smithsonian National Museum of American History - www.americanhistory.si.edu

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