

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



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 **Ninth 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 **Ninth Grade**. The complete South Carolina Academic Standards for each subject area can be found at www.ed.sc.gov.

Sample and release assessment questions for the High School Assessment Program (HSAP) and End-of-Course Tests can be found 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 and end-of-course examinations 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 and Release HSAP and End-of-Course Test Items:
www.eoc.sc.gov/informationforeducators/TestItems.htm

ENGLISH LANGUAGE ARTS

Students enrolled in grade nine are generally enrolled in **English 1**. Those students who took **English 1** in the eighth grade may be enrolled in **English 2** in grade nine.

Students should be able to:

Reading

- Make inferences and draw conclusions by comparing and contrasting information in one or more texts
- Analyze the relationship among character, plot, and theme in stories
- Write and make presentations in response to reading
- Understand that an author can reveal his/her preference on a subject by his/her word choice or by including or leaving out relevant information
- Identify propaganda techniques in nonfiction texts
- Analyze the use of text structures and graphic features in nonfiction texts
- Read independently for various reasons
- Use context clues to determine the meaning of unfamiliar words or technical terms
- Analyze word associations and subtleties in order to better understand the meaning of a text
- Analyze the meaning of words by using a knowledge of their Greek or Latin parts
- Analyze the impact of author's craft such as figurative language, point of view, foreshadowing, symbolism, and irony on the text
- Analyze an author's preference about a subject through his choice of words and unsupported opinions

Writing

- Organize writing by creating lists and using graphic organizers, models, or outlines
- Use a variety of sentence types and lengths to make writing interesting
- Create multi-paragraph writing with an introduction and conclusion, and a clearly supported main idea
- Use correct grammar, punctuation, and spelling in writing
- Use revision strategies to improve the organization, development, and voice of a written work
- Create reports and letters using appropriate descriptions and language for a particular audience
- Write memoirs or poems to tell a story using descriptive language to create tone and mood
- Create persuasive pieces (for example, editorials, essays, or speeches) that support a clearly stated opinion using facts, statistics, or first-hand accounts

Research

- Use direct quotations, paraphrases, or summaries to incorporate information from multiple sources into written or oral presentations

- Use a standard method to document sources and properly credit the work of others
- Create written assignments and oral presentations that are designed for a specific audience and purpose
- Use a variety of print or electronic source materials and supporting graphics
- Design and present research projects

Activities

- Provide access to a library where your child can access books
- Encourage your child to write a script or create a video relating to a topic of interest, mirroring the theme of something he/she has read
- Discuss movies and television with your child by analyzing characters, plot, and themes
- Identify opinions that are not supported while watching television or reading the newspaper together
- Have your child compare the structure and graphics used in a variety of print materials (for example, video game instructions and magazines)
- Have your child use a graphic organizer to create a family tree
- Have your child identify the correct order of the paragraphs based on content and logical sequence using cutup articles or essays
- Have your child look up and use statistics or facts to support opinions
- Collect magazine advertisements to illustrate various propaganda techniques and identify them with your child
- Encourage your child to interview people to gather first-hand information
- Have your child revise and edit homework assignments to ensure the best quality of work
- Encourage your child to read books that you enjoyed in order to support independent reading

Books

- Anderson, Laurie Halse. *Speak*
- Armstrong, Lance. *It's Not About the Bike: My Journey Back to Life*
- Draper, Sharon. *Romiette and Julio*
- Korman, Gordon. *Son of the Mob*
- Myers, Walter Dean. *Fallen Angels*
- Olshan, Matthew. *Finn*
- Pearson, Mary E. *Scribbler of Dreams*
- Woodson, Jacqueline. *If You Come Softly*

Web Sites

- The Internet Public Library – <http://www.ipl.org>
- Folger Shakespeare Library – <http://www.folger.edu>
- Surfing the Net with Kids – <http://www.surfnetkids.com>
- United States Department of Education – <http://www2.ed.gov/parents>
- The Write Source – <http://www.thewritesource.com/>

MATHEMATICS

The mathematics standards for grades nine through twelve contained in the South Carolina Mathematics Academic Standards 2007 provide the essential content students are expected to learn during their entire high school mathematics career. Academic standards are specified for five high school core areas: elementary algebra, intermediate algebra, geometry, precalculus, and data analysis and probability. Content topics contained in elementary algebra are given below. Students in 9th grade are generally enrolled in **Elementary Algebra** or **Mathematics for the Technologies 1**. Students are scheduled to take the **Algebra 1/Mathematics for the Technologies 2** End-of-Course Examination at the end of **Elementary Algebra** and **Mathematics for the Technologies 2**. Those students who took Algebra 1 in the seventh or eighth grade may be enrolled in **Geometry** or **Intermediate Algebra**. Since mathematics is taught in specific mathematics courses rather than as an integrated system in most high schools, standards for courses are incorporated into course outlines in the document Outlines of High School Mathematics Courses found on the State Department of Education Web site <http://www.ed.sc.gov/>. Other mathematics courses may be available as well for students in schools on a semester block schedule.

Elementary Algebra

The academic standards for the elementary algebra core area establish the process skills and core content for Algebra 1, Mathematics for the Technologies 1, and Mathematics for the Technologies 2.

The content of the elementary algebra standards includes:

- The real number system
- Operations involving exponents, matrices, and algebraic expressions
- Relations and functions
- Writing and solving linear equations
- Graphs and characteristics of linear equations
- Quadratic relationships and functions

Hand-held graphing calculators are required as part of instruction and assessment. Students should use a variety of representations (concrete, numerical, algorithmic, graphical), tools, and technologies to model mathematical situations in order to solve meaningful problems.

Activities:

Have your child:

- Explain and solve the following problem: A taxi company charges \$1.75 plus \$0.25 for every quarter mile. A second company charges \$1.25 plus \$0.35 for every quarter mile. Which company has the best rate? An extension problem could have the companies increasing or decreasing their fixed charges according to changes in services offered. How would this affect the problem?
- Explain the difference between a relation and a function. Give examples of a function and a relation using tables or ordered pairs.
- Analyze characteristics of equations by placing a 3-meter ramp at heights of $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and 1 meter. Roll a toy car down the ramp and time the roll. Plot the points (i.e., represent as (height, time)). Predict what happens as the slope of the ramp decreases or increases.

Books:

- Bills, Chris. *Eight Days a Week: Puzzles, Problems and Questions to Activate the Mind*
- Karnes, Frances A. and Kristen R. Stephens. *Young Women of Achievement: A Resource for Girls in Science, Math and Technology*

Web Sites:

- <http://education.ti.com>
- <http://illuminations.nctm.org>

SCIENCE

Physical Science

Overview: Students in grade nine are generally enrolled in **Physical Science**. The academic standards for Physical Science establish the scientific inquiry skills and core content for all Physical Science classes in South Carolina schools. The course should provide students with a conceptual understanding of the world around them — a basic knowledge of the physical universe that should serve as the foundation for other high school science courses. The standards should be used to make decisions concerning the structure and content for Physical Science classes that are taught. These decisions involve choices regarding additional content, activities, and learning strategies and depend on the particular objectives of the individual classes. All Physical Science classes must include inquiry-based instruction, allowing students to engage in problem solving, decision-making, critical thinking, and applied learning. In other words, students should spend more of their class time choosing the right method to solve a problem and less time solving problems that merely call for repetitive procedures.

For a complete listing of the Physical Science Indicators, go to <http://ed.sc.gov/topics/curriculumstds/subjects>, download the 2005 Academic Science Standards and refer to pages 61-68.

The physical science course is divided into two sections. One section is an introduction to chemistry and the other is an introduction to physics. Scientific inquiry is integrated continually throughout both sections.

The standards addressed in each part of physical science include:

Scientific Inquiry

- Demonstrate an understanding of how scientific inquiry and technological design, including mathematical analysis, can be used appropriately to pose questions, seek answers, and develop solutions

Chemistry: Structure and Properties of Matter

- Demonstrate an understanding of the structure and properties of atoms
- Demonstrate an understanding of various properties and classifications of matter
- Demonstrate an understanding of chemical reactions and the classifications, structures, and properties of chemical compounds

Physics: Interactions of Matter and Energy

- Demonstrate an understanding of the nature of forces and motion
- Demonstrate an understanding of the nature, conservation, and transformation of energy
- Demonstrate an understanding of the nature and properties of mechanical and electromagnetic waves

Activities:

Have your child:

- View programs such as NOVA on PBS
- View programs such as Mr. Wizard and Bill Nye the Science Guy on the Discovery Channel
- Discuss current science events in the nightly news and in the newspaper
- Attend local science fairs, museums, the Roper Mountain Science Center in Greenville, and a planetarium
- Investigate activities of the SC Junior Academy of Science at <http://www.scacadscience.org>
- Build model rockets or electronic devices from kits
- Cook by following a recipe and by varying a recipe
- Conduct soil or water tests on your property and research the acceptable levels of dissolved materials necessary for various plant and animal needs
- Read labels and discuss the function of ingredients in various substances, such as foods and cleaning products
- Learn to play musical instruments and discuss the variables that influence the pitch and the volume of the tones produced
- Research energy efficiency when purchasing a car or an appliance
- In the context of an eye exam, research and discuss how various lenses can correct vision

Web Sites

- Exploratorium – www.exploratorium.edu
- Frank Potter's Science Gems-more than 14000 science resources sorted by category and grade level – www.sciencegems.com
- Center for Improved Engineering and Science Education – <http://www.k12science.org/currichome.html>
- The Smithsonian Institution – www.si.edu
- What Should I Look For in the Science Program in My Child's School: A Guide for Parents – <http://www.scimathmn.org>
- Amusement Park Physics – <http://www.learner.org/exhibits/parkphysics/>



SOCIAL STUDIES

A separate document is available at www.eoc.sc.gov containing Family-Friendly Standards for the required courses of Economics, United States Government, and United States History and the Constitution