



A Guide for Parents and Families About What Your 11th 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 and appropriate courses for your **11th grader**. The standards or course outlines 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 and course descriptions, standards and/or outlines 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 course content and concepts are being learned.

The following pages provide information about the South Carolina Curriculum Standards and appropriate **11th grade** courses for mathematics, science, English language arts, and social studies. 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. Information about end-of-course examinations will be referenced in the specific subject area designations.

The complete South Carolina Curriculum Standards for each subject area can be found at www.sctlc.com or at www.myschools.com.



South Carolina Curriculum Standards.

Here are seven key reasons parents should be in the **know** about the curriculum standards and course offerings:

1. Standards set clear, high expectations for student achievement. Standards and course outlines tell what students need to do in order to progress through school on grade level.
2. Standards and course outlines guide efforts to measure student achievement. Results of tests (PACT and end-of-course examinations) on grade-level curriculum and course 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 matched to and compared with 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. 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 and course 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 and course outlines show parents how the expectations progress throughout the high school education. Parents are able to see how their child's knowledge is growing from one year to the next.

MATHEMATICS

The mathematics standards for grades nine through twelve contained in the *South Carolina Mathematics Curriculum Standards 2000* provide the essential content that students are expected to learn during their entire high school mathematics career. 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 www.myscschools.com.

Students in **grade eleven** are generally enrolled in **Algebra 2, Geometry** or **Mathematics for the Technologies 3**. Standards for these and other courses are found in content outline form in the *Outlines of High School Mathematics Courses*.

Other courses may be available as well for students in schools on a semester block schedule. Content topics contained in Algebra 2, Geometry, and Mathematics for the Technologies 3 are given below.

Algebra 2

Algebra 2 course competencies are presented for a one-year traditional or one-semester block course that meets the state Algebra 2 standards. The course includes:

- linear functions and transformations,
- solving and analyzing systems of equations and inequalities,
- number systems,
- quadratic functions (extended),
- quadratic equations and inequalities,
- rational functions,
- exponential functions,
- conic sections, and
- radical and absolute value functions.

In Algebra 2, handheld calculators are required as part of instruction and assessment. Students should use a variety of representations (concrete, numerical, algorithmic, graphical), tools (matrices, data), and technologies to model situations to solve meaningful problems.

Geometry

Geometry is the mathematical study of shapes, their properties, and their relationships. The course competencies are presented as a one-year traditional or one-semester block course that meets the state geometry standards. The course includes:

- an exploration and overview of geometry,
- logical reasoning principles,
- lines and triangles,
- polygons and quadrilaterals,
- coordinate geometry,
- area and perimeter,
- three-dimensional figures,
- principles and uses of similarity and transformations,
- right triangle relationships, and
- circles.

Students are expected to use technology throughout the course, particularly interactive, dynamic software.

Mathematics for the Technologies 3

Mathematics for the Technologies 3 is the third in a sequence of courses to meet the state Algebra 1 and Geometry standards. The course includes:

- exploration and overview of geometry,
- logical reasoning,
- lines and triangles,
- polygons and quadrilaterals,
- coordinate geometry,
- area and perimeter,
- three dimensional figures,
- principles and uses of similarity and transformations,
- right triangle relationships, and
- circles.

Students are expected to use technology throughout the course, particularly interactive, dynamic software.

Sample Assessment Questions

Sample questions for Algebra 2, Geometry, and Mathematics for the Technologies 3 are not available at this time.

Activities:

- Investigation: Creating an ellipse. Fasten the ends of a string to a piece of cardboard with thumbtacks. Make sure the string has some slack. Keeping the string taut, draw a curve on the card board. Describe the curve traced by the pencil.
Repeat the experiment by moving the tacks farther apart or closer together.
- Create a map of the neighborhood in which you live. Use a coordinate system and make a map key by listing the coordinates for the locations of the places on the map. Include a scale on your map.

Books:

- Abbott, Edwin A. *Flatland: A Romance of Many Dimensions*.
- Niederman, Derrick. *Hard-to-Solve Math Puzzles*.
- Yandell, Benjamin H. *The Honors Class: Hilbert's Problems and Their Solvers*.

Web Sites:

- <http://mathforum.org/library/problems/geometry.html>
- www.mathsnet.net/
- www.mcs.surrey.ac.uk/Personal/R.Knott/Fibonacci/fib.html
- www.illuminations.nctm.org
- www.keypress.com
- www.myscschools.com
- www.sctlc.com

ENGLISH LANGUAGE ARTS

The English language arts standards for grades nine through twelve contained in the *South Carolina English Language Arts Curriculum Standards 2006* provide the essential content that students are expected to learn during their entire high school English language arts career. Students enrolled in **grade eleven** are generally enrolled in **English 3** or **Communication in the Workplace 3**. Those students who took English 3 in the tenth grade may be enrolled in English 4 in grade eleven.

Reading

- Read and analyze a variety of literature with an emphasis on American literature and its relationship to history and culture.
- Read a variety of texts including poetry, works from other cultures, materials from the real world and drama.
- Analyze texts for accuracy, bias, point of view, assumptions, purpose and style.
- Increase his/her vocabulary through reading.
- Read independently for extended periods of time.
- Notice how the layout of informational texts is presented and the impact it has on the message.
- Understand the purpose of a variety of communication formats such as poetry, drama, fiction, essays, business letters, user manuals and Web sites.
- Analyze the effect of conflict on plot and characters.
- Analyze the origin and meaning of new words using knowledge of culture and mythology.
- Determine how effective tone, irony, and figurative language in works of literature.
- Read several works on a particular topic, paraphrase the ideas, and synthesize them with ideas from other authors addressing the same topic.
- Compare and contrast literary themes as they are developed in a variety of genres.
- Describe how the narrator's point of view or the author's choice of narrator affects a work of fiction.

Communication

- Analyze and evaluate oral persuasive presentations for accuracy, clarity and effectiveness.
- Listen to gather and interpret information.
- Listen to other viewpoints in discussions, conversations and interviews.
- Increase vocabulary through listening.
- Plan, research and deliver oral presentations for specific audiences.
- Develop criteria evaluating the speaking performance of self and others.

Writing

- Write in a variety of forms with an emphasis on persuasive writing.
- Write, revise and edit personal and business correspondence to a standard acceptable in the workplace and for higher education.
- Use writing to analyze and interpret ideas and to record experiences.
- Establish standards and use them to evaluate writing of self and others.

- Write to support differing points of view.
- Write for extended periods of time.
- Use characteristics of good literature as a model to refine personal writing style.
- Write to inform, explain, analyze, entertain, learn, describe, persuade and to transact business.
- Write responses to readings.
- Use rules of Standard American English (SAE) confidently in writing a range of simple-to-more-complex pieces.
- Select and write in a wide variety of forms including multiple-paragraph compositions, friendly letters, expressive and informational pieces, memos, business letters, essays, reports, articles and proposals.
- Improve one's own writing through conferencing with others and through self-reflection.

Research

- Collect, analyze, evaluate and organize information from a variety of sources, including technology.
- Create a documented research project.
- Distinguish between primary and secondary sources.

Activities:

- Read the same book your child is reading and discuss the book with your child.
- Take your child to a movie or play.
- Analyze what is read for point of view and author's purpose.
- Compare and contrast movies and plays to books read focusing on American Literature.
- Encourage your child to keep a journal.
- Encourage your child to write letters or send e-mail to family and friends.
- Get your child a library card and regularly go to the library or bookstore.
- Research a topic of interest. Present the information gathered in a variety of formats including written text, oral presentations, pamphlets and videos.
- When watching television or a video, discuss the conflict in the episode.
- Discuss the point of view of a character.
- Allow your child to read and write, JUST FOR FUN!

Books:

- Brokaw, Tom. *The Greatest Generation*.
- Burnes, Olive Ann. *Cold Sassy Tree*.
- Cisneros, Sandra. *Woman Hollering Creek and Other Stories*.
- Collins, Billy. *Sailing Alone Around the Room*.
- Conroy, Pat. *The Lords of Discipline*.
- Dove, Rita. *On the Bus with Rosa Parks: Poems*.
- Faulkner, William. *The Sound and the Fury*.
- Korman, Gordan. *Jake Reinvented*.
- Mitchell, Margaret. *Gone With the Wind*.
- Wright, Richard. *Black Boy*.

SCIENCE

Chemistry

Overview: Students in grade eleven are generally enrolled in **Chemistry** or **Physics**. The standards for chemistry establish scientific inquiry skills and core content for all chemistry courses in South Carolina schools. In chemistry, students acquire a fundamental knowledge of the substances in our world—their composition, properties, and interactions—that should not only serve them as a foundation for the more advanced science courses in secondary and postsecondary education but should also provide them with the science skills that are necessary in chemistry-oriented technical careers. For a complete listing of the Chemistry Indicators, go to

<http://www.myscschools.com/Offices/cso/science/StandardsRevision2004.cfm>

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

- Demonstrate an understanding of atomic structure and nuclear processes.
- Demonstrate an understanding of the structures and classifications of chemical compounds.
- Demonstrate an understanding of the types, the causes, and the effects of chemical reactions.
- Demonstrate an understanding of the structure and behavior of the different phases of matter.
- Demonstrate an understanding of the nature and properties of various types of chemical solutions.

Activities:

Have your child:

- Investigate the SC Junior Academy of Science and participate with your child in workshops and activities.
- Visit museums, industrial exhibits, and electrical generating plants and discuss the physics observed in everyday life.
- Discuss current science events as they appear in the nightly news and in the newspaper.
- Visit with your child a local science fair, the Roper Mountain Science Center in Greenville and a planetarium.

Websites:

- Amusement Park Physics – www.learner.org/exhibits/park-physics/
- 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>
- National Parent Information Network – www.npin.org

- SC MAPS – <http://www.ces.clemson.edu/scmaps>
- South Carolina Department of Education – www.myscschools.com
- South Carolina ETV's Resources for Teachers, Students and Parents – www.knowitall.org
- The Particle Adventure, The Fundamentals of Matter and Forces – www.particleadventure.org/
- The Smithsonian Institution – www.si.edu
- The Weather Channel – www.weather.com/
- What Should I Look For in the Science Program in My Child's School: A Guide for Parents – <http://www.scimathmn.org>

Physics

The standards for physics establish the scientific inquiry skills and core content for all physics courses in South Carolina schools. In these courses, students acquire a fundamental knowledge of motion, matter, and energy that should not only serve them as the foundation for their study of science in institutions of higher education but should also provide them with the science skills that are necessary in physics-oriented technical careers. A total of seven high school core area standards for physics must be taught: the required standards for physics are standards 1 through 5; any two of standards 6 through 10 are required in addition. The decision about which two of standards 6 through 10 to address in any particular physics course should be based on the objectives for that course. In order for students to achieve these goals, physics courses must include inquiry-based instruction, allowing students to engage in problem solving, decision making, critical thinking, and applied learning. Teachers, schools, and districts should therefore use these standards to make decisions concerning the structure and content of all their courses in physics and to make choices regarding additional content, activities, and learning strategies that will be determined by the objectives of the particular courses. For a complete listing of the Physics Indicators, go to <http://www.myscschools.com/Offices/cso/science/StandardsRevision2004.cfm>.

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.

Physics

- Demonstrate an understanding of the principles of force and motion and relationships between them.
- Demonstrate an understanding of the conservation, transfer, and transformation of mechanical energy.
- Demonstrate an understanding of the properties of electricity and magnetism and the relationships between them.
- Demonstrate an understanding of the properties and behaviors of mechanical and electromagnetic waves.
- Demonstrate an understanding of the properties and behaviors of sound.

SOCIAL STUDIES

Students should be able to:

United States History and the Constitution

- Summarize the distinct characteristics of each colonial region in the settlement and development of America.
- Summarize the early development of representative government and political rights in the American colonies.
- Explain the impact of the Declaration of Independence and the American Revolution on the American colonies and on the world at large.
- Explain the development and effectiveness of the Articles of Confederation.
- Summarize the creation of a new national government.
- Analyze the political philosophies, fundamental principles, and purposes of the United States Constitution and the Bill of Rights.
- Compare differing economic and political views that led to the emergence of the American two-party political system.
- Summarize the origins and the evolution of the United States Supreme Court and the power it has today.
- Explain the impact and challenges of westward movement.
- Explain how the Monroe Doctrine and the concept of manifest destiny affected United States' relationships with foreign powers.
- Compare economic development in different regions of the country during the early nineteenth century.
- Compare the social and cultural characteristics of the North, the South, and the West during the antebellum period.
- Explain how the political events and issues that divided the nation led to civil war.
- Outline the course and outcome of the Civil War.
- Summarize the progress made by African Americans during Reconstruction and the reversals brought by Reconstruction's end.
- Summarize developments in business and industry in the late 19th century.
- Summarize the factors that influenced the economic growth of the United States and its emergence as an industrial power.
- Explain the transformation of America from an agrarian to an industrial economy.
- Analyze the rise of the labor movement.
- Explain the causes and effects of urbanization in late nineteenth-century America.
- Explain changes caused by large-scale immigration into the United States in the late nineteenth century.
- Compare the reforms and key figures of the progressive movement in America.
- Analyze the development of American expansionism.
- Explain the influence of the Spanish-American War on the emergence of the United States as a world power.
- Compare United States foreign policies in different regions of the world during the early twentieth century."
- Outline the causes and course of World War I.
- Explain the effects of scientific innovation and consumer financing options in the 1920s on the United States and the world.
- Explain cultural responses to the period of economic boom-and-bust.
- Explain the causes and effects of the social conflict and change that took place during the 1920s.

- Explain the causes and effects of the stock market crash of 1929 and the Great Depression.
- Compare the first and second New Deals as responses to the economic bust of the Great Depression.
- Analyze the United States' decision to enter World War II.
- Summarize and illustrate on a time line the major events and leaders of World War II.
- Summarize the impact of World War II and war mobilization on the home front.
- Summarize the responses of the United States and the Allies to war crimes.
- Explain the lasting impact of the scientific and technological developments in America after World War II.
- Explain the causes and effects of social and cultural changes in postwar America.
- Summarize the origins and course of the Cold War.
- Summarize the key events and effects of the Vietnam War.
- Compare the domestic and foreign policies under all administrations from Harry Truman to Jimmy Carter.
- Explain the movements for racial and gender equity and civil liberties.
- Summarize key events in United States foreign policy from the end of the Reagan administration to the present.
- Summarize key economic issues in the United States since the fall of communist states.

Activities:

Have your child:

- Watch and discuss the nightly news to become aware of current events related to U.S. foreign policy.
- Read the newspaper to develop an understanding of world events and to form an opinion about U.S. foreign policies and involvement in the world.
- Watch historical programming on PBS, the History Channel, or other documentary channels. Discuss how events shown in programs are related to historical topics being studied in school.
- Interview and record oral histories of family or community members who were involved in the civil rights movement.
- Visit the state archives and state and county museums. Compare cultural characteristics of South Carolina across different time periods (for example, antebellum period, post-World War II)
- Read speeches, diary accounts, and memoirs related to significant events in U.S. history, such as the experience of people participating in westward expansion or the civil rights movement.
- Read and interpret Supreme Court decisions in landmark cases.



Books:

- Brokow, Tom. *The Greatest Generation*.
- Brown, Dee. *Bury My Heart at Wounded Knee*.
- Davidson, James West and Mark Hamilton Lytle. *After the Fact: The Art of Historical Detection*.

ENGLISH LANGUAGE ARTS CONTINUED

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
- South Carolina Department of Education – www.myschools.com
- Surfing the Net with Kids – www.surfnetkids.com
- The Internet Public Library – www.ipl.org
- United States Department of Education – www.ed.gov/parents

SCIENCE CONTINUED

- Demonstrate an understanding of the properties and behaviors of light and optics.
- Demonstrate an understanding of nuclear physics and modern physics.
- Demonstrate an understanding of the principles of fluid mechanics.
- Demonstrate an understanding of the principles of thermodynamics.

Books

- Eisenkraft, Arthur. *Active Physics*.
- Macaulay, David. *The Way Things Work: From Levers to Lasers. Cars to Computers; A Visual Guide to the World of Machines*.



SOCIAL STUDIES CONTINUED

- Davis, Kenneth C. *Don't Know Much about History*.
- Wallechinsky, David. *David Wallechinsky's The People's Almanac Presents the Twentieth Century History with the Boring Parts Left Out*.
- Wiesel, Elie. *Night*.

Web Sites:

- American Local History Network - www.alhn.org
- Awesome Stories, Famous Trials - www.lawbuzz.com
- History of the World - www.historychannel.com
- Public Broadcast System (PBS) - www.pbs.org
- News and Current Events - www.usdaily.com
- Smithsonian National Museum of American History - www.americanhistory.si.edu
- SCETV - www.knowitall.org
- South Carolina Department of Education - www.myschools.com
- South Carolina Teaching, Learning and Connecting - www.sctlc.com
- The Gilder Lehrman Institute of American History - www.gilderlehrman.org
- Time Online - www.time.com

South Carolina Education Oversight Committee

PO Box 11867 Columbia, SC 29211 (803) 734-6148 www.sceoc.org

A collaborative project sponsored by: South Carolina Department of Education, South Carolina Education Oversight Committee, Spring 2006

