



A Guide for Parents and Families About What Your 10th 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 **10th 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 **10th 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 guide efforts to measure student achievement. Results of tests (PACT and end-of-course examinations) 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 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 ten** are generally enrolled in **Algebra 2, Geometry or Mathematics for the Technologies 2**. Algebra 1 standards are appropriate for the course Mathematics for the Technologies 2, since students at the end of Mathematics for the Technologies 2 are scheduled to take the Algebra 1/Mathematics for the Technologies 2 end-of-course examination. 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 2 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, hand-held 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,
- right triangle relationships, and,
- circles.

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

Mathematics for the Technologies 2

Mathematics for the Technologies 2 is the second of a two-year consecutive sequence that meets the state Algebra 1 standards. At the completion of this course, students will take the Algebra 1/Mathematics for the Technologies 2 end-of-course examination. The course includes:

- generalizations, algebraic operations, and symbols and matrices;
- algebraic expressions in problem-solving situations (extended);
- interpretations and proportional change;
- linear functions and data representations (extended);
- systems of linear equations;
- quadratic functions and data representations;
- quadratic equations; and,
- other functions such as exponential growth and decay.

In Mathematics for the Technologies 2, hand-held 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.

Sample Assessment Questions

Sample questions for Algebra 2 and Geometry are not available at this time. Sample questions for Mathematics for the Technologies 2 are available at <http://www.myscschools.com/offices/assessment/Programs/endofcourse/TGuide-112003.doc>. Information concerning the mathematics portion of the High School Assessment Program (HSAP), which students take for the first time in grade 10 and must pass to receive a diploma, can be found at <http://www.myscschools.com/offices/assessment/Programs/HSAP/HSAPmathri030804.doc>.

Activities:

- Investigate the use of a credit card with a \$4000 limit and 18.99 percent interest. Using the Internet or mail-order catalogs, “purchase” whatever you want. Record the purchases, taxes, shipping, and other charges. What happens if a minimum payment of \$50 is made each month? Calculate the time necessary to pay the balance if no additional charges are added.
- An office manager must decide between two copiers for his office. Which is the most economical option? **a.** Acme Copiers leases a machine for \$50/week with a \$0.02/copy additional charge. **b.** Printo leases the same machine for \$165/week with an additional \$.004/copy. Explain your reasoning.
- The baseball coach for the city team needs a home run fence for the field. He asked the city council to have a fence surround the outfield so that it will be 325 feet down both the left and right field lines and 400 feet to straightaway center field. How many feet of fence will be needed and what shape should it be? (From Carolyn Sessions, Baton Rouge, Louisiana)

Books:

- Abbott, Edwin A. *Flatland: A Romance of Many Dimensions*.
- Johnson, Art. *Building Geometry: Activities for Polydron Frameworks*.
- Niederman, Derrick. *Hard-to-Solve Math Puzzles*.
- Smith, Kurt. *Logic Puzzles to Bend Your Brain*.

ENGLISH LANGUAGE ARTS

The English language arts standards for grades nine through twelve contained in the *South Carolina English Language Arts Curriculum Standards 2002* provide the essential content that students are expected to learn during their entire high school English language arts career. Students enrolled in **grade ten** are generally enrolled in **English 2**. Those students who took English 2 in the ninth grade may be enrolled in English 3 in grade ten.

Reading

- Read and analyze works of literature from different times and cultures in terms of similarities and differences, common themes, types, perspectives and historical significance.
- Read and interpret consumer print materials including instructions, policy statements, user manuals, lab reports and Web sites.
- Read and analyze poetry and drama.
- Increase vocabulary through extensive reading.
- Read for extended periods of time and select and read widely for pleasure.
- Use a general dictionary, a specialized dictionary and a thesaurus.
- Evaluate informational texts (such as newspaper editorials and campaign speeches) for its effectiveness.
- Analyze the use of figurative language in texts.
- Read a variety of multicultural texts.
- Begin noticing 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.
- 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

- Listen to analyze information for accuracy, bias and speaker's purpose.
- Analyze oral reports of small groups.
- Listen carefully to evaluate the viewpoints of others.
- Increase vocabulary through listening.
- Demonstrate effective listening skills in conferences and interviews.
- Plan and present oral presentations for specific audiences.
- Analyze speeches for accuracy, bias, point of view, purpose and style.
- Select information from research, organize and present the information orally.
- Develop criteria (standards) and use to evaluate oral presentations by self and others.
- Participate and respond appropriately in conferences and interviews.
- Present and evaluate dramatic readings.
- Develop appropriate oral responds to a variety of reading materials.

- Analyze spoken information for bias, accuracy, purpose, point of view and style.
- Plan oral presentations for specific audiences and purposes, giving sources used, and be able to answer questions about the topic.
- Understand and adjust the use of formal and informal language to fit an audience and purpose when speaking.
- Analyze historical speeches to determine why they are memorable.

Writing

- Write in a variety of forms including multiple-paragraph compositions, friendly letters, expressive and informational pieces, memos, business letters, essays, reports, articles, proposals and job applications.
- Analyze writing of others and suggest how it might be improved.
- Use writing to interpret, analyze and evaluate ideas.
- Analyze writing to determine accuracy, bias, point of view, purpose and style.
- Develop criteria to evaluate the writing of self and others.
- Demonstrate qualities of good writing by thinking and planning before writing, arranging information in a clear logical manner, revising and editing for clarity, and gauging the impact on the audience.
- Use characteristics of good literature as a model to refine personal writing style.
- Write for sustained periods of time.
- Improve one's own writing through conferencing with others and through self-reflection.

Research

- Collect, evaluate and organize information to produce reports and papers using available technology.
- Analyze and bring together information from a variety of sources to produce clear, effective reports and papers.
- Credit the sources of ideas and information used in reports and papers.
- Use a variety of sources, including technology, to locate information.
- Document sources of information using a standardized system of documentation.

Sample Assessment Questions

Sample questions for English 2 are not available at this time. Information concerning the English language arts portion of the High School Assessment Program (HSAP), which students take for the first time in grade 10 and must pass to receive a diploma, can be found at <http://www.myschools.com/offices/assessment/Programs/HSAP/releaseitems.htm>.

Activities:

- Read the same book your child is reading and discuss the book with your child.
- Take your child to a movie or play.
- Compare and contrast movies and plays to books read from different times in history and from different cultures.
- Encourage your child to keep a journal.
- Encourage your child to write letters or send e-mails to family and friends.
- Reward your child with books or a journal.

SCIENCE

Biology

Overview: Students in **grade ten** are generally enrolled in **Biology** or **Applied Biology I and II**. The academic standards for biology establish the scientific inquiry skills and core content for all biology classes in South Carolina schools. The course should provide students with a conceptual understanding of the world around them – a basic knowledge of the biological universe that should serve as the foundation for higher level high school science courses. The standards should be used to make decisions concerning the structure and content for Biology classes that are taught. All Biology 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.

Biology I

Biology I is an introductory laboratory-based course (minimum of 30 percent hands-on investigation) designed to familiarize the student with the major concepts of biological science. This course provides numerous opportunities for students to develop science process skills, critical thinking, and an appreciation for the nature of science through inquiry-based learning experiences. Investigative, hands-on lab activities that address the high school inquiry standards are an integral part of this course. Biology I course standards are presented for a one-year traditional or one-semester block course that meets the state Biology I standards. The Biology end-of-course test will be given at the completion of the course. The course includes:

- the cell;
- molecular basis of heredity;
- biological evolution;
- interdependence of organisms;
- matter, energy, and organization in living systems;
- behavior and regulation; and
- biological classification of organisms.

Applied Biology I and II

Applied Biology I and II are laboratory courses that emphasize problem-solving, decision-making, critical thinking and applied learning. Students explore the concepts and principles of biology and apply these concepts and principles to issues in the workplace, in society and in personal experiences. Investigative, hands-on lab activities that address the high school inquiry standards are an integral part of this course. Applied Biology is designed to be both academically rigorous and realistic for students pursuing technical careers and for students planning to continue their education at the technical or collegiate level. Students wishing to pursue a career in health and/or industrial fields are encouraged to complete a two-year sequence of Applied Biology. Instructors are encouraged to work with occupational instructors and local business/industry to incorporate career and technology application of life science. The Biology I/Applied Biology II end-of-course examination will be given at the conclusion of Applied Biology II. The courses include:

- the cell;
- the molecular basis of heredity;
- biological evolution;
- interdependence of organisms;
- matter, energy, and organization in living systems;
- behavior and regulation; and
- biological classification of organisms.

Sample Assessment Question

Sample questions for Biology I and Applied Biology I and II are available at <http://www.myschools.com/offices/assessment/Programs/endofcourse/Tguidebio.pdf>

Chemistry

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.myschools.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:

- Visit natural history museums, state parks, Riverbanks Zoo, and SC Aquarium and discuss the characteristics and behaviors of the animals and plants you observe.
- Read articles in *Scientific American*, *Popular Science* and *Nature Magazine*.
- View television programs such as Nova, Scientific American, Discover Channel and discuss how man has impacted the environment.
- Investigate the SC Junior Academy of Science and attend workshops and other events with your child - www.erskine.edu/scjas/.

SOCIAL STUDIES

Students should be able to:

Global Studies

- Explain the influence of Athenian government and philosophy on other civilizations.
- Summarize the essential characteristics of Roman civilization and explain their impact today.
- Explain the rise and growth of Christianity during the classical era.
- Explain the impact of religion in classical Indian civilization.
- Explain the influence of the Byzantine Empire.
- Summarize the origins, beliefs, and expansion of Islam.
- Summarize the influences of trans-Saharan trade on Africa.
- Compare the origins and characteristics of the Mayan, Aztec, and Inca civilizations.
- Summarize the functions of feudalism and manorialism in medieval Europe.
- Analyze the upheaval and recovery that occurred in Europe during the Middle Ages.
- Compare the impact of the Renaissance and the Reformation on life in Europe.
- Explain the long-term effects of political changes that occurred in Europe during the sixteenth, seventeenth, and eighteenth centuries.
- Summarize the origins and contributions of the scientific revolution.
- Explain the ways that Enlightenment ideas spread through Europe and their effect on European society.
- Explain the significant changes that took place in China in the nineteenth century.
- Explain the impact of European involvement on other continents during the era of European expansion.
- Compare the revolutions that took place on the European and American continents in the nineteenth century.
- Explain the causes and effects of transformation in Europe in the nineteenth century.
- Compare the political actions of European, Asian, and African nations in the era of imperial expansion.
- Summarize the causes of World War I.
- Summarize the worldwide changes that took place following World War I.
- Explain the impact of the Great Depression and political responses in Germany, Britain, and the United States.
- Explain the causes, key events, and outcomes of World War II.
- Compare the ideologies and global effects of totalitarianism, communism, fascism, Nazism, and democracy in the twentieth century.
- Exemplify the lasting impact of World War II.
- Summarize the ideologies and global effects of communism and democracy.
- Summarize the worldwide effects of the Cold War.
- Compare the challenges and successes of the movements toward independence and democratic reform in various regions following World War II.
- Summarize the impact of economic and political interdependence on the world.

Activities:

Have your child:

- Watch and discuss the nightly news. Look for examples of global interdependence and its effects on the world.
- Create a travel brochure that illustrates daily life in one of the classical civilizations. View historical documentaries on television (for example, on PBS or the History Channel) and discuss how the events shown in the program are related to historical topics being studied at school.
- Read biographies about people from a variety of places and time periods being studied.
- Interview family or community members about what it was like to live through World War I, II, or the Cold War.

Books:

- Adkins, Lesley and Roy Adkins. *Handbook to Life in Ancient Rome*.
- Birch, Cyril, ed. *Stories from a Ming Collection*.
- Brokow, Tom. *The Greatest Generation*.
- Atchity, Kenneth J., ed. *The Classical Greek Reader*.
- Bunsen, Matthew. *Encyclopedia of the Middle Ages*.
- Dersin, Diane, ed. *What Life Was Like on the Banks of the Nile, Egypt 3050-30 BC*.
- Ebry, Patricia. *The Cambridge Illustrated History of China*.
- Fischer, Louis. *Gandhi: His Life and Message for the World*.
- Hakim, Joy. *The First Americans*.
- Hamilton, Edith. *The Greek Way*.
- Haugaard, Erik. *Cromwell's Boy*.
- Keegan, John. *Illustrated History of the First World War*.
- Le Carre, John. *The Spy Who Came in from the Cold*.
- Macaulay, David. *Castle*.
- Macaulay, David. *Cathedral*.
- Macaulay, David. *Pyramid*.
- Macaulay, David. *Roman City*.
- More, Thomas. *Utopia*. Translated by Paul Turner
- Ross, Frank, Jr. *Oracle Bones, Stars, and Wheelbarrows*.
- Saggs, H.W.F. *Babylonians*.
- Sosin, Gene. *Sparks of Liberty: An Insider's Memoir of Radio Liberty*.
- Statler, Oliver. *Japanese Inn*.
- Vail, John. *"Peace, Land, Bread!": A History of the Russian Revolution*.
- Wiesel, Elie. *Night, Dawn, The Accident: Three Tales*.

Web Sites:

- Electronic Research - Library of Congress - <http://lcweb.loc.gov/>
- National Museum of African Art - www.si.edu/nmafa/
- National Gallery of Art - www.nga.gov
- National Geographic Society - www.nationalgeographic.org
- SCETV - www.knowitall.org
- South Carolina Department of Education - www.myschools.com
- South Carolina Teaching, Learning and Connecting - www.sctlc.com



MATHEMATICS CONTINUED

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 CONTINUED

- Attend a lecture or speech with your child. Help your child analyze the speaker's remarks for accuracy, bias and purpose.
- Determine a purpose for reading a magazine such as Consumer Reports with your child.
- 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.
- Allow your child to read and write, JUST FOR FUN!

Books:

- Carter, Jimmy. *An Hour Before Daylight: Memories of a Rural Boyhood.*
- Hillenbrand, Laura. *Seabiscuit: An American Legend.*
- Kidd, Sue Monk. *The Secret Life of Bees.*
- McCullers, Carson. *The Member of the Wedding.*
- Myers, Walter Dean. *Bad Boy: A Memoir.*
- Orwell, George. *Animal Farm.*
- Vonnegut, Kurt. *Slaughterhouse Five.*
- Wong, Janet S. *Behind the Wheel: Poems about Driving.*

Web Sites:

- Folger Shakespeare Library – www.folger.edu
- 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
- The Internet Public Library – www.ipl.org
- United States Department of Education – www.ed.gov/parents

SCIENCE CONTINUED

- Discuss current science events in the nightly news and in the newspaper.

Books:

- Carson, Rachel. *Silent Spring.*
- Collard, Sneed B. *Acting for Nature: What Young People Around the World Have Done to Protect the Environment.*
- Cornell, Joseph. *Sharing Nature with Children.*

Web Sites:

- Amusement Park Physics – www.learner.org/exhibits/parkphysics/
- Chemistry Societies' Network-Visual Interpretation of the Table of Elements – www.chemsoc.org/viselements/
- Exploratorium – www.exploratorium.edu
- National Parent Information Network – www.npin.org
- SC MAPS – 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
- South Carolina Forestry Commission – www.state.sc.us/forest/
- The Particle Adventure, The Fundamentals of Matter and Forces – www.particleadventure.org/
- 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>

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