



Department of Teaching & Learning
Parent/Student Course Information

Physical Science
(SC 4126)
One year
Grade 8

Counselors are available to assist parents and students with course selections and career planning. Parents may arrange to meet with the counselor by calling the school's guidance department.

COURSE DESCRIPTION

Physical Science is a laboratory-oriented program that provides students with a foundation in the physical sciences. Laboratory investigations and activities are the primary means for developing problem-solving skills and for developing the major concepts and principles of the fields of science which make up the eighth grade program. Students also develop experimental research and design skills in a problem area of their choice. Research and decision-making skills are further developed through the investigation of local or national issues and concerns that result from the interaction of science, technology and society. Students will take the Standards of Learning (SOL) test for Grade 8 Science. Specific dates for the spring SOL test will be announced by the school.

COURSE GOALS

- Develop a foundation of concepts and principles in the physical sciences
- Develop problem-solving and decision-making skills through experimentation, research and discussions
- Develop an awareness of the interdisciplinary nature of science and its relevance to society
- Develop basic communication skills
- Explore the application of scientific principles in careers and in other areas of interest
- Provide reading and study skills

PREREQUISITE

Life Science 7

OPTIONS FOR NEXT COURSE

Earth Science (*preferred*)

Biology

REQUIRED TEXTBOOK

Holt Science and Technology: *Physical Science* (2007)

MINIMUM REQUIREMENTS

- Demonstrate knowledge and understanding of all core objectives via laboratory investigations; issue investigations and projects; and oral and/or written tests, quizzes and reports
- Participate in the core laboratory investigations adhering to all safety procedures
- Prepare written reports for laboratory investigations
- Conduct a minimum of one experimental project including the selection of a problem, experimental design for solving the problem, carrying out the experiment and reporting the results
- Investigate science-related issues of local, regional, national, or global concern
- Investigate career opportunities and areas of interest in science

The Instructional Objectives that Comprise the Physical Science 8 Course are Summarized as Follows from the Prescribed Curriculum:

- Goal One: The learner will understand and investigate using the basic process skills and tools of science. **(PS 1)**
- Goal Two: The student will understand and investigate the basic nature of matter. **(PS 2)**
- Goal Three: The student will understand and investigate the modern and historical models of atomic structure. **(PS 3)**
- Goal Four: The student will understand and investigate the organization and use of the periodic table of elements to obtain information. **(PS 4)**
- Goal Five: The student will understand and investigate changes in matter and the relationship of these changes to the Law of Conservation of Matter and Energy. **(PS 5)**
- Goal Six: The student will understand and investigate states and forms of energy and how energy is transferred and transformed. **(PS 6)**
- Goal Seven: The student will understand and investigate temperature scales, heat and heat transfer. **(PS 7)**
- Goal Eight: The student will understand and investigate characteristics of sound and technological applications of sound waves. **(PS 8)**
- Goal Nine: The student will understand and investigate the nature and technological applications of light. **(PS 9)**
- Goal Ten: The student will understand and investigate scientific principles and technological applications of work, force and motion. **(PS 10)**
- Goal Eleven: The student will understand and investigate basic principles of electricity and magnetism. **(PS 11)**

Dr. Aaron C. Spence, Superintendent
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For further information please call (757) 263-1070.

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Alternative formats of this publication which may include taped, Braille, or large print materials are available upon request for individuals with disabilities. Call or write The Department of Teaching and Learning, Virginia Beach City Public Schools, 2512 George Mason Drive, P.O. Box 6038, Virginia Beach, VA 23456-0038. Telephone 263-1070 (voice); fax 263-1424; 263-1240 (TDD) or email her at Amanda.Malbon@VBSchools.com

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CHARTING THE COURSE

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(Revised August 2017)