COURSE GUIDE

SCIENCE

CALVERT ACADEMY™

Science

1ST GRADE SCIENCE

2 Semesters

1st Grade Science begins the process of teaching important principles of observation which will in turn assist children as they learn about the physical universe. Ten colorful worktexts present lessons on the human body, the five senses, animals, plants, energy, health, machines, and more.

2ND GRADE SCIENCE

2 Semesters

2nd Grade Science teaches the development of critical observation skills as part of instruction in the four major science strands of life sciences, earth and space sciences, physical sciences, and the nature of science. This course captivates students with lessons on how animals are alike and different, how people are alike and different, caring for pets, using the five senses, colors, shapes, sizes, caring for our world, the seasons, and more.

3RD GRADE SCIENCE

2 Semesters

3rd Grade Science is a basic elementary course that exposes students to the designs and patterns in the physical universe. This course provides a broad survey of the major areas of science, including the human body, plants, animals, health and nutrition, matter, sound waves, earth science, and heat energy.

4TH GRADE SCIENCE

2 Semesters

Building on fundamental concepts, 4th Grade Science provides a broad survey of the major areas of science, including the study of plants and animals, ecology, work and simple machines, electricity and magnetism, properties of water and matter, weather, the solar system, and the different spheres of earth.

5TH GRADE SCIENCE

2 Semesters

5th Grade Science provides a broad survey of the major areas of science, including the study of cells, plants and animals, ecology, energy, geology, properties of matter, and the natural cycles of life. The curriculum seeks to develop students' ability to understand and participate in scientific inquiry.

6TH GRADE SCIENCE

2 Semesters

This full-year middle school course focuses on introducing students to the diversity of physical and life sciences. The course includes an overview of scientific principles and procedures, and leads students toward a clearer understanding of matter, motion, and ecosystems.

7TH GRADE SCIENCE

2 Semesters

Students enrolled in this course explore the structure of life, covering everything from atoms and cells to the human body. The course also explores how humans have affected our atmosphere and marine ecosystems.

PHYSICAL SCIENCE

2 Semesters

Physical Science is an intermediate course that covers the structure and properties of matter, measurement and mathematics of science, geology, oceanography, natural cycles and resources, science today and tomorrow, and astronomy. Students at this level show an understanding of interrelationships between organisms and the environment, recognize patterns in systems, and expand their knowledge of cellular dimensions of living systems.

BIOLOGY

2 Semesters

This compelling two-semester course engages students in the study of life and living organisms and examines biology and biochemistry in the real world. This is a year-long course that encompasses traditional concepts in biology and encourages exploration of new discoveries in this field of science. The components include biochemistry, cell biology, cell processes, heredity and reproduction, the evolution of life, taxonomy, human body systems, and ecology.

CHEMISTRY

2 Semesters

The components of this course include chemistry and its methods, the composition and properties of matter, changes and interactions of matter, factors affecting the interactions of matter, electrochemistry, organic chemistry, biochemistry, nuclear chemistry, mathematical applications, and applications of chemistry in the real world.

ENVIRONMENTAL SCIENCE

2 Semesters

Environmental science is a captivating and rapidly expanding field, and this two-semester course offers compelling lessons that cover many different aspects of the field: ecology, the biosphere, land, forests and soil, water, energy and resources, and societies and policy. Through unique activities and material, high school students connect scientific theory and concepts to current, real-world dilemmas, providing them with opportunities for mastery in each of the segments throughout the semester.

PHYSICAL SCIENCE*

2 Semesters

This full-year course focuses on traditional concepts in chemistry and physics and encourages exploration of new discoveries in this field of science. The course includes an overview of scientific principles and procedures, and leads students toward a clearer understanding of matter, energy, and the physical universe.

*Physical Science is only available to incoming 9th grade students who have not taken Physical Science as a main course in 8th grade.

PHYSICS

2 Semesters

This full-year course focuses on traditional concepts in physics and encourages exploration of new discoveries in this field of science. The course includes an overview of scientific principles and procedures, and leads students toward a clearer understanding of motion, energy, electricity, magnetism, and the laws that govern the physical universe.