Science

Path	Earth Science	Integrated Science 9	Integrated Science 10	Biology Chemistry Physics AP Biology AP Chemistry AP Physics AP Environmental Scier
		Biology Chemistry Physics	Biology Chemistry Physics	

Earth Science

Earth Science provides a comprehensive eighth grade study of the Earth and space sciences in efforts to teach the relevance of Earth and science to everyday life and our environment through project-based learning. The 8th grade will build an understanding of the world around us through learning Astronomy, Plate Tectonics, Minerals, Rocks and Structure, Surface Processes, Winds, Oceans, Weather and Climate, Natural Resources and Earth System Evolution contexts. The course incorporates problem solving through fieldwork, data analysis using technology, as well as laboratory in-class activities.

Integrated Science 9

In ninth grade, the student will learn concepts and skills of physics in an exciting, innovative and meaningful way. This course will explore energy, forces and motion. The content is always placed in a larger context that emphasizes student learning through inquiry, while motivating students through a problem-based learning approach. For example, students learn about principles of motion through kinematic equations and subsequently use their knowledge to develop a specific soccer training plan to improve their skills. The first of four courses in the Project Lead the Way (PLTW) Biomedical Science program is the Principles of Biomedical Science (PBS) course. PBS is a rigorous STEM course focused on concepts of human medicine, physiology, genetics, microbiology and public health. The course offers a comprehensive exposure to basic biological principles through the context of real-world cases involving human body systems. In 9th grade, students study the first three units of the course.

Integrated Science 10

In tenth grade, the students will build upon concepts learned in ninth grade to explore waves, electricity and magnetism and optics. Scientific inquiry skills are embedded in the direct instruction, wherein students learn to ask scientific questions, form and test hypotheses, and use logic and evidence to draw conclusions about the concepts. Lab activities reinforce critical thinking, writing, and communication skills and help students develop a deeper understanding of the nature of science. The first of four courses in the Project Lead the Way (PLTW) Biomedical Science program is the Principles of Biomedical Science (PBS) course. PBS is a rigorous STEM course focused on concepts of human medicine, physiology, genetics, microbiology and public health. The course offers a comprehensive exposure to basic biological principles through the context of real-world cases involving human body systems. In 10th grade, students cover the last three units of the course.

Chemistry

Students learn about the behavior of matter and the changes it undergoes. The big ideas from which the essential questions are gleaned include the Nature of Science, Matter and Atoms, Temperature, Energy

and Heat and Chemical Changes. The course is based on inquiry learning by making observations in the laboratory, recording and analyzing data, making inferences and explanations.

Biology

Students study living organisms including their structure, function, growth, origin, evolution and distribution. This course builds upon the basic biological concepts learned in ninth and tenth grade Principles of Biomedical Science. The course teaches how biology connects with technology, society, the environment and the student. The course begins with an introduction to the nature of science and biology, including the major themes of structure and function, matter and energy flow, systems, and interconnectedness of life. Students then apply those themes to the structure and function of the cell, cellular metabolism, and biogeochemical cycles. Building on this foundation, students explore the connections and interactions between living things by studying genetics, ecosystems and natural selection, and evolution. The course ends with an applied look at human biology.

AP Chemistry

AP Chemistry builds students' understanding of the nature and reactivity of matter. After studying the structure of atoms, molecules, and ions, students move on to solve quantitative chemical problems and explore how molecular structure relates to chemical and physical properties. Students will examine the molecular composition of common substances and learn to predictably transform them through chemical reactions. The equivalent of an introductory college-level chemistry course, AP Chemistry prepares students for the AP exam and for further study in science, health sciences, or engineering.

AP Biology

AP Biology builds students' understanding of biology on both the micro and macro scales. After studying cell biology, students move on to understand how evolution drives the diversity and unity of life. Students will examine how living systems store, retrieve, transmit, and respond to information and how organisms utilize free energy. The equivalent of an introductory college-level biology course, AP Biology prepares students for the AP exam and for further study in science, health sciences, or engineering.

AP Physics B

AP Physics B is a non-calculus survey course covering five general areas: Newtonian mechanics, thermal physics, electricity and magnetism, waves and optics, and atomic and nuclear physics. Students will gain an understanding of physics' core principles and then apply them to problem-solving exercises. They'll learn how to measure the mass of a planet without weighing it, find out how electricity makes a motor turn, and learn how opticians know how to shape the lenses for glasses. The equivalent of an introductory college-level course, AP Physics B prepares students for the AP exam and for further study in science and engineer