



HIGH SCHOOL COURSE LIST

Science

AP[®] Biology +

This course guides students to a deeper understanding of biological concepts, including the diversity and unity of life, energy and the processes of life, homeostasis, and genetics. Students learn about regulation, communication, and signaling in living organisms, and interactions of biological systems. Students carry out a number of learning activities, including readings, interactive exercises, extension activities, hands-on and virtual laboratory experiments, and practice assessments. These activities are designed to help students gain an understanding of the science process and critical-thinking skills necessary to answer questions on the AP[®] Biology exam.

Prerequisites: Biology Honors, Chemistry Honors, Algebra 1 Honors (Summit Curriculum) (or equivalents), and teacher/school counselor recommendation required; success in Algebra 2 Honors (Summit Curriculum) highly recommended

AP[®] Chemistry +

Students solve chemical problems by using mathematical formulation principles and chemical calculations in addition to laboratory experiments. They build on their general understanding of chemical principles and engage in a more in-depth study of the nature and reactivity of matter. Students focus on the structure of atoms, molecules, and ions, and then go on to analyze the relationship between molecular structure and chemical and physical properties. To investigate this relationship, students examine the molecular composition of common substances and learn to transform them through chemical reactions with increasingly predictable outcomes. Students prepare for the AP[®] exam.

Available on Online School platform only.

Prerequisites: Chemistry Honors, Algebra 2 Honors (Summit Curriculum) (or equivalents), and teacher/school counselor recommendation

AP[®] Environmental Science ⓘ +

AP[®] Environmental Science is equivalent to an introductory college-level environmental science course and is designed to prepare students for the College Board AP[®] Environmental Science Exam. AP[®] Environmental Science is interdisciplinary, incorporating various topics from different disciplines and areas of science.

Prerequisites: Students must have taken at least one year of high school algebra and successfully completed a high school earth science



HIGH SCHOOL COURSE LIST

Science

Biology (Core) ⓘ □ ⊕

In this course, students focus on the chemistry of living things: the cell, genetics, evolution, the structure and function of living things, and ecology. The program consists of online lessons, including extensive animations, an associated reference book, collaborative activities, and laboratory experiments students can conduct at home.

Prerequisite: Middle school Life Science (or equivalent)

Biology (Comprehensive) ⓘ □ ⊕

In this comprehensive course, students investigate the chemistry of living things: the cell, genetics, evolution, the structure and function of living things, and ecology. The program consists of in-depth online lessons, including extensive animations, an associated reference book, collaborative explorations, and laboratory experiments students can conduct at home.

Prerequisite: Middle school Life Science (or equivalent)

Biology (Honors) ⓘ □ ⊕

This course provides students with a challenging honors-level biology curriculum, focusing on the chemistry of living things: the cell, genetics, evolution, the structure and function of living things, and ecology. The program consists of advanced online lessons, including extensive animations, an associated reference book, collaborative explorations, and laboratory experiments students can conduct at home. Honors activities include debates, research papers, and extended laboratories.

Prerequisites: Middle school Life Science (or equivalent), success in previous science course, and teacher/school counselor recommendation

Chemistry (Core) ⓘ □ ⊕

This course surveys all key areas of chemistry, including atomic structure, chemical bonding and reactions, solutions, stoichiometry, thermochemistry, organic chemistry, and nuclear chemistry. The course includes direct online instruction, laboratories, and related assessments, used with a problem-solving book.

Prerequisites: Middle school Physical Science or Physical Science (Core) and a satisfactory grasp of algebra basics, evidenced by success in Algebra 1 (Summit Curriculum) (or equivalents)



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Science

Chemistry (Comprehensive) ⓘ □ +

This comprehensive course gives students a solid basis to move on to future studies. The course provides an in-depth survey of all key areas, including atomic structure, chemical bonding and reactions, solutions, stoichiometry, thermochemistry, organic chemistry, and nuclear chemistry. The course includes direct online instruction, laboratories, and related assessments, used with an online problem-solving book.

Prerequisites: Satisfactory completion of either middle school Physical Science or Physical Science (Core) (or equivalents), and a solid grasp of algebra basics, evidenced by success in Algebra 1 (Summit Curriculum) (or equivalent)

Chemistry (Honors) ⓘ □ +

This advanced course gives students a solid basis to move on to more advanced courses. The challenging course surveys all key areas, including atomic structure, chemical bonding and reactions, solutions, stoichiometry, thermochemistry, organic chemistry, and nuclear chemistry, enhanced with challenging model problems and assessments. Students complete community-based written research projects, treat aspects of chemistry that require individual research and reporting, and participate in online threaded discussions.

Prerequisites: Success in previous science course, Algebra 1 (Summit Curriculum), Algebra 1 Honors (Summit Curriculum) (or equivalents), and teacher/school counselor recommendation

Earth Science (Core) ⓘ □ +

This course provides students with a solid earth science curriculum, focusing on geology, oceanography, astronomy, weather, and climate. The program consists of online lessons, an associated reference book, collaborative activities, and laboratories students can conduct at home. The course provides a base for further studies in geology, meteorology, oceanography, and astronomy, and gives practical experience in implementing scientific methods.

Prerequisite: Middle school Earth Science (or equivalent)

Earth Science (Comprehensive) ⓘ □ +

This course provides students with a comprehensive earth science curriculum, focusing on geology, oceanography, astronomy, weather, and climate. The program consists of in-depth online lessons, an associated reference book, collaborative activities, and laboratories students can conduct at home. The course prepares students for further studies in geology, meteorology, oceanography, and astronomy courses, and gives them practical experience in implementing scientific methods.

Prerequisite: Middle school Earth Science (or equivalent)



HIGH SCHOOL COURSE LIST

Science

Earth Science (Honors) ⓘ □ +

This challenging course provides students with an honors-level earth science curriculum, focusing on geology, oceanography, astronomy, weather, and climate. The program consists of online lessons, an associated reference book, collaborative activities, and laboratories students can conduct at home. The course prepares students for advanced studies in geology, meteorology, oceanography, and astronomy courses, and gives them more sophisticated experience in implementing scientific methods. Additional honors assignments include debates, research papers, and extended collaborative laboratories.

Prerequisites: Middle school Earth Science (or equivalent), middle school Physical Science (or equivalent) is recommended, and teacher/school counselor recommendation

Environmental Science ½

This course surveys key topic areas, including the application of scientific process to environmental analysis; ecology; energy flow; ecological structures; earth systems; and atmospheric, land, and water science. Topics also include the management of natural resources and analysis of private and governmental decisions involving the environment. Students explore actual case studies and conduct five hands-on, unit-long research activities, learning that political and private decisions about the environment and the use of resources require accurate application of scientific processes, including proper data collection and responsible conclusions.

Prerequisites: Success in previous high school science course and teacher/counselor recommendation

Forensic Science ½ □

This course surveys key topics in forensic science, including the application of the scientific process to forensic analysis, procedures and principles of crime scene investigation, physical and trace evidence, and the law and courtroom procedures from the perspective of the forensic scientist. Through online lessons, labs, and analysis of fictional crime scenarios, students learn about forensic tools, technical resources, forming and testing hypotheses, proper data collection, and responsible conclusions.

Prerequisites: Successful completion of at least two years of high school science, including Biology (Comprehensive) (or equivalent); Chemistry (Comprehensive) (or equivalent) is highly recommended



HIGH SCHOOL COURSE LIST

Science

Introduction to Renewable Technologies

With concerns about climate change and growing populations' effects on traditional energy supplies, scientists, governments, and societies are increasingly turning to renewable and innovative energy sources. In the Introduction to Renewable Technologies course, students learn all about the cutting-edge field of renewable energy and the exciting new technologies that are making it possible. They explore new ways of generating energy and storing that energy, from biofuels to high-capacity batteries and smart electrical grids. Students also learn more about the environmental and social effects of renewable technologies and examine how people's energy decisions influence policies.

Available on Online School platform only.

Prerequisite: None

Physical Science (Core)

Students explore the relationship between matter and energy by investigating force and motion, the structure of atoms, the structure and properties of matter, chemical reactions, and the interactions of energy and matter. Students develop skills in measuring, solving problems, using laboratory apparatuses, following safety procedures, and adhering to experimental procedures. Students focus on inquiry-based learning with laboratory investigations and experiences.

Prerequisite: Middle school Physical Science (or equivalent)

Physics (Comprehensive)

This course provides a comprehensive survey of all key areas: physical systems, measurement, kinematics, dynamics, momentum, energy, thermodynamics, waves, electricity, and magnetism, and introduces students to modern physics topics such as quantum theory and the atomic nucleus. The course gives students a solid basis to move on to more advanced courses later in their academic careers. The program consists of online instruction, laboratories, and related assessments, plus an associated problem-solving book.

Prerequisites: Algebra 2 (Summit Curriculum) and Pre-Calculus/Trigonometry (or equivalents); Pre-Calculus/Trigonometry strongly recommended as a prerequisite, but this course may instead be taken concurrently with Physics (Comprehensive)