Pompano Beach High School
2024-2025
Science - Course Curriculum Guide

Abbreviation & Terminology Key

Advanced Placement (AP) – is a program in the United States created by the College Board, which offers college-level curricula and examinations to high school students. American colleges and universities often grant placement and course credit to students who obtain high scores on the examinations. These courses award 2 extra quality points towards the weighted GPA.

Career & Technical Education (CTE) – Programs that are responsible for developing and maintaining educational programs that prepare individuals for occupations important to Florida's economic development. Each program is aligned to Career Clusters.

Honors (H) – The courses contain academic rigor, which is more than simply assigning to students a greater quantity of work. Through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi -faceted, students are challenged to think and collaborate critically on the content they are learning. These courses award 1 extra quality point towards the weighted GPA.

Local Honors (LH) – Specific courses are designated as "Local Honors" because they contain rigor that supports the awarding of an extra quality point towards the weighted GPA, which is used for class rank. These courses are not considered "Honors" by state universities and Bright Futures.

Pre-Advanced Placement (Pre-AP) – These courses deliver grade-level appropriate instruction through focused course frameworks, instructional resources, and learning checkpoints. These courses are designed to support all students across varying levels of abilities through focus. This designation signals consistent, high standards in focused courses that help build, strengthen, and reinforce students' content knowledge and critical thinking skills.

SCIENCE

Environmental Science Honors

Credit: 1.0

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data.

Prerequisite: Biology I Honors

AP Chemistry I

Credit: 1.0

Learn about the fundamental concepts of chemistry including structure and states of matter, intermolecular forces, and reactions. You'll do hands-on lab investigations and use chemical calculations to solve problems.

Physics 1 Honors

Credit: 1.0

Physics I will provide opportunities to student for an introductory study of the theories and laws governing the interaction of matter, energy, and the forces of nature. Topic will include but not be limited to: kinematics, dynamics, energy, work and

power, heat, thermodynamics, wave characteristics, light, electricity, magnetism, and nuclear physics. Laboratory activities that include the use of the scientific method, measurement, laboratory apparatus and safety are an integral part of this course. The Common Core State Standards (CCSS) for literacy are infused through instructional practices that ensure reading from a wide range of informational texts and provide extensive research and writing opportunities, while the mathematical practices focus on applying critical thinking and logical reasoning skills.
Special Note: This course meets an academic unit for NCAA.

Anatomy and Physiology Honors

Credit: 1.0
Anatomy is the branch of biology concerned with the study of the structure of organisms and their parts. Anatomy is a branch of natural science which deals with the structural organization of living things. It is an old science, having its beginnings in prehistoric times.

STEM Research II Honors

Credit 1.0
The course is designed to provide students with a basic understanding of what scientific research is and the principles on which it is based. The student will discover their interests in science, technology, engineering or math and learn how to identify problems to study, develop hypotheses, research questions and specify independent and dependent variables or the importance of research ethics.

AP Biology

Credit: 1.0
AP Biology will provide students with a college level course in biology and will prepare the student to seek credit and/or appropriate placement in college biology courses. Topics will include, but not be limited to: molecular and cellular biology, organismal biology, and population biology. Laboratory activities, which include the use of the scientific method, measurement, laboratory apparatus, and safety, are an integral part of this course. Students must take the Advanced Placement Biology exam.
Prerequisite: A or B in Biology I, Chemistry I Honors completed, teacher consultation.

AP Physics 1

Credit: 1.0
Learn about the foundational principles of physics as you explore Newtonian mechanics; work, energy, and power; mechanical waves and sound; and introductory, simple circuits. You'll do hands-on laboratory work to investigate phenomena.

AP Environmental Science

Credit: 1.0
Explore and investigate the interrelationships of the natural world and analyze environmental problems, both natural and human-made. You'll take part in laboratory investigations and field work.