



SCIENCE

Living Environment (Regents)

The purpose of this course is to provide students with awareness of the natural world, basic scientific concepts, and a basic understanding of biological processes and generalizations. The course is divided into seven units, study of life, human physiology, reproduction and development, genetics, evolution, and diversity and ecology. The emphasis is placed on human physiology, genetics, and ecology. The class meets six times during the six day cycle with three labs per cycle.

Grade: 9 1 unit

Prerequisite: none 1 year

** Regents exam is final exam for course.

Earth Science (Regents)

The purpose of Earth Science is to give the student an overall view of events reflected by changes between chemical, physical and biological aspects of the environment. The student will also be focusing on the lab inquiry process and development of a formal lab report. The purpose is to collect, organize, and interpret data while becoming familiar with simple standard measuring apparatus. Topics include, but are not limited to geology, meteorology, oceanography and astronomy. The lab counts as 25% of the class grade.

Grade: 10 1 unit

Prerequisite: Regents Living Environment 1 year

Chemistry (Regents)

This course aims to provide a general understanding of the physical nature of substances and of the basic importance of chemical change. The goals of this course are to provide the students for the Regents exam for which the course is named, and to give students a solid background to refer to during their higher education experiences. These goals are met through class discussion, student-written laboratories, projects, and individual student-teacher interaction. Students are taught to think creatively in the realm of chemical facts, to use appropriate techniques in solving chemical problems, and to use scientific methods in solving problems. The students will view matter and its changes from the subatomic, atomic, and molecular levels. Factors, which regulate and bring about these changes as well as their systematic classification, will also be studied. Note: This is the expected 3rd unit of science for college bound students.

Three laboratory periods per six-day cycle are required in addition to six class periods. It is recommended that the student take Algebra 2 concurrently with Chemistry.

Grade: 11 – 12 1 unit

Prerequisite: Regents Algebra 1 & Geometry 1 year

Regents Earth Science 1 year

Regents Living Environment 1 year

Physics (Regents)

The purpose of this course is to present a modern view of physics with major emphasis placed on the fundamental underlying concepts. The objectives not only include comprehension of the

facts but also intends to have the student gain an appreciation of the scientific method, develop the habit of critical thinking, and the ability to form or change opinions after the careful weighing of evidence. The course includes Mechanics and Forces, Wave Motion and Behavior, Optics, Electricity and Magnetism, Nuclear Energy and Modern Physics. The course will also include work on 1 long-term project of teacher discretion. Basic principles of physics are investigated and observed in laboratory and natural settings as well as analyzed mathematically. The lab counts as 25% of the class grade. Note: This is the expected 4th unit of science for college bound students.

Grade: 12	1 unit
Prerequisite: Living Environment Regents	1 year
Regents Earth Science	1 year
Regents Chemistry	1 year
Passing Trigonometry Regents	*or with teacher approval

Applied Science

Applied Science will focus on basic principles that can be experienced in everyday life. It will incorporate topics such as basic chemistry and general physics while expanding on concepts from previous science courses. In addition, new topics such as alternative energy and GIS systems will be explored. Note: This course is taught in an online format. This class is taught every other year.

Grade: 10-12	1 unit
Prerequisite: None	1 year

Environmental Science

Students are introduced to the basic ecological systems of the environment and how humans effect the environment. Students will participate in active discussions and complete multimedia projects relating to the course. In addition to class work, each student will be required to complete 1 substantial project each quarter that allows the student to actively participate and learn about their environment. The project will count as 25% of the student's grade. Note: This course is taught in an online format. This class is taught every other year.

Grade: 10 - 12	1 unit
Prerequisite: none	1 year

Introduction to Forensic Science

This course is designed to be a very basic, exploratory experience for students who may have an interest in forensic science. The presentation will be provided through a laboratory setting with each investigation culminating in a written summary or report. The goal of the course is not to prepare students for college level classes, rather to help them determine if this is a program they would like to pursue. Areas of study include, but are not limited to, document authenticity, hair and fiber analysis, and fingerprinting.

Grade: 11 - 12	1/2 unit
Prerequisites: Living Environment, Earth Science	

Introduction to Human Anatomy and Physiology

This is a general survey course with the purpose of providing students with an exposure to the structure and function of the human body. The material is presented systematically with the organization of the body. After an initial introduction, each organ system is explored in more depth. This course is designed to provide a foundation for students' future studies. In addition, students learn to develop their study skills which will benefit their efforts in all classes.

Grades: 11 – 12

1/2 unit

Prerequisites: Living Environment, Earth Science

AP Biology - *Online*

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes — energy and communication, genetics, information transfer, ecology, and interactions.

LABORATORY REQUIREMENT

This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry based investigations that provide students with opportunities to apply the science practices.

Grade: 11 and 12

1 unit/1 year

Prerequisite: Students should have successfully completed
high school courses in biology.
