

SCIENCE

EARTH SCIENCE

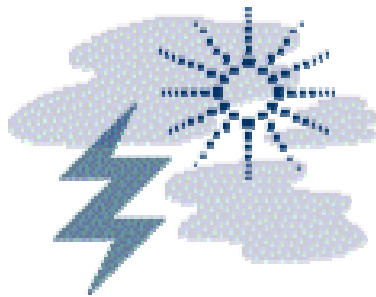
Earth Science is a laboratory-based course for Regents credit. It is the science that considers the earth, its material, processes, history and environment in space.

Matter, energy, space and time can be put into perspective through an inquiry-centered study of the student's environment on Earth. In addition to the major high school sciences of biology, chemistry, and physics, sciences such as astronomy, geology, geography, oceanography and meteorology play major parts in the development of earth science.

In addition to a class period every day, each student is enrolled in a separate laboratory class that meets once every four days.

Computer software includes word processing, spreadsheets, databases, and computer-aided instruction on earthquakes and volcanoes.

1 CREDIT



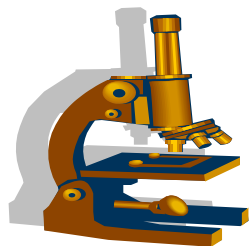
BIOLOGY

Biology is the science of life - a dynamic process. All living things are constantly changing - using energy, growing, reproducing, and responding to the environment. Students of biology will investigate major unifying themes in their study living things. These themes include the pattern of living things, the interaction of living things and the environment, the relationship between the structures and functions of various parts of living organisms, the continuity of life, and biologic change.

In addition to a class period every day, each student is enrolled in a separate laboratory class that meets once every four days. Successful completion of the lab component of the course is required to be eligible to take the Living Environment Regents exam. In addition to the 1200 hour lab requirement, New York State requires 5 mandated labs. If these labs are not successfully completed, the student is not eligible to take the Living Environment Regents exam.

Computer software includes videodiscs, computer-aided laboratory dissection, and computer-aided instruction of the human anatomy.

1 CREDIT



CHEMISTRY - Regents (Grade 11)

The Chemistry course concentrates on the organized investigation of the materials to their properties. In this course the student deals with the interaction of matter and energy in chemical reactions. Each student is scheduled for a class each day and a separate laboratory period every other day. Since the student will take the Regents examination at the completion of the course, the New York State syllabus is closely followed.

Computer software includes videodiscs and computer-based laboratory investigations.

Prerequisite - must pass Math A Regents exam or permission of instructor.

1 CREDIT

PHYSICS

The study of physics like art, literature, and music attempts to understand the Universe. It includes content areas on mechanics, energy, electricity and magnetism, wave phenomena and modern physics. The course is unique in that it utilizes selected literature to generate the scientific topics. Students will make connections between science, history and literature to gain a deeper insight into the concepts of matter and energy.

In addition to a class period every day, each student is enrolled in a separate laboratory class that meets every other day.

Each student will take the Regents examination at the completion of the course and will receive 1 credit.

Computer software includes videodiscs, computer-based laboratory investigations, and multimedia development.

Prerequisite - must pass Chemistry or obtain permission of instructor before entering Physics. In addition, the student should be enrolled in Course III mathematics or higher.

1 CREDIT



APPLIED SCIENCE PROGRAM

Key elements to the applied course structure include:

1. Performance standards
2. Integrated thematic units geared toward real-world skills
3. Project-based instruction
4. Authentic assessment
5. Technology integration
6. Student-centered, small group-based learning approach

APPLIED SCIENCE I - BIOLOGY

This course is an introductory course to Biology with content areas including, ecology, the human body, watershed dynamics, and environmental factors. In addition to protocol labs, students develop divergent research questions, adapt methods, and carry out preliminary investigations. This stage of inquiry is intended to be both exploratory and fun, and accompanied by activities designed to develop students understanding of the sociocultural context of contemporary scientific research.

In addition to a class every day, each student is enrolled in a lab class that meets once every four day. The Biology Regents will be given at the end of the year.

1 CREDIT



APPLIED SCIENCE II - EARTH SCIENCE

This course is an introductory course to Earth Science that is developed around a model that views the student as a technician and the classroom as a workplace. The goal of the course is to create workplace situations in which the students apply academic knowledge and workplace skills to solve problems. Content area includes Earth Science.

In addition to a class period every day, each student is enrolled in a separate lab class that meets once every four days. The Earth Science Regents will be given at the end of the year.

Prerequisite - Must have taken Applied Biology I or have taken Regents Biology. In addition the student must be enrolled in Applied Math II

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APPLIED SCIENCE III - CHEMISTRY I

Students engage in interactive research projects based on the content, protocol labs, and explorations developed throughout the Applied Science program. Students work in Team to plan and conduct experiments that test hypotheses. They then communicate their findings to others and further develop their understandings through a process of social argumentation and peer review. At this level, the students and teacher make use of modern communication technologies, as well as face-to-face conferences with students in other classes and schools.

The interactive research projects are designed to drive the specific science content needed to prepare the student to meet the New York State Learning Standards in Chemistry.

Prerequisite - must pass Applied Science II or have taken Biology. In addition, the student should be enrolled in Applied Math II or its equivalent.

1 CREDIT

APPLIED SCIENCE IV - CHEMISTRY II

Students engage in a specific interactive research project. They work in teams to plan and conduct experiments that test their hypotheses. They communicate their findings to others and further develop their understandings through a process of social argumentation and peer review. At this level, the students and teacher make use of modern communication technologies, as well as face-to-face conferences with students in other classes and schools.

The interactive research project leads to a publication and public presentation of the findings

Prerequisite - must pass Applied Chemistry I or Regents Chemistry. In addition, the student should be enrolled in Applied Math IV or its equivalent.

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SENIOR RESEARCH (Grade 12) - Elective

Students engage in a specific interactive research project. They work in teams to plan and conduct experiments that test their hypotheses. They communicate their findings to others and further develop their understandings through a process of social argumentation and peer review. At this level, the students and teacher make use of modern communication technologies, as well as face-to-face conferences with students in other classes and schools.

The interactive research project leads to a publication and public presentation of the findings

Students in this course work as mentors to research teams in Applied Chemistry II. In addition, they may also collaborate on projects with students in other courses, including Principles of Engineering and Creativity and Innovation.

Prerequisite - Accelerated students who have passed physics and permission of instructor.

1 CREDIT