

Science

Requirement:

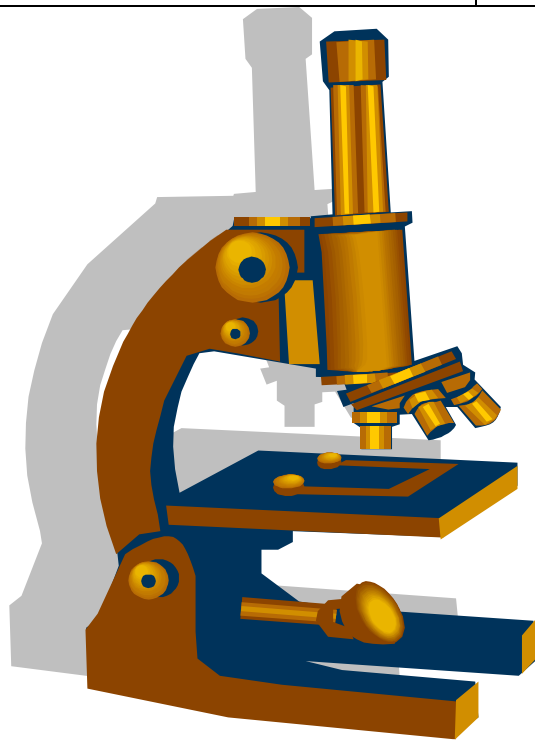
1 credit of Physical Science (9th grade)

1 credit of Laboratory “Life” Science (10 grade)

**Four-year Colleges require 1 year of Physical Science and 2 years of Lab-Science (Biology, Chemistry, and Physics)*

The Science Team’s goal is to empower each student to investigate, analyze, and synthesize scientific data and information. This experience begins with exploring science, creating investigations, solving complex problems, and more.

Class	Credit	Graduation Requirement	Grades
Physical Science			
Chemistry	1	Lab Science	10th-12th
Forensic Science	1	Lab Science	11th-12th
Physics	1	Lab Science	11th-12th
Physical Science *Required 9th grade*	1	Physical Science	9th
Biological Life Science *Required for 10th grade*			
Animal Biology	1	Lab Science/Oc. Ed	10th-12th
AP Biology	1	Lab Science	11th-12th
Environmental Biology/ Aquaculture Science	1	Lab Science/Oc. Ed	10th-12th
Biology	1	Lab Science	10th-12th
Plant Biology/Botany	1	Lab Science/Oc. Ed	10th-12th
Forensic Science	1	Lab Science	11th-12th
Pre Veterinary/Pre Medical	1	Lab Science/Oc. Ed	11th-12th



REQUIRED:

Students need to take Physical Science their 9th grade year and a Laboratory “Biological Life” Science their 10th grade year.

Physical Science

PHYSICAL SCIENCES:



Chemistry

Credit: 1.00
Duration: One Year
Available for Grades: 10, 11 and 12
Prerequisites: Physical Science and Algebra IA

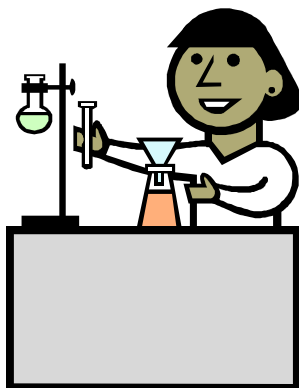
Costs: Recommend a scientific calculator
Meets Graduation Requirements for: Lab Science

Description: Chemistry is the study of matter and how it combines and reacts. The use of the scientific method to investigate all types of matter is stressed in this class. Several observations and labs on chemical phenomenon will be expected of students to complete. Topics of the course include: properties of matter, atomic theory, use of the Periodic Table, bonding, chemical equations, gas laws, solutions and acid base reactions.

Forensic Science

Credit: 1.00
Duration: One Year
Available for Grades: 11 and 12
Prerequisites: Physical Science
Meets Graduation Requirements for: Lab Science

Description:
 Are you a fan of CSI, Cold Case, and Criminal Minds to name a few? The advancement in criminal investigations is explosive and mind boggling. The fact remains that to solve all the cases involves using science and technology. This course will include information on deductive reasoning, digital imaging, fingerprinting, paper chromatography, blood splatter analysis, and other impressions and prints. Basic science process skills would be helpful to succeed in this class.



Physics

Credit: 1.00
Duration: One Year
Available for Grades: 11 and 12
Prerequisites: Physical Science, Algebra IA, Geometry
Meets Graduation Requirements for: Lab Science

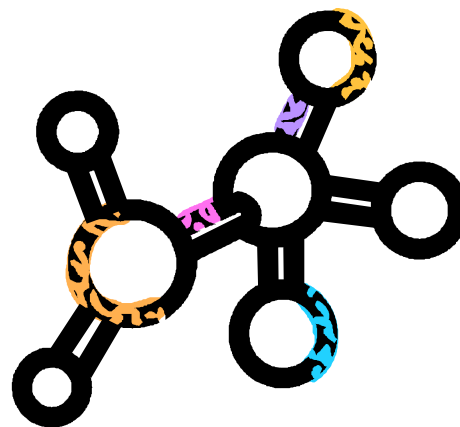
Description: Physics is the study about the nature of basic things such as motion, forces, energy, matter, heat, sound, light and nuclear particles. All sciences are built on the knowledge of physics.



Physical Science

Credit: 1.00
Duration: One Year
Available for Grades: 9th
Meets Graduation Requirements for: Physical Science

Description: Physical Science uses inquiry in a “hands-on way” to gain an understanding of matter and energy, and then applies that knowledge to solve human problems. Students will use writing, reading, and mathematics to investigate the properties, structures, and changes of physical systems. Explore the atomic nature of matter, chemical reactions, motion of objects, wave behavior, forces, and forms of energy that shape the world around us!



BIOLOGICAL LIFE SCIENCES:

Animal Biology

Credit: 1.00

Duration: One Year

Available for Grades: 10, 11 and 12

Cost: \$20.00 FFA Dues is recommended

Meets Graduation Requirement For:

Lab Science, Occupational Education or Elective

Description:

This course will This covers biologic principles in a hands on manner that uses animals as the main focus. Students will learn about animal taxonomy, nutrition, health, reproduction, genetics, and species specific information. Students will participate in the Agri-Science Fair along with opportunities in FFA Career Development Events. Students will have mastery in a specific animal skill such as Meat Science, Poultry Science, Dairy Foods, Food Science, and Ag Issues.



Environmental Science/Aquaculture Science

Credit: 1.00

Duration: One Year

Available for Grades: 10, 11 and 12

Cost: \$20.00 FFA Dues is recommended

Meets Graduation Requirement For:

Lab Science, Occupational Education or Elective

Description:

This course will include, but not limited to: origins and opportunities in aquaculture plants, animals, water, aquaculture operations, sales and marketing along with fish biology. Math and science applications will be used in this course. Students will also be involved with the local fish hatcheries in our area. FFA activities are encouraged for all students. To participate in our salmon spawning and other related activities with the Department of Fish and Wildlife, FFA membership is required. Students will be responsible for raising trout and salmon in our Aquaculture facility on campus.

Note: Tech Prep College Credits available (FISH 122, Introduction to Aquaculture, 3 credits) Provided at Grays Harbor Community College with successful completion of this course to any student receiving a "B" or better.

AP Biology

Credit: 1.00

Duration: One Year

Available for Grades: 11 & 12

Meets Graduation Requirement For:

Lab Science or Elective

Description: This course is designed to be the equivalent of a college introductory biology course usually taken by biology majors during their first year. Some AP students, as college freshmen, are permitted to undertake upper-level courses in biology or to register for courses for which biology is a prerequisite. Other students may have fulfilled a basic requirement for a laboratory science course and will be able to undertake other courses to pursue their majors.



The AP Biology course is designed to be taken by students after the successful completion of a first course in high school biology and one in high school chemistry. It aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology.

The two main goals of AP Biology are to help students develop a conceptual framework for modern biology and to help students gain an appreciation of science as a process. The ongoing information explosion in biology makes these goals even more challenging. Primary emphasis in an AP Biology course should be on developing an understanding of concepts rather than on memorizing terms and technical details. Essential to this conceptual understanding are the following: a grasp of science as a process rather than as an accumulation of facts; personal experience in scientific inquiry; recognition of unifying themes that integrate the major topics of biology; and application of biological knowledge and critical thinking to environmental and social concerns.

Science

Biology



Credit: 1.00
Duration: One Year
Available for Grades: 10, 11 and 12
Prerequisite: Physical Science
Meets Graduation Requirements for: Lab Science

Description: This introduction to Biology uses inquiry to gain a scientific understanding of living systems, and then applies that knowledge to solve human problems. Students will use writing, reading, and mathematics to explore the characteristics, organization, and relationships of living organisms. Learn about the diversity of life by discovering the role of energy, cells, genetics, ecology, and technology!



Plant Biology/ Botany

Credit: 1.00
Duration: One Year
Available for Grades: 10, 11 and 12

Cost: \$20.00 FFA Dues is recommended

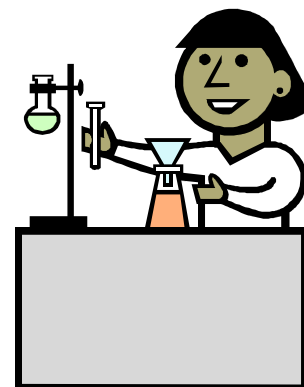
Meets Graduation Requirement For: Lab Science, Occupational Education, or Elective

Description: Growing plants in the greenhouse and selling them to the public is one of the many opportunities in Botany/Plant Science. Scientific investigation and inquiry are incorporated into plant production along with plant identification, plant propagation, and more.

Note: Tech Prep College Credits available (HORT 100, General Horticulture, 5 credits) Provided at South Puget Sound Community College with successful completion of this course to any student receiving a "B" or better.

***Plant Biology can be transferred to some Washington colleges as Lab Science. Check with your college choice.**

Forensic Science



Credit: 1.00
Duration: One Year
Available for Grades: 11 and 12
Prerequisites: Physical Science
Meets Graduation Requirements for: Lab Science

Description: Are you a fan of CSI, Cold Case, and Criminal Minds to name a few? The advancement in criminal investigations is explosive and mind boggling. The fact remains that to solve all the cases involves using science and technology. This course will include information on deductive reasoning, digital imaging, fingerprinting, paper chromatography, blood splatter analysis, and other impressions and prints. Basic science process skills would be helpful to succeed in this class.



Pre Veterinary/ Pre Medical Science

Credit: 1.00
Duration: One Year

Available for Grades: 11 and 12
Cost: \$20.00 FFA Dues or \$16.00 Skills USA strongly recommended.

Meets Graduation Requirement For: Lab Science, Occupational Education, or Elective

Note- A strong background in chemistry and biology is necessary. Students must complete a 4 hour job shadow in a local Veterinary/Medical Office during the course of the year.

Description: This high level science class will take information generally discussed in the Animal Biology class and expand on those principles of nutrition, health, reproduction and genetics. Students will learn anatomy and physiology utilizing fetal pig dissections. Students will also be expected to participate in the Agri-Science Fair and Job Interview Career Development Events. General medical office procedures will be covered along with communication skills.