

MARINE SCIENCE
(Grades 10th-11th-12th)
STUDENT OBJECTIVES

Two-Semester Course

Prerequisite: Successful completion of both semesters of Biophysical Science.

Four major topics are covered during the year: salmon biology and hatcheries, Alaska's major commercial fisheries, physical oceanography and biological oceanography. Each unit is approximately one quarter in length. This course is designed for students interested in pursuing a career in fisheries or the ocean sciences as well as for those students who have difficulty with previous science courses. An understanding and appreciation for the marine environment is stressed throughout the course. Local hatcheries and the school boat, M/V JACK COTANT, are used for field trips.

C-1 CONCEPTS OF LIFE SCIENCE

SC2 Develop an understanding of the structure, function, development, life cycle and diversity of living organisms.

SC2.1 Describe and compare the characteristics of the taxonomy of the animal kingdom through models

SC2.3 State the function of major physiological systems through testing

SC3 Develop an understanding that all organisms are linked to each other and their physical environments through the transfer and transformation of matter and energy.

SC3.2 Identify ecological relationships (competition, symbiosis, food webs, human impacts, etc.) through worksheets

D-1 CONCEPTS OF EARTH SCIENCE

SD1 Students develop an understanding of Earth's geochemical cycles.

SD1.1 Use a model to demonstrate the rock cycle

SD2 Students develop an understanding of the origins, ongoing processes, and forces that shape the structure, composition, and physical history of the Earth.

SD2.2 Describe how the theory of plate tectonics explains the dynamic nature of its surface through worksheets

SD3 Students develop an understanding of the cyclical changes controlled by energy from the sun and by Earth's position and motion of our solar system.

SD3.1 Recognize the effect of the moon and sun on tides through lab simulations

SD3.2 Identify the causes and effects related to phenomena.(currents. Coriolis effect, waves, earthquakes, etc) through quizzes