

AP Environmental Science

Course Standards

The standards below are adapted from the revised Maine State Learning Results and the National Science Education Standards.

Casco Bay High School Science Department Standards:

Processes of Science--Students will be able to: ask questions and define problems, develop and use models, plan and carry out investigations, analyze and interpret data, use mathematics, information and computer technology, and computational thinking, construct explanations and design solutions, engage in argument from evidence, and obtain, evaluate and communicate information.

Science and Technology--Students will understand the history and nature of scientific knowledge and technology, the processes of inquiry and technological design, and the impacts science and technology have on society and the environment.

AP Environmental Science Standards:

Earth -- Students will describe and analyze the biological, physical, energy, and human influences that shape and alter Earth Systems.

Topics covered: Earth Science, Atmosphere, Global Water Resources and Use, Soil and Soil Dynamics, Ozone, Global Warming

Land and Water Use--

Topics covered: Agriculture, Forestry, Rangelands, Development, Mining, Fishing, Global Economics

Pollution--

Topics covered: Pollution Types, Impacts on the Environment and Humans, Economic Impacts

Matter and Energy -- Students will describe the structure, behavior and interactions of matter at the atomic level and the relationship between matter and energy.

Topics covered: Energy Concepts, Energy Consumption, Fossil Fuel Resources and Use, Nuclear Energy, Hydroelectric Power, Energy Conservation, Renewable Energy

Biodiversity -- Students will describe and analyze the evidence for relatedness among and within diverse populations of organisms and the importance of biodiversity.

Topics covered: Population Biology Concepts, Human Populations, Impacts on Environment

Ecosystems -- Students will describe and analyze the interactions, cycles, and factors that affect short-term and long-term stability and change.

Topics covered: Ecosystem Structure, Energy Flow, Ecosystem Diversity, Natural Ecosystem Change, Natural Biogeochemical Cycles