

AP Environmental Science

INTRODUCTION OF ENVIRONMENTAL PROBLEMS 3 weeks

Where are we now, and where do we want to go?

FOOD PRODUCTION 18 weeks

MATTER AND ENERGY RESOURCES 1 week

ECOSYSTEMS 2 weeks

Dynamics, food chains and webs, and flow of energy

CLIMATE AND WEATHER 2 weeks

Global air circulation, ocean currents, and biomes

POPULATION DYNAMICS 1 week

What causes changes in ecosystems

EARTH SCIENCE 1 week

Plate tectonics, the rock cycle, weathering and erosion, and volcanoes and earthquakes, natural disasters

HUMAN POPULATION 3 weeks

Demography and population distribution

LOSS OF BIODIVERSITY 2 weeks

Endangered plants and animals

GLOBAL WARMING AND OZONE DEPLETION 1 week

Cause and solutions

RENEWABLE ENERGY 2 weeks

Alternate sources of energy

END OF FIRST SEMESTER

NONRENEWABLE ENERGY	1 week
HUMAN HEALTH	2 weeks
Toxic and hazardous substances, disease	
AIR POLLUTION	1 week
Outdoor and indoor pollution	
WATER POLLUTION	2 weeks
Water sources and types of pollution	
SOIL	1 week
Structure of soil, erosion, desertification, and conservation	
TOXIC AND SOLID WASTE	2 weeks
Disposal, regulations, and social boundaries	
FOOD PRODUCTION	18 weeks
Biological, physical, and social boundaries	
PESTICIDES	2 weeks
History, problems, and alternatives	
LAND MANAGEMENT	1 week
Conservation problems and alternatives	
PRESERVING ANIMAL DIVERSITY	1 week
Human encroachment and sustainable management	
ECONOMICS, POLITICS, ETHICS AND THE ENVIRONMENT	2 weeks
Dealing with environmental policy, problem solving, and environmental education	

Physics curriculum

1st Six Weeks

Safe lab procedure
Safe environmental awareness
Scientific method
Accuracy in measuring
Graphing data
Successful use of scientific equipment
Study the effects of forces on motion
Free force diagrams
Understand acceleration

2nd six weeks

Identify and describe motion
Practical application of work theorems
Kinetic and potential energy
Mechanical energy
Calculate momentum in physical systems
Understand and use gravitational forces and their influence on objects

3rd six weeks

Conversion of energy and momentum
Historical development of gravitational forces
Historical development of electrical forces
Historical development of magnetic forces
Analyze influences of electrical charges and distance on electrical forces

4th six weeks

Design and build electrical circuits
Demonstrate the relationship between electricity and magnetism
Practical application of electrical and magnetic forces in daily life

5th six weeks

Understand wave characteristics
Understand their uses in daily activities
Understand behaviors of sound and electromagnetic waves
Analyze and use Laws of Thermodynamics
Understand wave propagation and characteristics

6th six weeks

Evaluate different methods of heat energy transfer
Describe and use the photoelectric effect
Discuss and view line spectra from different gas discharge tubes

Biology 1 scope and sequence

1st six weeks

- The student will...demonstrate safe practices during field and lab investigations use scientific methods to problem solving.
- Investigate and identify cellular processes describe components of organic chemical compounds.
- Know metabolic processes of energy transfers that occur in living organisms know that interdependence and interactions occur within an ecosystem.

2nd six weeks

- The student will...know that cells are the basic structures of all living things and have specialized parts that perform specific duties.
- Know metabolic processes and energy transfers that occur in living things
- Know the structures and functions of nucleic acids in the mechanisms of genetics.

3rd six weeks

- The student will...know the theory of biological evolution
- Develop and use taxonomic key
- Compare the structure and functions of viruses.
- Differentiate between and identify the critical attributes of the kingdoms, bacteria, protista and fungi.

4th six weeks

- The student will...identify characteristics of kingdoms including monerans, protists, fungi, plants and animals.

5th six weeks

- The student will know how an organism grows and how specialized cells, tissues and organs develop
- Know the significance of plants to the environment
- Know that all levels of nature
- Living systems are found within other systems

6th six weeks

- The student will...interpret the functions of vertebrate animals and distinguish them from invertebrate animals
- Investigate and evaluate the interrelationships between humans body systems