



# Environmental Science

The following learning targets represent the major concepts studied and assessed in this course.

## Semester 1:

### **Unit 1: The Living World**

- Explain how ecosystems are organized.
- Create and interpret food chains and food webs.
- Recognize and interpret the complex interactions between organism and their environment.
- Explain the biogeochemical processes that cycle nutrients.

### **Unit 2: Populations**

- Explain the factors that influence the populations of different organisms.
- Explain the differences between the three survivorship curves.
- Use age diagram graphs to explain the current and historical population sizes and trends.

### **Unit 3: Land and Water Use**

- Explain how past and current land and water use practices have affected the environment.
- Describe how current land and water use practices have affected the economy.

## Semester 2:

### **Unit 4: Energy Resources and Consumption**

- Summarize the history and predict the future of human energy use.
- Explain the various types of energy sources including their formation, uses, advantages and disadvantages.
- Develop a plan for energy conservation.

### **Unit 5: Pollution**

- Describe the various types of pollution and their impacts on the environment and economy.
- Explain strategies to reduce the amount of pollution one produces.
- Demonstrate strategies to purify water sources.
- Analyze the economic impacts of pollution, waste disposal, and waste reduction.

### **Unit 6: Global Change**

- Explain why biodiversity is important to an ecosystem and humans.
- Explain how ozone layer is created, destroyed, and its purpose.
- Model how greenhouse gases trap heat within the atmosphere.
- Explain the advantages and disadvantages of the greenhouse effect.
- Explain the ecological and economic impacts of climate change.