

AP® Environmental Science provides students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. The course draws upon various disciplines, including geology, biology, environmental studies, environmental science, chemistry, and geography in order to explore a variety of environmental topics. Topics explored include natural systems on Earth; biogeochemical cycles; the nature of matter and energy; the flow of matter and energy through living systems; populations; communities; ecosystems; ecological pyramids; renewable and nonrenewable resources; land use; biodiversity; pollution; conservation; sustainability; and human impacts on the environment. The equivalent of an introductory college-level science course, AP Environmental Science prepares students for the AP exam and for further study in science, health sciences, or engineering.

The AP Environmental Science course provides a learning experience focused on allowing students to develop their critical thinking skills and cognitive strategies. Scientific inquiry skills are embedded in the direct instruction, wherein students learn to ask scientific questions, deconstruct claims, form and test hypotheses, and use logic and evidence to draw conclusions about the concepts. Frequent no- and low-stakes assessments allow students to measure their comprehension and improve their performance as they progress through each activity.

Students perform hands-on labs and projects that give them insight into the nature of science and help them understand environmental concepts, as well as how evidence can be obtained to support those concepts. Virtual lab activities enable students to engage in investigations that would otherwise require long periods of observation at remote locations and to explore simulations that enable environmental scientists to test predictions. During both hands-on and virtual labs, students form hypotheses; collect, analyze, and manipulate data; and report their findings and conclusions. Throughout this course, students are given an opportunity to understand how biology, earth science, and physical science are applied to the study of the environment and how technology and engineering are contributing solutions for studying and creating a sustainable biosphere.

Summative tests are offered at the end of each unit as well as at the end of each semester, and contain objective and constructed response items. Robust scaffolding, rigorous instruction, relevant material, and regular active learning opportunities ensure that students can achieve mastery of the skills necessary to excel on the AP exam.

This course has been authorized by the College Board® to use the AP designation.

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Length: Two Semesters

## UNIT 1: INTRODUCTION TO AP ENVIRONMENTAL SCIENCE

### LESSON 1: SCIENCE AND THE ENVIRONMENT

#### Study: The Interdisciplinary Science

Identify the many fields of science that contribute to the study and understanding of the interrelated, dynamic systems of Earth's environment. Relate examples of environmental studies and equipment to specialized fields of science. Recommend areas of expertise that might contribute information relevant to specific environmental issues.

Duration: 1 hr Scoring: 0 points

#### Quiz: The Interdisciplinary Science

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 10 points

### **Study: Applied Science and Technology**

Describe the role of technology in environmental science and human society. Identify commonly used devices and systems that are important to environmental studies. Describe the importance of technology and environmental studies to human health and well-being.

Duration: 1 hr Scoring: 0 points

### **Quiz: Applied Science and Technology**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Practice: Science and the Environment**

Identify the many fields of science that contribute to the study and understanding of the interrelated, dynamic systems of Earth's environment. Relate examples of environmental studies and equipment to specialized fields of science. Recommend areas of expertise that might contribute information relevant to specific environmental issues. Describe the role of technology in environmental science and human society. Identify commonly used devices and systems that are important to environmental studies. Use the Internet to locate and collect information about GPS and GIS technology. Discuss the validity and impact of scientific research on environmental issues related to human activities.

Duration: 0 hrs 30 mins Scoring: 10 points

### **Read: Science and the Environment**

Read about science and the environment.

Duration: 1 hr 30 mins Scoring: 0 points

### **Quiz: Science and the Environment**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

### **Explore: GPS and GIS Technology**

Relate examples of environmental studies and equipment to specialized fields of science. Describe the role of technology in environmental science and human society. Identify commonly used devices and systems that are important to environmental studies. Describe the importance of technology and environmental studies to human health and well-being.

Duration: 1 hr 30 mins Scoring: 30 points

### **Lab: Investigate Your Ecological Footprint**

Conduct a scientific investigation, using a scientific process and demonstrating the proper and safe use of laboratory equipment. Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error.

Duration: 1 hr 30 mins Scoring: 40 points

### **Discuss: Investigate Your Ecological Footprint**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

## **LESSON 2: ENERGY AND SYSTEMS**

### **Study: Matter and Energy**

Recognize the major types of matter that make up the biosphere. Recognize the forms of energy that enter and flow through the geosphere. Identify the processes that transform energy as it moves through the geosphere. Compare the characteristics of different surfaces on Earth, including albedo and heat capacity. Differentiate among scavengers, decomposers, and detritivores. Trace the flow of matter and energy through a food chain and a food web.

Duration: 1 hr Scoring: 0 points

### **Quiz: Matter and Energy**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: The Flow of Matter and Energy**

Differentiate among scavengers, decomposers, and detritivores. Trace the flow of matter and energy through a food chain and a food web.

Duration: 1 hr Scoring: 0 points

### **Quiz: The Flow of Matter and Energy**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Biogeochemical Cycles**

Trace the movement of water in the water cycle from one part of the environment to another. Trace the movement of carbon in the carbon cycle from one part of the environment to another. Trace the movement of nitrogen and phosphorus from one part of the environment to another.

Duration: 1 hr Scoring: 0 points

### **Quiz: Biogeochemical Cycles**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Practice: Matter and Energy in the Biosphere**

Recognize the major types of matter that make up the biosphere. Recognize the forms of energy that enter and flow through the geosphere. Identify the processes that transform energy as it moves through the geosphere. Compare the characteristics of different surfaces on Earth, including albedo and heat capacity. Differentiate among scavengers, decomposers, and detritivores. Trace the flow of matter and energy through a food chain and a food web.

Duration: 0 hrs 30 mins Scoring: 10 points

### **Lab: Investigate Cycling of O<sub>2</sub> and CO<sub>2</sub>**

Conduct a scientific investigation, using a scientific process and demonstrating the proper and safe use of laboratory equipment. Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error.

Duration: 1 hr 30 mins Scoring: 40 points

### **Discuss: Investigate Cycling of O<sub>2</sub> and CO<sub>2</sub>**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

## **LESSON 3: INTRODUCTION TO AP ENVIRONMENTAL SCIENCE WRAP-UP**

### **Test (CS): Introduction to AP Environmental Science**

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

### **Test (TS): Introduction to AP Environmental Science**

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

## **UNIT 2: EARTH'S PHYSICAL SYSTEMS**

### **LESSON 1: THE HYDROSPHERE**

#### **Project: Part I — Explore Your Local Physical Environment**

Research and describe the physical features and abiotic factors that characterize the geographical area in which you live.

Duration: 1 hr 30 mins Scoring: 10 points

**Study: Bodies of Water**

Identify the characteristics of the major types of bodies of water. Describe the formation of and characteristics of the major types of bodies of water.

Duration: 1 hr Scoring: 0 points

**Quiz: Bodies of Water**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

**Study: Movements of the Hydrosphere**

Relate solar energy to ocean currents and the distribution of heat around the globe. Describe the causes and effects of ocean waves and tides. Trace the path of groundwater from soil to the ocean.

Duration: 1 hr Scoring: 0 points

**Quiz: Movements of the Hydrosphere**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

**Practice: The Hydrosphere**

Describe the reasons that liquid water can exist on Earth. Describe the formation of and characteristics of the major types of bodies of water. Relate solar energy to ocean currents and the distribution of heat around the globe. Identify reasons for fluctuations in sea level. Describe the causes and effects of ocean waves and tides. Trace the path of groundwater from soil to the ocean.

Duration: 0 hrs 30 mins Scoring: 10 points

**Read: The Hydrosphere**

Read about the hydrosphere.

Duration: 1 hr 30 mins Scoring: 0 points

**Quiz: The Hydrosphere**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

**Lab: Investigate Watershed Analysis**

Conduct a scientific investigation, using a scientific process and demonstrating the proper and safe use of laboratory equipment. Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error.

Duration: 1 hr 30 mins Scoring: 40 points

**Discuss: Investigate Watershed Analysis**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

**LESSON 2: THE ATMOSPHERE****Study: Structure and Movements of the Atmosphere**

Describe the structure, composition, and temperature of Earth's atmosphere. Identify the processes of wind generation and relate them to different types of local and global wind systems.

Duration: 1 hr Scoring: 0 points

**Quiz: Structure and Movements of the Atmosphere**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

**Study: Weather and Climate**

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Describe the major climate zones and their characteristics. Explain how ocean currents, wind patterns, and topography affect climate. Explain how Earth's orbit, tilt, and wobble affect the planet's climate. Describe the effects of El Niño and La Niña on global weather patterns.

Duration: 1 hr Scoring: 0 points

### **Quiz: Weather and Climate**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Practice: The Atmosphere**

Describe the structure, composition, and temperature of Earth's atmosphere. Identify the processes of wind generation and relate them to different types of local and global wind systems. Describe the major climate zones and their characteristics. Explain how ocean currents, wind patterns, and topography affect climate. Explain how Earth's orbit, tilt, and wobble affect the planet's climate. Describe the effects of El Niño and La Niña on global weather patterns. Discuss the validity and impact of scientific research on environmental issues related to human activities.

Duration: 0 hrs 30 mins Scoring: 10 points

### **Lab: Investigate Passive Heating and Cooling**

Conduct a scientific investigation, using a scientific process and demonstrating the proper and safe use of laboratory equipment. Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error.

Duration: 1 hr 30 mins Scoring: 40 points

### **Discuss: Investigate Passive Heating and Cooling**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

## **LESSON 3: THE GEOSPHERE**

### **Study: Earth's Crust and Landforms**

Relate the surface features of Earth's crust to the theory of plate tectonics. Distinguish erosional features and depositional features of Earth's crust.

Duration: 1 hr Scoring: 0 points

### **Quiz: Earth's Crust and Landforms**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Soil Composition and Structure**

Identify the types of weathering and the agents of each type of weathering. Describe the types of soil and the processes of soil formation.

Duration: 1 hr Scoring: 0 points

### **Quiz: Soil Composition and Structure**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Movements of Land and Soil**

Identify the types of erosion and their effects on Earth's crust. Relate the different types of faults to the different types of tectonic plate boundaries.

Duration: 1 hr Scoring: 0 points

### **Quiz: Movements of Land and Soil**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Checkup: The Geosphere**

Relate the surface features of Earth's crust to the theory of plate tectonics. Distinguish erosional features and depositional features of Earth's crust. Identify the types of weathering and the agents of each type of weathering. Describe the types of soil and the processes of soil formation. Identify the types of erosion and their effects on Earth's crust. Relate the different types of faults to the different types of tectonic plate boundaries. Discuss the validity and impact of scientific research on environmental issues related to human activities.

Duration: 0 hrs 30 mins Scoring: 0 points

### **Read: The Geosphere**

Read about the geosphere.

Duration: 1 hr 30 mins Scoring: 0 points

### **Quiz: The Geosphere**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

### **Explore: Earthquake Prediction and Readiness**

Recognize areas on Earth where earthquakes are likely to occur. Distinguish the three types of earthquake waves. Describe how geologists rate the destructive force of an earthquake. Identify ways that human communities in earthquake zones can prepare for and limit damages caused by strong earthquakes.

Duration: 1 hr 30 mins Scoring: 30 points

## **LESSON 4: EARTH'S PHYSICAL SYSTEMS WRAP-UP**

### **Project: Part II — Explore Your Local Physical Environment**

Research and describe the physical features and abiotic factors that characterize the geographical area in which you live.

Duration: 1 hr 30 mins Scoring: 40 points

### **Test (CS): Earth's Physical Systems**

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

### **Test (TS): Earth's Physical Systems**

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

## **UNIT 3: ECOSYSTEM STRUCTURE**

### **LESSON 1: NATURE OF ECOSYSTEMS**

#### **Project: Part I — Explore Your Local Ecosystem**

Recognize the major types of biotic factors in an ecosystem and their roles in the biosphere. Distinguish biological species, populations, and communities. Identify the abiotic factors in an ecosystem and their importance to living organisms. Explain how biotic factors interact with the abiotic factors of an ecosystem.

Duration: 1 hr 30 mins Scoring: 10 points

#### **Study: What Is a Biological Community?**

Distinguish biological communities from populations and ecosystems. Identify major types of biological communities.

Duration: 1 hr Scoring: 0 points

#### **Quiz: What Is a Biological Community?**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

#### **Study: Species Interactions**

Describe the types of interactions that occur among the species in biological communities. Analyze food chains and food webs that describe the interactions of species in a biological community. Explain the nature and importance of ecological niches.

Duration: 1 hr Scoring: 0 points

### **Quiz: Species Interactions**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Community Structure**

Model the makeup of communities using ecological pyramids. Understand the factors that affect community stability and biodiversity.

Duration: 1 hr Scoring: 0 points

### **Quiz: Community Structure**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Practice: Nature of Ecosystems**

Distinguish biological communities from populations and ecosystems. Identify major types of biological communities. Describe the types of interactions that occur among the species in biological communities. Analyze food chains and food webs that describe the interactions of species in a biological community. Explain the nature and importance of an ecological niche. Model the makeup of communities using ecological pyramids. Understand the factors that affect community stability and biodiversity

Duration: 0 hrs 30 mins Scoring: 10 points

### **Explore: The Importance of Coral Reefs**

Describe characteristics of aquatic ecosystems. Evaluate the importance of individual ecosystems to the health of biomes and the biosphere.

Duration: 1 hr 30 mins Scoring: 30 points

## **LESSON 2: CHANGES IN ECOSYSTEMS**

### **Study: Natural Disturbances and Succession**

Describe how destructive natural events in the geosphere can affect ecosystems. Predict the effects of the removal of species from biological communities. Predict the effects of the introduction of nonnative species on communities.

Duration: 1 hr Scoring: 0 points

### **Quiz: Natural Disturbances and Succession**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Evolution and Biodiversity**

Identify the sources and importance of genetic diversity in natural populations, ecosystems, and the biosphere. Summarize the process of natural selection and its role in biological evolution. Predict changes that may occur in an ecosystem when its amount of biodiversity changes.

Duration: 1 hr Scoring: 0 points

### **Quiz: Evolution and Biodiversity**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Checkup: Changes in Ecosystems**

Describe how destructive natural events in the geosphere can affect ecosystems. Predict the effects of the removal of species from biological communities. Predict the effects of the introduction of nonnative species on communities. Recognize the sources and importance of genetic diversity in natural populations, ecosystems, and the biosphere. Summarize the process of natural selection and its role in biological evolution. Predict changes that may occur in an ecosystem when its amount of biodiversity

changes. Discuss the validity and impact of scientific research on environmental issues related to human activities.

Duration: 0 hrs 30 mins Scoring: 0 points

### **Read: Changes in Ecosystems**

Read about changes in ecosystems.

Duration: 1 hr 30 mins Scoring: 0 points

### **Quiz: Changes in Ecosystems**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

### **Lab: Investigate Using a Dichotomous Key**

Conduct a scientific investigation, using a scientific process and demonstrating the proper and safe use of laboratory equipment. Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error

Duration: 1 hr 30 mins Scoring: 40 points

### **Discuss: Investigate Using a Dichotomous Key**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

## **LESSON 3: ECOSYSTEMS AND BIOMES**

### **Study: Aquatic Ecosystems**

Describe characteristics of aquatic ecosystems.

Duration: 1 hr Scoring: 0 points

### **Quiz: Aquatic Ecosystems**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Land Ecosystems**

Identify the major land and aquatic biomes. Describe the distinguishing biotic and abiotic features of a given biome. Compare the plants and animals of your local biome with those of the other major biomes found in North America.

Duration: 1 hr Scoring: 0 points

### **Quiz: Land Ecosystems**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Read: Ecosystems and Biomes**

Read about ecosystems and biomes.

Duration: 1 hr 30 mins Scoring: 0 points

### **Quiz: Ecosystems and Biomes**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

### **Checkup: Ecosystems and Biomes**

Describe characteristics of land ecosystems. Describe characteristics of aquatic ecosystems. Identify the major land and aquatic biomes. Describe the distinguishing biotic and abiotic features of a given biome. Compare the plants and animals of your local biome with those of the other major biomes found in North America. Evaluate the importance of individual ecosystems to the health of biomes and the biosphere. Discuss the validity and impact of scientific research on environmental issues related to human activities.

Duration: 0 hrs 30 mins Scoring: 0 points

**Lab: Investigate Primary Productivity**

Conduct a scientific investigation, using a scientific process and demonstrating the proper and safe use of laboratory equipment. Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error.

Duration: 1 hr 30 mins Scoring: 40 points

**Discuss: Investigate Primary Productivity**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

**LESSON 4: ECOSYSTEM STRUCTURE WRAP-UP****Project: Part II — Explore Your Local Ecosystem**

Recognize the major types of biotic factors in an ecosystem and their roles in the biosphere. Distinguish biological species, populations, and communities. Identify the abiotic factors in an ecosystem and their importance to living organisms. Explain how biotic factors interact with the abiotic factors of an ecosystem.

Duration: 1 hr 30 mins Scoring: 40 points

**Test (CS): Ecosystem Structure**

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

**Test (TS): Ecosystem Structure**

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

**UNIT 4: POPULATION ECOLOGY****LESSON 1: POPULATION BIOLOGY****Study: Characteristics of Populations**

Identify characteristics used to describe populations. Identify limiting factors that affect populations and their characteristics. Describe a population's carrying capacity and the factors that determine the carrying capacity. Explain how populations change in size.

Duration: 1 hr Scoring: 0 points

**Quiz: Characteristics of Populations**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

**Study: Population Growth**

Describe the factors that produce both positive and negative population growth. Compare exponential and logistic patterns of population growth. Explain the significance of studying populations over time.

Duration: 1 hr Scoring: 0 points

**Quiz: Population Growth**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

**Practice: Population Biology**

Identify characteristics used to describe populations. Identify limiting factors that affect populations and their characteristics. Describe a population's carrying capacity and the factors that determine the carrying capacity. Explain how populations change in size. Describe the factors that produce both positive and negative population growth. Compare exponential and logistic patterns of population growth. Explain the significance of studying populations over time.

Duration: 0 hrs 30 mins Scoring: 10 points

**Lab: Investigate Estimating Population Size**

Conduct a scientific investigation, using a scientific process and demonstrating the proper and safe use of laboratory equipment. Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error.

Duration: 1 hr 30 mins Scoring: 40 points

**Discuss: Investigate Estimating Population Size**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

**LESSON 2: HUMAN POPULATIONS****Study: Human Population Dynamics**

Describe historical trends in human population growth and distribution. Identify characteristics of human populations.

Duration: 1 hr Scoring: 0 points

**Quiz: Human Population Dynamics**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

**Study: Human Communities**

Describe the purposes of human communities. Identify different kinds of human communities. Explain how individuals work together in groups. Explain how individuals and groups work together in communities.

Duration: 1 hr Scoring: 0 points

**Quiz: Human Communities**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

**Checkup: Human Populations**

Describe historical trends in human population growth and distribution. Identify characteristics of human populations. Describe the purposes of human communities. Identify different kinds of human communities. Explain how individuals work together in groups. Explain how individuals and groups work together in communities.

Duration: 0 hrs 30 mins Scoring: 0 points

**Read: Human Populations**

Read about human populations.

Duration: 1 hr 30 mins Scoring: 0 points

**Quiz: Human Populations**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

**Explore: Public Health Policies**

Research objectives and accomplishments of public health policies.

Duration: 1 hr 30 mins Scoring: 30 points

**LESSON 3: IMPACTS OF POPULATION GROWTH****Study: Renewable Resources**

Identify renewable resources on which humans depend. Differentiate between renewable and nonrenewable resources. Evaluate the cost-benefit trade-offs of using renewable resources instead of nonrenewable resources.

Duration: 1 hr Scoring: 0 points

**Quiz: Renewable Resources**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Nonrenewable Resources**

Identify nonrenewable resources on which humans depend. Differentiate between renewable and nonrenewable resources. Describe how the use of natural resources will affect future generations of humans.

Duration: 1 hr Scoring: 0 points

### **Quiz: Nonrenewable Resources**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Practice: Impacts of Population Growth**

Identify renewable resources on which humans depend. Identify nonrenewable resources on which humans depend. Differentiate between renewable and nonrenewable resources. Evaluate the cost-benefit trade-offs of using renewable resources instead of nonrenewable resources. Describe how the use of natural resources will affect future generations of humans. Describe alternative forms of energy production.

Duration: 0 hrs 30 mins Scoring: 10 points

### **Read: Impacts of Population Growth**

Read about impacts of population growth.

Duration: 1 hr 30 mins Scoring: 0 points

### **Quiz: Impacts of Population Growth**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

### **Lab: Investigate Resource Consumption**

Conduct a scientific investigation, using a scientific process and demonstrating the proper and safe use of laboratory equipment. Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error.

Duration: 1 hr 30 mins Scoring: 40 points

### **Discuss: Investigate Resource Consumption**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

## **LESSON 4: POPULATIONS WRAP-UP**

### **Test (CS): Population Ecology**

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

### **Test (TS): Population Ecology**

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

## **UNIT 5: SEMESTER 1 WRAP-UP**

### **LESSON 1: SEMESTER 1 WRAP-UP**

#### **Exam: Semester 1 Computer-Scored Exam**

Take a computer-scored exam to demonstrate your mastery of concepts and skills covered in this semester.

Duration: 0 hrs 40 mins Scoring: 100 points

#### **Final Exam: Semester 1 Teacher-Scored Exam**

Take a teacher-scored exam to demonstrate your mastery of concepts and skills covered in this semester.

Duration: 1 hr Scoring: 50 points

## UNIT 6: LAND AND WATER USE

### LESSON 1: OBTAINING EARTH'S RESOURCES

#### **Project: Part I — Explore Your Local Environmental Challenges**

Research and describe environmental challenges that affect the geographical area in which you live.

Duration: 1 hr 30 mins Scoring: 10 points

#### **Study: Land and Water Resources**

Identify natural resources obtained from Earth's land and water and used to support the lifestyles of humans. Recognize the interdependence of natural resources. Evaluate the economic significance of natural resources.

Duration: 1 hr Scoring: 0 points

#### **Quiz: Land and Water Resources**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

#### **Study: Agriculture, Forestry, and Fishing**

Identify types and sources of biological resources used to produce food and goods that support human lifestyles. Evaluate the economic significance of natural resources. Recognize the interdependence of natural resources.

Duration: 1 hr Scoring: 0 points

#### **Quiz: Biological Resources**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

#### **Study: Mineral Resources and Mining**

Identify types and sources of mineral resources used to produce goods and energy that support human lifestyles. Learn about types of mining and the environmental effects of mining. Recognize the interdependence of natural resources.

Duration: 1 hr Scoring: 0 points

#### **Quiz: Mineral and Energy Resources**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

#### **Practice: Earth's Natural Resources**

Identify the types of Earth's land and water used to support the lifestyles of humans. Identify types and sources of mineral resources used to produce goods and energy that support human lifestyles. Recognize the interdependence of natural resources. Identify types and sources of biological resources used to produce food and goods that support human lifestyles.

Duration: 0 hrs 30 mins Scoring: 10 points

#### **Lab: Investigate How Pollutants Affect Plants**

Conduct a scientific investigation, using a scientific process and demonstrating the proper and safe use of laboratory equipment. Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error.

Duration: 1 hr 30 mins Scoring: 40 points

#### **Discuss: Investigate How Pollutants Affect Plants**

Discuss the results of the investigation.

Duration: 0 hrs 20 mins Scoring: 10 points

### LESSON 2: RECREATION AND URBAN DEVELOPMENT

#### **Study: Recreation, Conservation, and Urban Development**

Summarize the effects on natural ecosystems of human activities such as recreation, urbanization, conservation, preservation, restoration, and resource gathering and management.

Duration: 1 hr Scoring: 0 points

### **Quiz: Recreation, Conservation, and Urban Development**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Human Cultures and Societies**

Summarize the nature and purpose of human cultures and societies. Identify examples of different types of human cultures and societies.

Duration: 1 hr Scoring: 0 points

### **Quiz: Human Cultures and Societies**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Practice: Land Use and Its Effects**

Evaluate the economic significance of natural resources. Summarize the effects and cost-benefit trade-offs of practices used in commercial agriculture, forestry, and fishing. Evaluate the hazards and risks involved in obtaining natural resources. Evaluate the hazards and risks to human health and well-being involved in obtaining and managing natural resources. Summarize the advantages and disadvantages of using different energy resources. Summarize the effects on natural ecosystems of human activities such as recreation, urbanization, conservation, preservation, restoration, and resource gathering and management. Discuss the validity and impact of scientific research on environmental issues related to human activities.

Duration: 0 hrs 30 mins Scoring: 10 points

### **Read: Recreation and Urban Development**

Read about recreation and urban development.

Duration: 1 hr 30 mins Scoring: 0 points

### **Quiz: Recreation and Urban Development**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

### **Explore: Effects of Climate Change**

Explore scientists' predictions about the effects of global climate change on the biosphere.

Duration: 1 hr 30 mins Scoring: 30 points

## **LESSON 3: SUSTAINABLE PRACTICES**

### **Study: Sustainable Food Production**

Explain the goal of using sustainable practices in food production, resource management, and human societal development. Describe sustainable methods of food production, resource management, and human societal development. Compare traditional practices used in food production, resource management, and human societal development with sustainable practices. Identify advantages and disadvantages of using "green" and sustainable practices in food production, resource management, and human societal development.

Duration: 1 hr Scoring: 0 points

### **Quiz: Sustainable Food Production**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Sustainable Resource Management**

Explain the goal of using sustainable practices in food production, resource management, and human societal development. Describe sustainable methods of food production, resource management, and human societal development. Compare

traditional practices used in food production, resource management, and human societal development with sustainable practices. Identify advantages and disadvantages of using "green" and sustainable practices in food production, resource management, and human societal development.

Duration: 1 hr Scoring: 0 points

### **Quiz: Sustainable Resource Management**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Checkup: Sustainable Practices**

Explain the goal of using sustainable practices in food production, resource management, and human societal development. Describe sustainable methods of food production, resource management, and human societal development. Compare traditional practices used in food production, resource management, and human societal development with sustainable practices. Identify advantages and disadvantages of using "green" and sustainable practices in food production, resource management, and human societal development. Summarize the process of carbon dioxide sequestration and technologies that achieve it. Discuss the validity and impact of scientific research on environmental issues related to human activities.

Duration: 0 hrs 30 mins Scoring: 0 points

### **Read: Sustainable Practices**

Read about sustainable practices.

Duration: 1 hr 30 mins Scoring: 0 points

### **Quiz: Sustainable Practices**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

### **Lab: Investigate Food Security**

Conduct a scientific investigation, using a scientific process and demonstrating the proper and safe use of laboratory equipment. Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error.

Duration: 1 hr 30 mins Scoring: 40 points

### **Discuss: Investigate Food Security**

Discuss the results of the investigation.

Duration: 0 hrs 20 mins Scoring: 10 points

## **LESSON 4: LAND AND WATER USE WRAP-UP**

### **Project: Part II — Explore Your Local Environmental Challenges**

Research and describe environmental challenges that affect the geographical area in which you live.

Duration: 1 hr 30 mins Scoring: 40 points

### **Test (CS): Land and Water Use**

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

### **Test (TS): Humans and the Environment**

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

## **UNIT 7: ENERGY CONSUMPTION AND RESOURCES**

### **LESSON 1: ENERGY CONCEPTS AND TRADITIONAL SOURCES**

#### **Study: Types of Energy**

Learn about different types of energy and examples of each type.

Duration: 1 hr Scoring: 0 points

**Quiz: Types of Energy**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

**Study: Fossil Fuels**

Identify types and sources of mineral resources used to produce goods and energy that support human lifestyles. Recognize the interdependence of natural resources.

Duration: 1 hr Scoring: 0 points

**Quiz: Fossil Fuels**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

**Practice: Energy Concepts and Traditional Sources**

Identify the types of Earth's land and water used to support the lifestyles of humans. Identify types and sources of mineral resources used to produce goods and energy that support human lifestyles. Recognize the interdependence of natural resources. Identify types and sources of biological resources used to produce food and goods that support human lifestyles.

Duration: 0 hrs 30 mins Scoring: 10 points

**Read: Energy Concepts and Traditional Sources**

Read about energy concepts and traditional sources.

Duration: 1 hr 30 mins Scoring: 0 points

**Quiz: Energy Concepts and Traditional Sources**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

**Lab: Investigate Home Energy Usage**

Conduct a home energy audit.

Duration: 1 hr 30 mins Scoring: 40 points

**Discuss: Investigate Home Energy Audits**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

**LESSON 2: ENERGY AND SUSTAINABILITY****Study: Energy and Sustainability**

Learn about the advantages and disadvantages of different energy sources; learn how to apply scientific reasoning to analyze socially relevant energy issues.

Duration: 1 hr Scoring: 0 points

**Quiz: Energy and Sustainability**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

**Study: Alternative Energy Resources**

Describe how the use of natural resources will affect future generations of humans. Describe alternative forms of energy production.

Duration: 1 hr Scoring: 0 points

**Quiz: Alternative Energy Resources**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

**Practice: Resource Availability**

Identify renewable resources on which humans depend. Identify nonrenewable resources on which humans depend. Differentiate between renewable and nonrenewable resources. Evaluate the cost-benefit trade-offs of using renewable resources instead of nonrenewable resources. Describe how the use of natural resources will affect future generations of humans. Describe alternative forms of energy production.

Duration: 0 hrs 30 mins Scoring: 10 points

**Explore: Fluid-Injection Wells and Induced Seismicity**

Explore and evaluate fluid-injection wells and induced seismicity.

Duration: 1 hr 30 mins Scoring: 30 points

**Read: Energy and Sustainability**

Read about energy and sustainability.

Duration: 1 hr 30 mins Scoring: 0 points

**Quiz: Energy and Sustainability**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

**Lab: Investigate Sustainable Energy**

Determine sustainable combinations of practices for generating and using energy.

Duration: 1 hr 30 mins Scoring: 40 points

**Discuss: Investigate Sustainable Energy**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

**LESSON 3: ENERGY CONSUMPTION AND RESOURCES WRAP-UP****Test (CS): Energy Consumption and Resources**

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

**Test (TS): Energy Consumption and Resources**

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

**UNIT 8: POLLUTION AND WASTE MANAGEMENT****LESSON 1: POLLUTION AND WASTE MANAGEMENT****Study: Water, Air, and Land Pollution**

Identify point sources and nonpoint sources of air, land, and water pollution. Describe the effects of pollution on oceans, freshwater supplies, air, and land. Recognize the consequences of air, land, and water pollution on human health and societies. Evaluate the hazards pollutants pose to wildlife and other types of natural resources.

Duration: 1 hr Scoring: 0 points

**Quiz: Water, Air, and Land Pollution**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

**Study: Waste Management**

Describe methods of waste management, including burial in a landfill, dumping, incineration, composting, recycling, and reuse. Evaluate the impact of waste management and reduction strategies on resource availability.

Duration: 1 hr Scoring: 0 points

### **Quiz: Waste Management**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Practice: Pollution and Waste Management**

Identify point sources and nonpoint sources of air, land, and water pollution. Describe the effects of pollution on oceans, freshwater supplies, air, and land. Recognize the consequences of air, land, and water pollution on human health and societies. Evaluate the hazards pollutants pose to wildlife and other types of natural resources. Describe methods of waste management, including burial in a landfill, dumping, incineration, composting, recycling, and reuse. Evaluate the impact of waste management and reduction strategies on resource availability.

Duration: 0 hrs 30 mins Scoring: 10 points

### **Read: Pollution and Waste Management**

Read about pollution and waste management.

Duration: 1 hr 30 mins Scoring: 0 points

### **Quiz: Pollution and Waste Management**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

### **Lab: Investigate Recycling Practices**

Compare the effectiveness of recycling techniques.

Duration: 1 hr 30 mins Scoring: 40 points

### **Discuss: Investigate Recycling Practices**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

## **LESSON 2: IMPACTS OF POLLUTION**

### **Study: The Tragedy of the Commons**

Recognize the definition and examples of a "common." Describe how the overuse and degradation of natural resources affects the biosphere and human societies.

Duration: 1 hr Scoring: 0 points

### **Quiz: The Tragedy of the Commons**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Managing the Commons**

Describe how conservation and preservation of natural resources affect their availability and quality. Relate conservation and preservation of natural resources to the sustainability of ecosystems and human societies.

Duration: 1 hr Scoring: 0 points

### **Quiz: Managing the Commons**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Protecting Water, Air, and Land**

Summarize the history, provisions, and effects of the National Park Service Act. Summarize the history, provisions, and effects of the Clean Air Act. Summarize the history, provisions, and effects of the Clean Water Act. Summarize the history, provisions, and effects of the Soil and Water Resources Conservation Act.

Duration: 1 hr Scoring: 0 points

### **Quiz: Protecting Water, Air, and Land**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Checkup: The Concept of the Commons**

Recognize the definition and examples of a "common." Describe how the overuse and degradation of natural resources affects the biosphere and human societies. Describe how conservation and preservation of natural resources affect their availability and quality. Relate conservation and preservation of natural resources to the sustainability of ecosystems and human societies.

Duration: 0 hrs 30 mins

### **Explore: Carbon Dioxide Sequestration**

Summarize the process of carbon dioxide sequestration and technologies that achieve it.

Duration: 1 hr 30 mins Scoring: 30 points

### **Lab: Investigate Air Quality**

Identify point source and nonpoint source causes of air pollution.

Duration: 1 hr 30 mins Scoring: 40 points

### **Discuss: Investigate Air Quality**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

## **LESSON 3: POLLUTION AND WASTE MANAGEMENT WRAP-UP**

### **Test (CS): Pollution and Waste Management**

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

### **Test (TS): Pollution and Waste Management**

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

## **UNIT 9: GLOBAL CHALLENGES**

### **LESSON 1: THE GLOBAL COMMUNITY**

#### **Project: Part I — Explore Sustainability for Your Local Environment**

Identify your state and local legislation designed to protect the environment and natural resources. Evaluate the effects of national, state, and local environmental and resource protection laws on your local environment. Identify sustainable practices that have been adopted in your local environment. Recommend practices that might contribute to the sustainability of your local environment.

Duration: 1 hr 30 mins Scoring: 10 points

#### **Study: Sustainable Societal Development**

Explain the goal of using sustainable practices in food production, resource management, and human societal development. Describe sustainable methods of food production, resource management, and human societal development. Compare traditional practices used in food production, resource management, and human societal development with sustainable practices. Identify advantages and disadvantages of using "green" and sustainable practices in food production, resource management, and human societal development.

Duration: 1 hr Scoring: 0 points

#### **Quiz: Sustainable Societal Development**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

#### **Study: The Global Economy**

Recognize the interrelatedness of the global economy. Identify complex real-world problems faced by the global economy.

Evaluate possible solutions to complex real-world problems in a global economy. Evaluate the need for cooperative human behaviors in mitigating and preventing complex real-world problems.

Duration: 1 hr Scoring: 0 points

### **Quiz: The Global Economy**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Practice: The Global Community**

Summarize the nature and purpose of human cultures and societies. Identify examples of different types of human cultures and societies. Recognize the interrelatedness of the global economy. Identify complex real-world problems faced by the global economy. Evaluate possible solutions to complex real-world problems in a global economy. Evaluate the need for cooperative human behaviors in mitigating and preventing complex real-world problems.

Duration: 0 hrs 30 mins Scoring: 10 points

### **Read: The Global Community**

Read about the global community.

Duration: 1 hr 30 mins Scoring: 0 points

### **Quiz: The Global Community**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

### **Lab: Investigate Human Carrying Capacity**

Determine Earth's carrying capacity for human populations.

Duration: 1 hr 30 mins Scoring: 40 points

### **Discuss: Investigate Human Carrying Capacity**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

## **LESSON 2: GLOBAL CLIMATE CHANGE**

### **Study: Climate Change**

Describe effects of air pollution on the natural systems that regulate Earth's climate. Analyze the historical trends observed in global climate data. Relate human activities to observed changes in global climate. Evaluate differing views on global warming and climate change.

Duration: 1 hr Scoring: 0 points

### **Quiz: Climate Change**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Effects of Climate Change**

Summarize scientists' predictions about the effects of global climate change on the biosphere. Evaluate differing views on global warming and climate change.

Duration: 1 hr Scoring: 0 points

### **Quiz: Effects of Climate Change**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Checkup: Environmental Change**

Describe effects of air pollution on the natural systems that regulate Earth's climate. Analyze the historical trends observed in

global climate data. Relate human activities to observed changes in global climate. Evaluate differing views on global warming and climate change. Summarize scientists' predictions about the effects of global climate change on the biosphere. Discuss the validity and impact of scientific research on environmental issues related to human activities.

Duration: 0 hrs 30 mins Scoring: 0 points

### **Read: Global Climate Change**

Read about global climate change.

Duration: 1 hr 30 mins Scoring: 0 points

### **Quiz: Global Climate Change**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

### **Lab: Investigate Dissolved Oxygen Levels**

Explore dissolved oxygen levels.

Duration: 1 hr 30 mins Scoring: 40 points

### **Discuss: Investigate Dissolved Oxygen Levels**

Analyze data by using data tables, calculating the range and average of a set of measurements, and identifying sources of error. Evaluate lab procedures and results in a discussion with your peers.

Duration: 0 hrs 20 mins Scoring: 10 points

## **LESSON 3: GLOBAL ENVIRONMENTAL POLICIES**

### **Study: Protecting Environmental Quality**

Summarize the goals and provisions of international treaties and protocols that address the effects of human activities on the environment, including the Antarctic Treaty System, Montreal Protocol, and Kyoto Protocol. Evaluate the effects of international treaties and protocols on environmental quality and global cooperation.

Duration: 1 hr Scoring: 0 points

### **Quiz: Protecting Environmental Quality**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Study: Protecting Wildlife and Biodiversity**

Summarize the goals and provisions of international treaties and protocols that address biodiversity, such as the United Nations' Convention of International Trade in Endangered Species (CITES), the RAMSAR Convention on Wetlands, the International Treaty on Plant Genetic Resources for Food and Agriculture, and the Convention on Biological Diversity. Evaluate the effects of international treaties and protocols on environmental quality and global cooperation.

Duration: 1 hr Scoring: 0 points

### **Quiz: Protecting Wildlife and Biodiversity**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 20 points

### **Practice: Global Environmental Policies**

Summarize the goals and provisions of international treaties and protocols that address the effects of human activities on the environment, including the Antarctic Treaty System, Montreal Protocol, and Kyoto Protocol. Summarize the goals and provisions of international treaties and protocols that address biodiversity, such as the United Nations' Convention of International Trade in Endangered Species (CITES), the RAMSAR Convention on Wetlands, the International Treaty on Plant Genetic Resources for Food and Agriculture, and the Convention on Biological Diversity. Evaluate the effects of international treaties and protocols on environmental quality and global cooperation. Discuss the validity and impact of scientific research on environmental issues related to human activities.

Duration: 0 hrs 30 mins Scoring: 10 points

**Read: Global Environmental Policies**

Read about global environmental policies.

Duration: 1 hr 30 mins Scoring: 0 points

**Quiz: Global Environmental Policies**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 45 mins Scoring: 20 points

**Explore: Biodiversity Hot Spots**

Summarize the process of natural selection and its role in biological evolution. Explain the importance of biodiversity in the biosphere.

Duration: 1 hr 30 mins Scoring: 30 points

**LESSON 4: GLOBAL CHALLENGES WRAP-UP****Project: Part II — Explore Sustainability for Your Local Environment**

Identify your state and local legislation designed to protect the environment and natural resources. Evaluate the effects of national, state, and local environmental and resource protection laws on your local environment. Identify sustainable practices that have been adopted in your local environment. Recommend practices that might contribute to the sustainability of your local environment.

Duration: 1 hr 30 mins Scoring: 40 points

**Test (CS): Global Challenges**

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

**Test (TS): Global Challenges**

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

**UNIT 10: SEMESTER 2 WRAP-UP****LESSON 1: SEMESTER 2 WRAP-UP****Exam: Semester 2 Computer-Scored Exam**

Take a computer-scored exam to demonstrate your mastery of concepts and skills covered in this semester.

Duration: 0 hrs 40 mins Scoring: 100 points

**Final Exam: Semester 2 Teacher-Scored Exam**

Take a teacher-scored exam to demonstrate your mastery of concepts and skills covered in this semester.

Duration: 1 hr Scoring: 50 points