Options EHS Environmental Science A	Scope and Sequence
Unit Lesson	**Objectives**
The Land	
Skills Lesson: Plotting Trends and Patterns	
	Record observations of an event or process.
	Categorize recorded observations based on similarities and differences.
	Interpret trends and patterns within the recorded data.
Life and Earth's Crust	
	Describe the composition of each layer of the Earth.
	Explain the structure and function of the Earth's crust.
	Evaluate the interdependence of Earth's crust and its organisms.
	Skills used: create graph, map, chart
Plate Tectonics	
	Explain the theory of plate tectonics.
	Relate the movement of the continents to changes in weather patterns.
	Describe the impact of continental shifting on local environments.
	Skills used: create graph, map, chart
Weathering and Erosion	
	Compare and contrast weathering and erosion.
	Distinguish between chemical and physical weathering.
	Describe the effects of natural erosion on the environment.
	Explain the impact of artificial erosion on the environment.
	Skills used: create graph, map, chart
Human Use of Land	

Options EHS Environmental Science A		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Assess the effects of human land usage on ecosystems.
		Compare and contrast ways humans are working to reduce the impact of land use on the environment.
		Describe possible future consequences of land use to the environment.
		Skills used: determine the cause and predict the effect
	Minerals and Mining	
		Identify uses of minerals.
		Compare and contrast various mineral extraction methods.
		Explain the impact of mining on local populations.
		Describe the long-term consequences of large scale mineral extraction to the Earth.
		Skills used: determine the cause and predict the effect
	Urban Growth	
		Compare and contrast various urban and suburban migration patterns seen on the Earth.
		Describe the effects of upward growth on local environments.
		Describe the effects of urban sprawl on local environments.
		Skills used: determine the cause and predict the effect
	Land Management and Planning	
		Describe differences in the use of public land and private land.
		Describe large-scale land management methods implemented by governments and corporations.
		Determine possible impacts of land management methods on the environment.
		Skills used: determine the cause and predict the effect
	Test	
Vanishing Forests		

Options EHS Environmental Science A		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Skills Lesson: Constructing Valid Criticisms	
		Identify factors contributing to the possible outcome of a process.
		Research data relating to the contributing factors.
		Analyze data to determine reliability and bias.
		Construct a valid criticism of the possible outcome based on the data.
	The Importance of Trees	
		Explain the impact of trees on air quality.
		Identify methods in which trees are utilized by humans.
		Describe the relationship between trees and other organisms.
		Analyze the consequences of human use of trees.
		Skills used: constructing valid criticism
	Rainforest Loss	
		Identify the locations of the world's rainforests.
		Explain how rainforest resources are utilized throughout the globe.
		Evaluate the impact of rainforest loss over the last 100 years.
		Compare and contrast the effectiveness of current rainforest conservation efforts.
		Skills used: constructing valid criticism
	Modern Forestry	
		Describe the main roles of a forester.
		Compare and contrast current methods of forest management.
		Analyze the role of forests as carbon sinks.
		Skills used: constructing valid criticism

Options EHS Environmental Science A		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Fire and Nature	
		Evaluate ways that wildfire benefits ecosystems.
		Analyze methods of fire utilization within various environments.
		Predict how fire can be used to further benefit the environment.
		Skills used: constructing valid criticism
	Topic Test	
Soil		
	What is Soil?	
		Describe the composition of soil.
		Characterize the major horizons in soil.
		Compare processes of soil formation in various environments.
		Skills used: selecting valid resources
	Soil Formation	
		Identify the properties of soil.
		Explain the relationship between microorganisms, humus, and soil health.
		Assess the role of microorganisms in soil.
		Skills used: selecting valid resources
	Soil Around the World	
		Explain the relationships between organisms and soil of different ecosystems.
		Compare and contrast the soil composition of different ecosystems.
		Describe ways in which humans impact soil.
	Soil and Agriculture	

Options EHS Environmental Science A		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Compare and contrast various agricultural practices around the world.
		Evaluate various methods used in agriculture to minimize soil depletion and erosion.
		Skills used: selecting valid resources
	Global Connection: Microflora and Microfauna	
		Evaluate how agricultural practices affect microflora and microfauna.
	Topic Test	
Marine Ecosystems		
	Skills Lesson: Proposing Solutions	
		Identify an unresolved problem or dilemma.
		Determine the desired outcome of the identified problem.
		Propose a possible solution.
	Ocean Exploration	
		Explore the relationship between technology and new developments in oceanography.
		Discuss possible applications of recent discoveries within the ocean.
		Examine how recent discoveries in abyssal zones have impacted scientific theories.
	Salt Marshes and Mangroves	
		Identify characteristics of salt marsh and mangrove habitats.
		Explain how utilization of mangrove and salt marshes has changed over time.
		Propose alternative ways to utilize resources in mangroves and salt marshes.
		Skills used: forming a valid hypothesis
	Coral Reefs	
		Describe the characteristics of a coral reef.

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Unit	**Lesson**	**Objectives**
		Explain the relationship between aquatic organisms and the coral reef.
		Examine causes of coral reef loss.
		Analyze the effectiveness of current efforts to preserve coral reefs.
		Skills used: forming a valid hypothesis
	Issues Affecting Marine Ecosystems	
		Identify the impacts of floating refuse on marine ecosystems.
		Describe how fisheries and ocean bottom trawling impact marine ecosystems.
		Evaluate methods humans are using to reduce their impact on marine ecosystems.
	Topic Test	
Freshwater Ecosystems		
	Pools, Ponds, and Lakes	
		Compare and contrast the characteristics of pools, ponds, and lakes.
		Differentiate littoral and riparian areas.
		Describe the cause of eutrophication and its effects on the environment.
		Assess the relationships between organisms that live in pools, ponds, and lakes.
	Streams and Rivers	
		Compare and contrast the characteristics of streams and rivers.
		Describe the impact of current and oxygen content on biodiversity in streams and rivers.
		Explain various ways humans impact rivers and streams.
		Assess the relationships between organisms that live in streams and rivers.
	Wetlands	
		Differentiate various types of wetlands.

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Unit	**Lesson**	**Objectives**
		Distinguish between the main types of water found in wetlands.
		Assess the biodiversity of organisms found in wetlands.
		Explain how the wetlands filter and clean water.
	Global Connection: Water Management and Katrina	
		Analyze the effect of canals and levees on wetlands.
	Topic Test	
Energy in Ecosystems		
	Energy Transformation	
		Discuss the main forms of energy in an ecosystem.
		Explain how energy is transformed and conserved as it changes from one form to another.
		Describe the impact of energy transformations on ecosystems.
		Skills used: making logical connections, creating diagrams, compare and contrast
	Energy Transfer	
		Outline the flow of energy in an ecosystem.
		Describe how the amount of available energy changes between trophic levels in a food chain.
		Explain the relationship between entropy and usable energy in a food chain.
		Skills used: making logical connections, creating a flow chart
	Photosynthesis in Plants	
		Explain the process of photosynthesis in plants.
		Distinguish between the main types of carbon fixation.
		Skills used: proposing logical alternatives
	Topic Test	

Options EHS Environmental Science A	Scope and Sequence
Unit Lesson	**Objectives**
Resources	
What Are Natural Resources?	
	Explain how natural resources are produced.
	Explain how fossil fuels are formed.
	Explain how resource availability is limited by rates of use and renewal.
	Skills used: making predictions, compare and contrast, researching with technology, making logical connections
Nuclear Power	
	Compare and contrast the processes of nuclear fission and nuclear fusion.
	Describe uses of nuclear energy.
	Examine possible consequences of using nuclear energy.
	Skills used: researching with technology, modeling systems, compare and contrast, making logical connections
Resource Conservation	
	Assess the availability and allocation of resources.
	Discuss problems associated with the use of non-local resources.
	Compare and contrast uses of renewable and nonrenewable resources.
	Propose alternatives to using nonrenewable resources.
	Skills used: compare and contrast, proposing alternative solutions, researching with technology
The Social Costs of Resource Use	
	Compare and contrast the costs and benefits of using renewable and nonrenewable resources.
	Evaluate the consequences of world dependence on fuels.
	Explain how technology can be utilized in resource conservation efforts.

Options EHS Environmental Science A	Scope and Sequence
Unit Lesson	**Objectives**
	Skills used: making logical connections, evaluating explanations, compare and contrast
Cumulative Test Review	
Cumulative Exam	