

Science: Advanced Placement Environmental Science

UNIT/Weeks	Timeline/Topics	Essential Questions
1	<p><u>Earth's Forces: Geology</u></p> <ul style="list-style-type: none"> • The Geosphere • Geologic Time Scale 	<ul style="list-style-type: none"> • What impact do Earth's natural processes have on our environment? • How do Earth's natural processes and human involvement interact to produce global warming? • How does the hydrosphere interact with the biosphere?
3	<p><u>Ecological Systems: Interactions in Ecosystems</u></p> <ul style="list-style-type: none"> • Energy Flow in Ecosystems • The Cycling of Materials • How Ecosystems Flow • Freshwater Ecosystems • Marine Ecosystems 	<ul style="list-style-type: none"> • How is energy cycled through the biosphere? • How do key nutrients cycle through the biosphere and what role do they play in it? • How do ecosystems change over time?
5	<p><u>Populations</u></p> <ul style="list-style-type: none"> • Biodiversity • Biodiversity at Work • The Future of Biodiversity • How Populations Change in Size • How Species Interact with Each Other • Studying Human Populations • Changing Population Trends 	<ul style="list-style-type: none"> • How do interactions within biological systems result in complex properties? • How do competition and cooperation affect biological systems? • How do competition and cooperation affect biological systems? • How does naturally occurring diversity among and between components within biological systems affect their interactions with the environment? • Why do scientists study population growth? • How do organisms interact in their environment? • How are population growth and sustainability related? • What role should humans play in limiting population growth? • What affects population growth?

Environmental Resources

- Acid Precipitation
- Water Resources
- Water Use and Management
- Water Pollution
- How We Use Land
- Urban Land Use
- Land Management and Conservation
- Mineral and Mineral Resources
- Mineral Exploration and Mining
- Mining Regulations and Mine Reclamation
- Renewable Energy Today
- Alternate Energy and Conservation
- Energy Resources and Fossil Fuels
- Nuclear Energy

- How do humans rely on natural water resources for survival?
- How is water pollution classified?
- How can humans reduce our impact on water pollution?
- How are the different types of air pollution created?
- How are the different types of air pollution affecting the Earth?
- How has the production of acid rain caused changes within the environment?
- How Are Different Types of Land Used?
- How Is Society Dealing with Land Usage?
- Why Is It Important to Understand How Land Is Used?
- How are specific types of minerals formed?
- What are the many ways in which minerals are recovered from the Earth?
- How has mining regulations created by the government helped in conserving the environment?
- What are the several forms of renewable energy?
- How does renewable energy work within different types of nations?
- How can alternative energy resources be used?
- How are fuels created, used and consumed within the United States?
- What is nuclear energy?
- How does the use of nuclear energy

		compare to the use of fossil fuels?
9	<p><u>Environmental Pollution</u></p> <ul style="list-style-type: none"> • Solid Waste • Reducing Solid Waste • Hazardous Waste • Pollution and Human Health • Biological Hazards • Air, Noise and Light Pollution 	<ul style="list-style-type: none"> • What is the best way to dispose of waste with the least amount of environmental impact? • How can a community member make an informed decision that promotes active involvement in the 3 R's and waste management? • How has medical technology helped in the areas of pollution and human health? • How have biological hazards caused a spread in old and new diseases?
6	<p><u>Project</u></p> <ul style="list-style-type: none"> • TBD (Environmental Issue Research) 	<ul style="list-style-type: none"> • How do living things adapt to changes in their environment? • In what ways does how we live today impact how people live in the future? • What choices did our elders make that affect the way we live today? • How do your actions impact the future of others? • How can we make choices to ensure a healthy future?