

**Environmental Science**  
**1st Quarter**

<b>Chapter</b>	<b>Standards</b>	<b>Topics</b>	<b>Time Frame</b>
Introduction to Science	HS-ETS1-2 HS-ETS1-3 HS-ESS3-4	- Science Safety - Scientific Method - Variables - Graphing - Metric System	4 Weeks
Chapter 1 - Introduction to Environmental Science	HS-LS2-1 HS-LS2-2 HS-LS2-3 HS-LS2-4 HS-LS2-6 HS-LS2-7 HS-LS4-5 HS-LS4-6 HS-ESS2-4 HS-ESS2-6 HS-ESS3-1 HS-ESS3-6 HS-ETS1-1 HS-ETS1-3 HS-ETS1-4	- Human and the Environment - Types of Resources - Human Population Growth - Ecological Footprint - Tragedy of the Commons - What is Science - Analysis and Feedback - Benefits and Outcomes - Culture and Worldview - Ethics - Current Environmental Issues	3 Weeks
Chapter 3 - Earth's Environmental System	HS-LS1-6 HS-LS2-3 HS-LS2-4 HS-LS2-5 HS-ETS1-1 HS-ESS2-5 HS-ESS2-6	- Building Blocks of Chemistry - Macromolecules - Properties of Water - Earth's Systems - Feedback Loops - The Geosphere - The Biosphere - The Atmosphere - The Hydrosphere - Nutrient Cycling - The Carbon Cycle - The Phosphorus Cycle - The Nitrogen Cycle	3 Weeks
Chapter 4 - Population Ecology	HS-LS2-1 HS-LS2-2 HS-LS2-6 HS-LS2-7 HS-LS4-5	- Levels of Ecological Organization - Biotic and Abiotic Factors - Habitats	3 Weeks

	HS-ETS1-1 HS-ESS3-1	<ul style="list-style-type: none"> <li>- Population Size</li> <li>- Population Density and Distribution</li> <li>- Factors that Determine Growth</li> <li>- How Populations Grow</li> <li>- Limiting Factors and Biotic Potential</li> </ul>	
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### 2nd Quarter

Chapter	Standards	Topics	Time Frame
Chapter 5 - Evolution and Community Ecology	HS-LS2-2 HS-LS2-6 HS-LS2-7 HS-LS4-6 HS-ETS1-4	<ul style="list-style-type: none"> <li>- Evolution and Natural Selection</li> <li>- Speciation and Extinction</li> <li>- Niche and Competition</li> <li>- Symbiosis</li> <li>- Producers and Consumers</li> <li>- Energy and Biomass</li> <li>- Food Webs</li> <li>- Ecological Succession</li> <li>- Invasive Species</li> </ul>	3 Weeks
Chapter 6 - Biomes and Aquatic Ecosystems	HS-LS2-2 HS-ESS2-4 HS-ESS3-6 HS-ETS1-3	<ul style="list-style-type: none"> <li>- Biomes and Climate</li> <li>- Terrestrial Biomes</li> <li>- Aquatic Ecosystems</li> <li>- Freshwater Ecosystems</li> <li>- The Oceans</li> </ul>	3 Weeks

### 3rd Quarter

Chapter	Standards	Topics	Time Frame
Chapter 7 - Biodiversity and Conservation	HS-LS2-6 HS-LS2-7 HS-LS4-6	<ul style="list-style-type: none"> <li>- Biodiversity</li> <li>- Biodiversity Distribution</li> <li>- Benefits of Biodiversity</li> <li>- Biodiversity at Risk</li> <li>- Causes of Loss of Biodiversity</li> <li>- Legal Efforts to Protect Biodiversity</li> <li>- Ecosystem and</li> </ul>	3 Weeks

		Habitat Approaches	
Chapter 10 - Urbanization	HS-LS2-2 HS-LS2-7 HS-LS4-6 HS-ESS2-6 HS-ESS3-6	- Land Cover and Use - Urbanization - Urban Environmental Impacts - How Sprawl Occurs - Impacts of Sprawl - City Planning - Transportation Options - Open Space - Urban Sustainability	3 Weeks
Chapter 11 - Forestry and Resource Management	HS-LS2-2 HS-LS2-7 HS-LS4-6 HS-ESS2-6 HS-ESS3-4 HS-ESS3-5 HS-ESS3-6 HS-ETS1-1	- Renewable Resource Management - Management Approaches - Forest Resources - Timber Harvesting - Deforestation - National Forests - Fire Policies - Sustainable Forest Products	3 Weeks
Chapter 12 - Soil and Agriculture	HS-LS2-2 HS-LS2-7 HS-LS4-6 HS-ESS2-6 HS-ESS3-4 HS-ESS3-5 HS-ESS3-6 HS-ETS1-1	- Soil Formation - Soil Horizons - Soil Characteristics - Erosion - Soil Pollution - Development of Agriculture - Industrial Agriculture - Pests - Food Security - GMO's - Sustainable Agriculture	3 Weeks

#### 4th Quarter

Chapter	Standards	Topics	Time Frame
Chapter 14 - Water Resources	HS-LS2-1 HS-LS2-2 HS-LS2-7 HS-ESS3-1 HS-ESS3-4 HS-ESS3-5	- Where is Our Water? - Surface Water - Ground Water - How We Use Water - Solutions to Freshwater Depletion	3 Weeks

	HS-ESS3-6	<ul style="list-style-type: none"> <li>- Types of Water Pollution</li> <li>- Controlling Water Pollution</li> </ul>	
Chapter 15 - The Atmosphere	HS-LS2-1 HS-LS2-2 HS-LS2-7 HS-ESS3-1 HS-ESS3-4 HS-ESS3-5 HS-ESS3-6 HS-ETS1-1	<ul style="list-style-type: none"> <li>- Properties of the Atmosphere</li> <li>- Layers of the Atmosphere</li> <li>- Sources of Air Pollution</li> <li>- Air Pollution and Your Health</li> <li>- Smog and Temperature Effects</li> <li>- Acid Deposition</li> <li>- The Clean Air Act</li> <li>- The Ozone Hole</li> </ul>	3 Weeks
Chapter 16 - Global Climate Change	HS-LS2-1 HS-LS2-2 HS-LS2-7 HS-LS4-6 HS-ESS3-1 HS-ESS3-3 HS-ESS3-4 HS-ESS3-5 HS-ESS3-6 HS-ETS1-1 HS-ETS1-2	<ul style="list-style-type: none"> <li>- Energy From the Sun</li> <li>- Wind Patterns in the Atmosphere</li> <li>- The Oceans and Climate</li> <li>- Evidence of a Warming Earth</li> <li>- Finding the Cause of Climate Change</li> <li>- Effects on Ecosystems and Organisms</li> <li>- Impact Right Now</li> <li>- Impact on the Future</li> <li>- Responding to Climate Change</li> </ul>	3 Weeks