



**Earth Systems Curriculum Pacing Guide
Resources and Our Environment**

Crosscutting Concepts: Patterns; Cause and Effect; Scale, Proportion, and Quantity; Systems and System Models; Stability and Change

Topics: Earth’s resources and the human impact

Estimated Time: 3 weeks

Anchoring Phenomenon	Standard	Instructional Segment	Disciplinary Core Ideas	Science and Engineering Practices	Instructional Notes
<p><i>Impacts</i> <i>Hurricanes have on people</i></p> <p><i>Students will observe videos and/or pictures of hurricanes and observe the impacts hurricanes have on people; recent media can be found online. A potential resource:</i> Environmental Management and Disaster Reduction - An Introduction</p>	<p>SES6. a, b, c, d</p>	<p>Hurricane Impacts on Natural Resources</p>	<p>From A Framework for K-12 Science Education: <i>By the end of 12th grade</i></p> <p>ESS3.A: NATURAL RESOURCES</p> <ul style="list-style-type: none"> ● Resource availability has guided the development of human society. ● All forms of energy production and other resource extraction have associated economic, social, environmental, and geopolitical costs and risks, as well as benefits. ● New technologies and regulations can change the balance of these factors. <p>ESS3.C: HUMAN IMPACTS ON EARTH SYSTEMS</p> <ul style="list-style-type: none"> ● The sustainability of human societies and the biodiversity that supports them requires responsible management of natural resources. 	<ul style="list-style-type: none"> ● Asking questions and defining problems. ● Analyzing and interpreting data ● Constructing explanations ● Engaging in argument from evidence ● Obtaining, evaluating, and communicating information 	<p>Background: By the end of this unit, students are using the following language in their speaking and writing during EXPLAIN or ELABORATE.</p> <p>major climatic change, tectonic events through extinction, migration, and/or adaptation, geologic time, nutrient cycling, atmospheric composition, and soil formation, land and water resources, anthropogenic modification of Earth’s atmosphere and oceans. Renewable and non-</p>



			<ul style="list-style-type: none">• Scientists and engineers can make major contributions—for example, by developing technologies that produce less pollution and waste and that preclude ecosystem degradation.• When the source of an environmental problem is understood and international agreement can be reached, human activities can be regulated to mitigate global impacts (e.g., acid rain and the ozone hole near Antarctica).		renewable resources, climate change, carbon footprint, environment, manmade and natural events, examples: use of fossil fuels burning during 1700-1900's, extinction of dinosaurs by asteroid
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