

RCPS Curriculum Pacing Guide

Subject: Environmental Science

Week of:	SOL #	Unit	Bloom's	Objectives
Week 1/2	LS.11	Intro. to Environmental Science, Science and the Environment and Tools of Environmental Science (Chapter 1 and 2) Fierce Green Fire	Understanding Analyzing Evaluating	LS.11 The student will investigate and understand the relationships between ecosystem dynamics and human activity. Key concepts include a) food production and harvest; b) change in habitat size, quality, or structure; c) change in species competition; d) population disturbances and factors that threaten or enhance species survival; and e) environmental issues.
Week 3/4	ES.12	Eco-Foot Prints, understanding populations, Human Populations (Chapter 8 and 9) Recycling Project introduced	Remembering Understanding Applying Analyzing Evaluating	LS.12e The student will investigate and understand the relationship between ecosystem dynamics and human activity Key Concepts: environmental issues(water supply, waste management)
Week 5/6	LS.6	Biodiversity Endangered Species (chapter 10) Biodiversity Study.	Evaluating Analyzing Applying Understanding Remembering	LS.6 The student will investigate and understand that organisms within an ecosystem are dependent on one another and on nonliving components of the environment. Key concepts include a) the carbon, water, and nitrogen cycles; b) interactions resulting in a flow of energy and matter throughout the system;

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				<ul style="list-style-type: none"> c) complex relationships within terrestrial, freshwater, and marine ecosystems; and d) energy flow in food webs and energy pyramids. <p>The student will investigate and understand the relationships between ecosystem dynamics and human activity. Key concepts include</p> <ul style="list-style-type: none"> a) food production and harvest; b) change in habitat size, quality, or structure; c) change in species competition; d) population disturbances and factors that threaten or enhance species survival; and e) environmental issues. <p>3.10b The student will investigate and understand human influences can affect the survival of a species. Key Concepts: the effects of human activity on the quality of air, water and habitat</p>
Week 7/8/9	ES.9 4.8 6.7 2.8	Watersheds, Chesapeake Bay/ Enviroscape tables PRESENTATIONS	Remembering Understanding Applying Analyzing Evaluating	<p>ES.9e,f The student will investigate and understand how freshwater resources are influenced By geologic processes and the activities of humans. Key Concepts: dependence on freshwater resources and the effects of human usage on water quality and Identification of the major watershed systems in Va. Including the Chesapeake Bay and its tributaries.</p> <p>4.8a The student will investigate and understand important Virginia natural resources.</p>

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				<p>Key Concepts: Watershed and water resources</p> <p>6.7 a-f The student will investigate and understand the natural processes and human interactions that affect watershed systems.</p> <p>Key Concepts:</p> <ol style="list-style-type: none"> a. The abiotic factors of an ecosystem b. The location and structure of Va's regional watershed systems c. Divides, tributaries, river systems and stream processes d. Wetlands e. Estuaries f. Major conservation, health and safety issues associated with watersheds <p>2.8c The student will investigate and understand that plants provide ... benefits in nature.</p> <p>Key Concepts: plants prevent soil from washing away.</p>
Week 10/11	LS.10 ES. 8 3.9	Aquatic Ecosystems/Water Ogallala Activity/Tapped	Remembering Understanding Applying Analyzing Evaluating Creating	<p>LS.10 The student will investigate and understand that ecosystems, communities, populations, and organisms are dynamic, change over time, and respond to daily, seasonal, and long-term changes in their environment. Key concepts include</p> <ol style="list-style-type: none"> a) phototropism, hibernation, and dormancy; b) factors that increase or decrease population size; and <ul style="list-style-type: none"> ● eutrophication, climate changes, and catastrophic disturbances <p>ES.8 The student will investigate and understand how freshwater resources are</p>

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				<p>influenced by geologic processes and the activities of humans. Key concepts include</p> <ul style="list-style-type: none"> a) processes of soil development; b) development of karst topography; c) relationships between groundwater zones, including saturated and unsaturated zones, and the water table; d) identification of sources of fresh water including rivers, springs, and aquifers, with reference to the hydrologic cycle; e) dependence on freshwater resources and the effects of human usage on water quality; and f) identification of the major watershed systems in Virginia, including the Chesapeake Bay and its tributaries. <p>3.9d The student will investigate and understand the water cycle and its relationship to life On Earth. Key Concepts: water supply and water conservation</p>
Week 12/13	3.10	Air/Atmosphere and Climate Change	Remembering Understanding Applying Analyzing Evaluating	<p>3.10b The student will investigate and understand human influences can affect the survival of a species. Key Concepts: the effects of human activity on the quality of air, water and habitat</p>

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Week 14/15/16	LS.6	Land/Food and Agriculture	Remembering Understanding Applying Analyzing Evaluating	LS.6 The student will investigate and understand that organisms within an ecosystem are dependent on one another and on nonliving components of the environment. Key concepts include a) the carbon, water, and nitrogen cycles; b) interactions resulting in a flow of energy and matter throughout the system; c) complex relationships within terrestrial, freshwater, and marine ecosystems; and d) energy flow in food webs and energy pyramids.
Week 17/18	ES.6 K-10 3.8	Resources/Energy/Waste (Chapters 16-19)	Remembering Understanding Applying	ES.6 The student will investigate and understand the differences between renewable and nonrenewable resources. Key concepts include a) fossil fuels, minerals, rocks, water, and vegetation; b) advantages and disadvantages of various energy sources; c) resources found in Virginia; and d) environmental costs and benefits. K-10c The student will investigate and understand that materials can be reused, recycled and conserved. Key concepts: water and energy conservation at home and in school helps preserve resources for future use

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				<p>1.8c The student will investigate and understand that natural resources are limited. Key Concepts : recycling, reusing and reducing consumption of natural resources.</p>
Week 19/20	LS.12	Assessing the Future/Resolutions Reflective Essay	Remembering Understanding Applying Analyzing Evaluating	<p>LS.12e The student will investigate and understand the relationship between ecosystem dynamics and human activity Key Concepts: environmental issues(water supply, waste management) Reflect on Semester and assess the state of the future. What have we learned?</p>