

AMHERST PUBLIC AND PELHAM ELEMENTARY SCHOOLS – CURRICULUM MAP

ELEMENTARY SCIENCE GRADE: 5	UNIT TITLE: LOCAL ECOLOGY
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SECTION	LENGTH	CONTENT	SKILLS	METHODS OF ASSESSMENT	FRAMEWORK STRANDS & STANDARDS Grades 3-5
Aquatic Ecosystems	1.5 weeks + extended observation time	<ul style="list-style-type: none"> An ecosystem includes all the organisms in a specific area, and their interactions with the environment. Food chains include producers, consumers, and decomposers. In nature, everything is connected to everything else. 	<ul style="list-style-type: none"> Observe closely Record observations with words, sketches and diagrams Tools: metric rulers, microscopes or hand lenses, pH paper	Journal rubric Worksheets End of unit assessment	LS 7 LS 11 Skills of Inquiry
Soil Investigations	2 weeks	<ul style="list-style-type: none"> Soil properties include color, texture, particle size, percolation, and water holding capacity. The properties of soil affect the plants that grow in that soil. 	<ul style="list-style-type: none"> Make meaningful predictions Organize data on graphs and charts Support conclusions with evidence Tools: graduated cylinders, timers	Worksheets Teacher checklist End of unit assessment	ESS 5 Skills of Inquiry
Schoolyard Investigations	3 weeks	<ul style="list-style-type: none"> Ecosystems respond to changes in measurable ways. The more we know about ecosystems, the better we are able to help ecosystems stay healthy. 	<ul style="list-style-type: none"> Cooperate and communicate in the practice of scientific inquiry Make meaningful predictions Form conclusions and suggest next steps 	Investigation/ project rubric Teacher checklist	ESS 5 LS 7 LS 10 LS 11 Skills of Inquiry

Massachusetts Science and Technology/Engineering Curriculum Framework, October 2006; Grades 3-5

Earth and Space Science (ESS),

ESS 5 Recognize and discuss the different properties of soil, including color, texture (size of particles), the ability to retain water, and the ability to support the growth of plants.

Life Science (LS)

LS 7 Give examples of how changes in the environment (drought, cold) have caused some plants and animals to die or move to new locations (migration).

LS 10 Give examples of how organisms can cause changes in their environments to ensure survival. Explain how some of these changes may affect the ecosystem.

LS11 Describe how energy derived from the sun is used by plants to produce sugars (photosynthesis) and is transferred within a food chain from producers (plants) to consumers to decomposers.

Skills of Inquiry, Experimentation, and Design

- Ask questions and make predictions that can be tested.
- Select and use appropriate tools and technology (e.g., calculators, computers, balances, scales, meter sticks, graduated cylinders) in order to extend observations.
- Keep accurate records while conducting simple investigations or experiments.
- Conduct multiple trials to test a prediction. Compare the result of an investigation or experiment with the prediction.
- Recognize simple patterns in data and use data to create a reasonable explanation for the results of an investigation or experiment.
- Record data and communicate findings to others using graphs, charts, maps, models, and oral and written reports.