

Problem-Based Learning Unit Template

Topic

Ecology

Goals/Objectives/SOL

4.5- The student will investigate and understand how plants and animals, including humans, in an ecosystem interact with one another and with the nonliving components in the ecosystem.

4.9- The student will investigate and understand important Virginia natural resources.

5.4- The student will investigate and understand that matter is anything that has mass and takes up space; and occurs as a solid, liquid, or gas.

5.5- The student will investigate and understand that organisms are made of one or more cells and have distinguishing characteristics that play a vital role in the organism's ability to survive and thrive in its environment.

5.7- The student will investigate and understand how Earth's surface is constantly changing.

6.5-The student will investigate and understand the unique properties and characteristics of water and its roles in the natural and human-made environment.

6.7-The student will investigate and understand the natural processes and human interactions that affect watershed systems.

6.9-The student will investigate and understand public policy decisions relating to the environment

Theme

Creek/Pond: Characteristics, Ecosystems, and Human Impact

Problem Question

How can we improve the quality of local natural resources in Narrows before they are depleted?

Scenario

The Mill Creek Pond and Park are very valuable resources to the town of Narrows. Unfortunately the quality of these areas has been declining in appearance, function, and use. As a resident and/or tourist to the town of Narrows, this is a concern. You are needed to help investigate the issues surrounding these areas and help improve the quality of our beloved Mill Pond.

Student Role

Ecological Consultant for Mill Pond

Resources

Even More Picture-Perfect Science Lessons K-5 by Emily Morgan and Karen Ansberry
Teacherspayteachers.com

http://syracusecoe.org/coe/images/allmedia/classroom/PollutedRiver_mar03.pdf

Delta/Foss/ CPO Science Curriculum

Local Partners

PBS

<http://Cioss.coas.oregonstate.edu>

<http://www.nps.gov>

Cyberbee Learning

Minnesota Science Teachers Education Project

Gizmo

<http://www.mysciencebox.org>

Culminating Activity

Present a plan or solution to educate the citizens, local governmental entities, or media of Narrows outlining recommendations for improvements to the Mill Creek Pond areas.