

Merry Lea Environmental Learning Center of Goshen College

Water Quality 6th - 8th

Program Description

What, if anything, is wrong with our water? How did it get that way? What can be done about it now? Students address these questions using modern equipment and techniques to conduct water sampling experiments. Explore a lake ecosystem in canoes and waders to assess biological indicators, pollution, siltation and human impacts on water guality.

Program Objectives

Students will:

- Explore a lake ecosystem using canoes and waders
- · Conduct sample field tests used by professionals for a variety of water quality parameters
- Sample for aguatic macroinvertebrates, learn to identify them and utilize this data as an indicator of water quality

Program Outline

Students rotate in groups through four different activity stations:

- 1. Wetland Dipping: Students use waders and nets to dip for aquatic macroinvertebrates in a lake ecosystem.
- 2. Wetland Lab: Students use microscopes and field guides to identify aquatic macroinvertebrates. Then students explore how this data can be used to determine the water quality of the lake at the time of the program.
- 3. Canoeing: Students partner up and use canoes and scavenger hunts to do a physical assessment of the lake's health.
- 4. Water Quality Testing: Students practice using field tests for water quality parameters like dissolved oxygen, pH and nitrogen.

Vocabulary

- Water guality
- Macroinvertebrate Dissolved oxygen
- Turbidity
- Pollution Tolerance Index

Quick Facts

Season	Fall: September - November Spring: April - May Summer: June
Grades	6th - 8th
Program Length	4 hours
Maximum # of Students	35 Students
Standards	

Correlations

6.LS.1 Investigate and describe how homeostasis is maintained as living things seek out their basic needs of food, water, shelter, space, and air.

6.LS.4 Investigate and use data to explain how changes in biotic and abiotic components in a given habitat can be beneficial or detrimental to native plants and animals.

8.ESS.3 Research how human consumption of finite natural resources (i.e. coal, oil, natural gas, and clean water) and human activities have had an impact on the environ- ment (i.e. causes of air, water, soil, light, and noise pollution).

See Standards Correlations for Water Quality for more academic connections.

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