

HOW WETLANDS WORK

SUMMARY

During this program students will test the absorption properties of different soils to determine the effectiveness of wetland soils and detaining contamination. Students will learn biological techniques plants use to clean pollution through an interactive game.

GRADE LEVEL: K-2

ACTIVITY DURATION: 1 hour

SETTING: Outdoors, in a large open space

SUBJECT AREAS: Earth's Systems, Earth and Human Activity, Engineering Design

NGSS: K-ESS2-2, K-ESS3-1, K-ESS3-3, K-2-ETS1-1, 2-ESS2-2

OBJECTIVES: This program is designed to use a game where students mimic the role of water and soil in the wetland environment as pollution is removed. By the end of the program, students will be able to:

- **Identify wetlands as important ways to clean water.**
- **Explain that soil and plants in the wetland help clean pollution.**

COOPERATIVE APPROACH: This program is designed to work along *A Model Watershed* and *Nature's Filter* for a full experience of why we need wetlands, how wetlands work to clean pollution, and how effective wetlands are at performing their job of cleansing. This program works great with the *Cave Boat Tour* by providing students with a view of the underground they learned to protect.

MAKING CONNECTIONS: Students will become more observant of plant-rich bodies of water they see in other areas. They will recognize that plants and soil play a greater role in the ecosystems than they thought. Students will see them as individual elements of the ecosystem.

EXTENSION:

STEM

The *How Wetlands Work* program can be extended into a longer program in which principles of Technology, Engineering, and Math are applied. By prefacing the program with *A Model Watershed* and then following this program with the program *Nature's Filter*, students will experience why we need wetlands, how wetlands work to clean pollution, and how effective wetlands are at performing their job of cleansing.



VOCABULARY: Absorption, Humus, Hydrophilic