



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Aquifer On the Go

SUBJECT AREA: Science - Earth Science, Environmental Science.

GRADE LEVEL: Third through fifth.

DURATION: 30 minutes; staff will need 15 minutes to set up the demonstration.

AUDIENCE SIZE: 75 students at one time; larger groups can rotate through stations.

OVERVIEW: Many communities obtain their drinking water from underground sources called aquifers. Water suppliers or utility officials drill wells through soil and rock into aquifers for ground water contained therein to supply the public with drinking water. This simple and effective program demonstrates the concept of an aquifer and how it functions. With this hands-on approach to learning about aquifers through an Enviroscape model, students will tap into their creative side and use tools to create a “real” aquifer. Their aquifer creation will help them understand the principles of groundwater flow and the properties of aquifers, making the concept more tangible and understandable.



OBJECTIVES:

The student will:

- Understand the concept of an aquifer as an underground geological formation that stores and transmits groundwater.
- Identify the properties of an aquifer, including the permeable layers (sand) and impermeable layers (gravel) that allow water to move through and be stored in the ground.
- Describe how groundwater recharges as water infiltrates through the layers of the simulated aquifer in a cup.
- Recognize the importance of aquifers as a critical source of drinking water.
- Explain the department’s role in protecting and conserving valuable groundwater resources.



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SUNSHINE STATE STANDARDS:

SC.1.N.1.1/SC.3.N.1.1 - Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

SC.1.E.6.1 - Recognize that water, rocks, soil, and living organisms are found on Earth's surface.

SC.1.E.6.2 - Describe the need for water and how to be safe around water.

SC.2.E.6.1 - Recognize that Earth is made up of rocks. Rocks come in many sizes and shapes.

SC.3.N.3.2 - Recognize that scientists use models to help understand and explain how things work.

SC.4.E.6.6 - Identify resources available in Florida (water, phosphate, oil, limestone, silicon, wind, and solar energy).

SC.5.E.7.1 - Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another.

SC.5.E.7.2 - Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth's water reservoirs via evaporation and precipitation processes.