

Aquifer in a Cup

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What is groundwater?

Groundwater is the water we drink and the water that grows our food. It is found underground in the cracks and spaces between sand and soil. These underground formations are called aquifers.

Key Topic: Aquifer, Groundwater, Recharge

Grade Level: This activity can be adapted for many age groups and settings

Duration: 15 - 20 Minutes

Items Needed:

- Clear plastic cups
- Sand, gravel or aquarium rock
- Water

Objectives:

Learn groundwater concepts by building a model aquifer. It's sometimes easier to understand groundwater if you can "see" it.

Activity Steps:

1. Start by filling a clear cup with sand/gravel.
2. Add water, filling the cup until half of the sand/gravel is saturated. Where did the water go?
3. The water filled in the spaces between the particles of sand/gravel. This represents groundwater. It is stored in formations called aquifers.
4. Look closely at the line created by the water. This line is called the water table. The area below the water table is called the saturated zone. The unsaturated zone is above the water table.
5. Add more water, pretend the water is rain from a storm cloud. Watch the water table. The groundwater supply has been recharged. This is what happens when it rains or snows and water infiltrates (sinks) into the ground.
6. Continue to fill the cup with water until the water covers the gravel/sand. This water is called surface water, it includes rivers, lakes, and oceans.

For More Fun:

- Use a clean soap or lotion pump to simulate a well. Pump groundwater out of the model aquifer.
- Discuss the effects pumping has on groundwater.



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