

There's No New Water

www.groundwater.org

How much water is available for humans to use? How much is stored in the atmosphere, frozen in glaciers and ice caps, or in the oceans?

We all have the responsibility to protect water in all its forms. The freshwater found in groundwater, rivers, and lakes is our primary source of drinking water. You may be surprised to learn that groundwater and fresh surface water make up a very small percentage of the Earth's total water supply.

Key Topic: Earth science, Water cycle, Groundwater, Water availability/water use, Water conservation

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

Duration: 20 minutes

Objectives:

Learn how much water is on the planet and where it is stored.

Items Needed:

- 5-gallon bucket
- Large jar labeled "freshwater"
- Cup labeled "groundwater"
- Small jar labeled "rivers and lakes"
- Tablespoon
- Eyedropper (optional)
- Water



www.groundwater.org
1-800-858-4844

Activity Steps:

1. Fill the 5-gallon bucket with five gallons of water. This represents all the water on Earth including the water that is contained in the atmosphere, glaciers, ice caps, streams, lakes, rivers, oceans, and groundwater.
2. Take out 25 tablespoons of water from the bucket and place it in the large, clear jar labeled "freshwater." This represents all the freshwater on Earth (water contained in the air, glaciers, rivers, ponds, lakes, and groundwater). All the remaining water in the bucket represents all the salt water on Earth.
3. Take out eight tablespoons from the freshwater supply and place it in the cup labeled "groundwater." This represents all the groundwater on Earth.
4. Take out one tenth of a tablespoon (or about 25 drops with an eyedropper) out of the freshwater supply and pour it in a small jar labeled "rivers and lakes." This water represents all the water in rivers and lakes on Earth. All of the water contained in groundwater, rivers, and lakes from the world's "freshwater" supply has been removed. The "freshwater" jar now represents all the water contained in the atmosphere (clouds, rain, snow, etc.) and all the water on the planet that is frozen (polar ice caps and glaciers).
5. Discuss the amount of water in each container, where we get our drinking water from, what other purposes surface water has (wildlife), and ways to conserve water.

Discussion Questions:

- Would it be easy to collect a cloud or wait for it to rain in order to get a drink?
- Is it easy to chip away a chunk of ice, then melt it in order to get a drink?
- Is it easy to drink water from the ocean?
- Why is it important to help protect and conserve the freshwater available for drinking?

