

ALL THE WATER IN THE WORLD

PURPOSE: *Students will learn that Earth has a limited supply of freshwater compared with all the water in the world.*

MATERIALS

- 3 Pipets
- 3 Spoons
- Water colored with blue food coloring
- 8 Clear Containers Labelled:
 - All The Water In The World
 - Groundwater
 - Icecap/Glaciers
 - Soil Moisture
 - Lakes
 - Atmosphere
 - Ocean
 - River

VOCABULARY

Water (Hydrologic) Cycle:

Describes how water moves throughout the Earth. Water can change forms from solid to liquid to gas as it heats up and cools down throughout the cycle.

SET-UP

Each group will get their own set of 8 labelled containers, 3 pipets and 3 spoons.

Set aside a demonstration set for you to use at the end of the lesson.

Fill the "All the Water in the World" containers with blue colored water.

PRE-ACTIVITY DISCUSSION

75% of the Earth is covered in water. Can you name some of the locations where we might find water?

Water is not only found in lakes, rivers, and oceans. There is also water locked up in icecaps and glaciers, underground in aquifers, in the atmosphere, and absorbed into the soil!



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DIRECTIONS

1. Fill each group's "All the Water in the World" container with blue water.
2. Using pipets and spoons, your students will try to accurately distribute "all the water in the world" into each of the other 7 containers.
3. Once your students are done distributing their water, let them walk around to observe how other group's have distributed their water.
4. Using your teacher demonstration containers, show your students the actual distribution of water.

ACTUAL DISTRIBUTION OF WATER:

Icecaps/Glaciers: 4.5 spoonfuls

Groundwater: 1.5 spoonfuls

Lakes: 4 drops

Soil Moisture: 1 drop

Atmosphere: 1/5 drop

Rivers: Not enough to measure

Oceans: The rest of the water!

POST-ACTIVITY DISCUSSION

If you look at a globe, you can clearly see that Earth is a water planet. About 70% of Earth's surface is covered in water. Of that total water supply on Earth, 97% is found in the oceans. That means 3% of all the water in the world is freshwater. Of this freshwater, 2.34% is locked up in icecaps and glaciers! This means, out of all the water in the world, less than 1% is usable by humans.

CLIMATE CONNECTIONS

As the world's average temperature rises, we are seeing more severe and widespread weather events such as drought and wildfires recorded each year. Our demand for water is increasing, yet our actual freshwater supply is decreasing. With less than 1% of the Earth's water available for use by living beings, it is important to understand the importance of conserving water.

1. Can you think of some ways we can work together to conserve water at school? Home?
2. Can you think of other ways we could acquire drinkable water?

TEKS ALIGNMENT

1st Grade: (b) 1B, 2E, 7B ; 2nd Grade: (b) 1B, 2E, 2F, 3B, 7B; 3rd Grade (b) 1B, 2F, 3B, 9C; 4th Grade: (b) 3B, 7B, 7C, 8B; 5th Grade: (b) 1B, 2B, 3B, 8B; 6th Grade (b) 1B, 3A 7th Grade (b) 1B, 2E, 3B, 3C 8th Grade (b) 1B, 3B, 3C



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