

Watery Planet

Grade 5

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References:

- CPS curriculum guide
- http://en.wikipedia.org/wiki/Water_cycle

Benchmarks & Objectives:

ES-3: Describe the characteristics of the Earth and its orbit about the sun (three fourths of the Earth's surface is covered by water).

Materials:

- Large clear jug or tank to pour water into
- Measuring cups, tablespoons
- Clear Dixie cups

Initial Demonstration:

Show the students a globe. Ask them why the earth is considered a watery planet. Show them where major oceans and ice sheets are located. Ask them what type of water they drink? Explain why saltwater is not drinkable. Tell the students that they will make a model to understand the water by volume. The students should be told that oceans contain 97% of the water on earth, ice caps and glaciers are 2%, groundwater .7% lakes are .1%, streams and rivers are .01% and the atmosphere, soil moisture, and water contained in the biosphere are the rest of the water. You may create charts to pass out to the students.

Procedure:

Students should break into groups or volunteer to get the amount of water needed for their water reservoir. The students responsible for the ocean should measure 96 & 1/2 tablespoons into the container. (16 cups) They should also put 3 1/2 tablespoons of salt into the water to closely represent the salinity of the ocean.

Other groups will measure their water into Dixie cups. (they may choose to have less than one drop or nothing for the very small components of the water cycle).

Then the students with the Dixie cups should pour their water into the larger reservoir and note how little the water level changes. The oceans contain a lot of water!

Target Observations:

Although the earth is a watery planet, very little of the water on earth is freshwater.

Summary and Discussion:

Students may discuss follow-up questions including: what is groundwater? Why is it important to not pollute our drinking water.