

# Water, Water...Everywhere?

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## **Standards of Learning**

Science: 1.8, 3.9, 4.9, 6.5, 6.7, 6.9

## **Objective**

The student will

- identify the major uses of water and understand the limited amount of water available. Discuss the importance of water conservation.

## **Materials**

- 1 gallon jug of water (can recycle an old milk jug)
- measuring cup
- tablespoon
- eye dropper
- clear plastic cup

## **Background Knowledge**

Water travels in a cycle. It comes down as precipitation; the sun causes evaporation; and then forms clouds through condensation. In this cycle, water is neither gained nor lost, it simply continues through the cycle.

Although the Earth's surface is about 75% water, only 3% of that is fresh, drinkable, water. Of that 3%, three-fourths is found in polar ice caps and glaciers. That means that less than 1% of the water on the earth is drinkable. Water is vital for humans, animals, and plants.

## **Procedure**

1. Begin the lesson by asking students how they use water each day. Discuss answers and record on the board.
2. Brainstorm other uses of water, industrial and agricultural. Record on the board as well.
3. Ask students where fresh water comes from. (rain/snow, rivers, lakes)
4. Hold up a gallon jug filled with water. Tell students that this represents all of the water on the Earth.
5. Use the measuring cup and pour out  $\frac{1}{4}$  cup of water from the jug.
6. The water in the measuring cup represents the Earth's supply of fresh water. The water remaining in the jug represents ocean/salt water.
7. Take 3 tablespoons of water out of the measuring cup and dump into a clear plastic cup. The 3 tablespoons represents the water locked away in glaciers and polar ice caps.
8. Ask for a volunteer. Take the eyedropper and place 2 drops (taken out of the measuring cup) into his/her hand. These 2 drops represent all of the fresh water available for use on Earth.
9. Revisit the list of water uses on the board. Why is it important to conserve water? Why is water pollution and contamination so harmful? Discuss.

## **Extension**

Break students into groups of 3-4. Have groups brainstorm ways to conserve water. Next, each group should create a Public Service Announcement skit or poster advertisement encouraging people to conserve water. Skits/posters should include conservation tips as well as explain the importance of doing so.

## **References**

Lesson adapted from Space Agriculture in the Classroom, [www.spaceag.org](http://www.spaceag.org).

