



A Drip in the Bucket

Objectives:

The students will understand that there is a limited amount of water on earth available for drinking. Draw conclusions about the need for water conservation

Key Vocabulary:

Conservation - the use of water-saving methods to reduce the amount of water needed for homes, lawns, farming and industry, and thus increasing water supplies for optimum long-term economic and social benefits.

Fresh Water - water with less than 0.5 parts per thousand dissolved salts. (NOT SALT WATER)

Ground Water - water that has been absorbed into the soil and is contained in rock pores, cracks and crevices in rock formations, sand, gravel and other porous materials. Aquifers are one kind of groundwater. Water from wells or springs are ways of tapping groundwater.

Surface Water - water above the surface of the land, including lakes, rivers, streams, ponds, flood water, and runoff.

Watershed - the land area from which surface runoff drains into a stream channel, lake, reservoir, or other body of water; also called a drainage basin.

Materials:

- One Gallon of Water
- One clear empty gallon container
- ¼ cup
- 1 – tablespoon
- Pictures of various bodies of water,
- snow covered mountain tops a globe or
- map
- 1 - teaspoon
- Eyedroppers

Procedure:

Set up of materials can be for individual groups – having each group run the activity.

1. Show the class a gallon of water and explain that it represents all the water on earth.
2. Discuss where most of the water on Earth is located. Refer to a map or globe. (look at pictures of oceans, lakes, rivers, snow caps, etc.)
3. Pour a quarter cup of water from the gallon into an empty gallon container . Discuss how this represents the Earth's fresh water, about 3% of the total.
4. Examine a globe or map of the world and discuss what is at the earth's poles. Explain that almost 80% of the Earth's fresh water is frozen in glaciers and icecaps.
5. Pour One Tablespoon from the quarter cup of water in the second gallon of fresh water into a clear glass. This water represents non-frozen fresh water.
6. Pour one quarter of this tablespoon (less then a teaspoon) into another clear glass. Explain that this water is surface water and that the remaining water is groundwater.
7. Using an eyedropper, remove a single drop (drip) of water. Put the drop in a third clear cup. Place the last cup next to the original gallon of water. Discuss how this single drop of water represents clean, fresh water that is not polluted or otherwise unavailable for use, about 0.00003 percent of the total.
8. Have students discuss as a class what they think about the quantity of water available for consumption.
9. Discuss as a class why it is important to conserve water.

Extension:

1. Have the students write to local officials to determine the town or cities plans for mandatory water conservation.
2. Have students write how they will conserve water.