

Where Is All the Water?



Essential Question: How is water distributed on Earth?

Overview

Florida is a large peninsula that is surrounded by water around more than 80 percent of its border. But, does that mean there is enough water available to support Florida's growing population? It is a complicated question to answer because the most visible water in Florida, the ocean, and the Gulf of Mexico are not useful for most human activities. On the other hand, not all useful water is visible at the surface.

Water is found nearly everywhere on or near the surface of the Earth. It may or may not be visible, but it is there. Visible sources of water include oceans, lakes, streams, and ice. Less obvious sources include groundwater (aquifers beneath the surface), soil moisture, water vapor in the atmosphere, and water contained within living cells. However, not all water can be used for all human needs. Water in the oceans is too salty to drink. Water frozen in icecaps can be melted for drinking, but this requires a lot of energy. In this activity, you will explore how much water is available on Earth for us to use, and how much is not useful or difficult to acquire.

Materials

For each group:

- 1 L plastic beaker
- 8 32-oz. clear plastic cups
- masking tape
- 1 3-mL dropper
- 1 250-mL graduated cylinder
- 1 50-mL graduated cylinder

Safety

Wear eye protection; clean any spills immediately.

Procedure

1. Construct a data table with four columns and nine rows. Label the first column "Water Source," the second "Amount (mL)," the third "Experimental %," and the fourth "Actual %."
2. Fill the large beaker with one liter of water. Label it with tape as "Total World Supply of Water" (1000 mL).