

A drop of water

Activity

Background

Three fourth of the surface of the Earth is covered with water. Early astronauts described Earth as “The Blue Pearl”. Although there is a large quantity of water available on earth, only a very small percentage of this total water is available for human use and consumption. This activity will help students draw an analogy to the quantity of water present in the seas, that present in glaciers, that available as ground water, etc.

Methodology

- Students should take 2200 ml of water into a container. If a measuring cylinder is not available, an empty soft drink bottle of known capacity maybe used.
- Students should assume that 2200 ml of water represents the total water available on Earth.
- Students should then remove 12 spoonfuls of water from the total volume of water mentioned above into a plastic/ glass bowl. This water removed into the bowl represents the total amount of fresh water on the Earth. Including the water found in lakes, rivers, ice caps and ground water.
- The water that now remains in the large container represents salty water found in oceans and seas.
- From the bowl containing 12 spoons of water, students should measure out 2 spoons of water into another bowl. This water represents the ground water.
- From the bowl now containing 10 spoonfuls of water, remove half a spoon of water into another bowl. This water represents the surface water present as fresh water lakes.
- From the bowl now containing, just over 9 spoonfuls of water, students must remove one drop of water with the help of a dropper. The water in the dropper represents the water present in rivers.
- The bowl which now contains just about 9 spoonfuls of water represents water locked in icebergs.
- The students must now compare the quantities of water in various containers.
- Students would realise that although three fourth of the surface of the Earth is covered with water, only a limited percentage is available for human consumption.

Percentage distribution of water on Earth

Oceans	97.2
Ice-caps	02.0
Groundwater	00.62
Fresh water lakes	00.009
Inland seas and salt lakes	00.008
Atmosphere	00.001
Rivers	00.0001
Total	99.8381

1/2 Spoon = freshwater lakes

1 drop = rivers

2 Spoons = groundwater

Objective
To demonstrate to students the distribution of water on earth.

Place
Home, school

Group size
Individual/ group

Duration
30 min

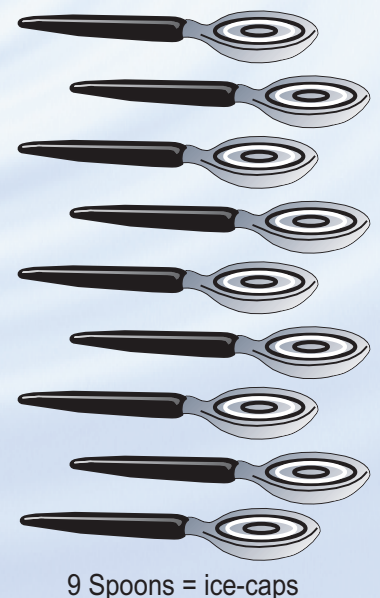
Suitable time
Anytime

Materials
Water, Large container (capacity of 2.5L), small transparent containers (3), spoons, dropper, measuring cylinder

Curricular Linkages

Subject
Science, Math

Concept
Distribution of water



9 Spoons = ice-caps