



Sustainable Development Goal 6: Clean Water and Sanitation

Can You Spare a Drop of Water?

Goal

The goal of SDG 6 is to: Ensure availability and sustainable management of water and sanitation for all.

Activity: Can You Spare a Drop of Water? Measuring Fresh Water

This activity highlights the scarcity of useable/available freshwater and indicates why it's important to take actions in line with the targets of SDG 6 to ensure clean water for all.

Summary

Participants remove measured amounts of water from a five-gallon bucket, simulating the amount of fresh water available on earth.

Time required

50 minutes

Equipment needed

- 5-gallon bucket
- 2-cup transparent measuring cup
- 1-cup transparent measuring cup
- 1 eyedropper

Advance Preparation

Before the activity, fill the 5-gallon bucket with water. Have the other materials nearby in a place where the whole group can observe.

Note: Be sure to wipe water off the floor if spills occur during this activity.



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Part 1

- Explain to the scouts that the water in the 5-gallon bucket represents all the water on Earth. Ask them to name the kinds of water that exist in, on or around Earth. They should be able to name rivers, lakes, oceans, clouds or water vapor, ice caps, groundwater, water held in soil, and water held in plants and animals. Provide hints so that all types of water are mentioned.
- Ask two scouts to come up and help with the demonstration. Ask one of them to remove two cups of water from the bucket, using a measuring cup. Have the scout hold that amount so everyone in the group can see it.
- What does the water in the cup represent?
 - Freshwater.
- What does the water in the bucket represent?
 - Saltwater. Explain that the saltwater is not usable by humans because drinking it would make us very sick.
- Move the bucket aside. Ask the first scout to pour 1/2 cup of water into the one-cup measurer held by the other scout.
- What does the 1-1/2 cups still left in the two-cup measurer represent?
 - Polar ice caps. Explain that this water is unavailable for our use because it is frozen.
- Set this cup aside. The first scout can return to his or her seat.
- Ask the group what the 1/2 cup of water represents.



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- Groundwater, surface water (e.g. lakes, rivers, wetlands), and water vapor in the atmosphere.
 - Have the group guess how much water should be removed from the cup to represent only the surface water on Earth. After a few guesses, pull out the eyedropper from your pocket and draw some water into it. Place one drop of water into the hand of a few scouts. Explain that one drop of water out of a whole 5-gallon bucket represents the water that is available to us and other animals for drinking.
 - Allow the group to think about this for a minute.
 - Then explain to them that the total amount of water on the planet is not going to change. Even though water moves around on the planet and changes from one kind to another, we will never have any more than we have right now.

Part 2 – Discuss the Results

Spend some time discussing the activity with the group. The following questions are a good place to start:

- Were you surprised at how little water is available for human use?
- Would you call water a scarce or abundant resource? Why?
- What do we need/use water for?
- Why can't we drink saltwater?
- The number of people who need to use Earth's freshwater keeps increasing. If the amount of freshwater cannot change, but there are more people who need it, what does that mean? What might happen?
- Can people and animals live without clean freshwater?



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- What is the main cause of the increased demand for freshwater?
- Ask the scouts to think about the term water quality. Find out from them what they think it means. If they get stuck, have them think about it in terms of low water quality or high water quality: would they want to drink, wash, swim or cook with low quality water or high quality water? Have them come up with as many descriptions as they can for what might be low quality and high quality water.