

Water On Earth Session

Age/Grade Range

- K to Grade 3
- Modifications available for grades 3-5

Group Size

- Large group activity (15-30 students)

Time

- Set-up: 5 minutes
- Activity Part I: 20 – 25 minutes.
- Activity Part II: 10 minutes.
- Activity Part III: 10 minutes.

Materials

- Printed photographs of nature (displaying aquatic, terrestrial and aerial environments).
- Three small or medium glass jars: one with soil, one with water and one empty to represent air. All three labelled.
- A box labelled "Life Box" that can fit the jars inside.
- An inflatable globe.
- A blue tarp.

Set-Up

1. Clear a large space and layout the blue tarp on the ground.
2. Place the Life Box in the middle of the tarp.
3. Inflate the Globe.



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Topics

- Water

Objective

- Understand the relationships between land and water.
- Understand that water is limited.
- Explore the amount of freshwater available for human use.



Activity Directions

Part I

1. Ask the youth to sit on the tarp, forming a large circle around the box.
2. Explain that the box contains the four elements of the Earth necessary for most life. Ask what they think the four elements are. Give 2-3 minutes to discuss. Ask a student to open the box and reveal the contents, placing the jars in the middle of the circle.
3. Explain that the four elements are necessary for life to exist are: soil, air, water and sunlight. The box contained three of the elements, and the fourth, light, entered the life box when we opened it.
4. Pass out one photo per student and ask them to place each photo, one at a time, next to the corresponding jar.
5. Explain how each of these elements is used by organisms to stay alive.

Part II

1. Start by discussing the question: "Does our planet Earth contain more land or more water?"
2. Toss the inflatable globe around the circle to all students, encouraging them to catch it with both hands and their fingers spread wide. Every time a student catches the globe, they will say out loud if their hands are touching mostly land or mostly water (optional: have students name the ocean and or continent their hands land on). Record the answers.
3. Once the globe has gone around, look at the results and describe what you see as a group.
4. Wrap up the activity by explaining that water makes up about 71% of the Earth, and that all water is connected and circulates through the water cycle.

Part III

1. Tell students that they are going to pretend that the blue tarp they are standing on represents all of the water on Earth.
2. Ask students 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 vapour, ice caps, groundwater, water held in the soil, and water held in plants and animals. Provide hints so that they mention all types of water.
3. Have seven students represent each a billion people on the Earth; other students can represent all of the plants and the animals on Earth.
4. Ask the youth: How much of the Earth's water is drinking water? Explain that oceans hold most of the Earth's water- 97%. Fold up the tarp multiple times to represent the saltwater that we can't use. All students should be standing on the tarp.
5. Continue by explaining that icecaps and glaciers contain 2% of the Earth's water. Fold up the tarp again. 0.6% is groundwater, 0.005% moisture in the soil, 0.001% moisture in the atmosphere. Lakes and rivers hold only 0.0091%! All students should be squeezing on a small area of the tarp, which represents freshwater.
6. Explain that not very much water is available to us, and other animals, for drinking. We all need water to survive, but the amount of water on Earth is finite. Emphasize the importance of sharing and protecting our freshwater resources.
7. As a group, brainstorm individual actions to protect/conserves water at home and school.





Modifications

- Part I: An alternative is to focus this activity on water. Prepare a slideshow and use a projector to display images of water in nature.
- Tell students that we are all going to be water and move like water through the environment. Have them stand up and practice movements that mimic flowing/liquid water, frozen water and water vapour up in the air before going through the photos.
- Start the slideshow as you narrate the story of water molecules flowing through the environment. Every time the slide changes, have students (and yourself) mimic the state of water.

