

# Visualize Earth's Fresh Water in the Kitchen!

- **Intro:** When reading about the water cycle, you may have learned that most of the water on earth is saltwater (~97.5%), like the water in our oceans. Also, a large amount of earth's water is frozen such as glaciers and ice sheets (~1.7%). Fresh groundwater makes up ~0.75% of the water on earth, and fresh surface water such as the water in streams and lakes is about ~0.01% of the water on earth. Additionally, about ~0.001% of earth's water is in gas form as water vapor in our atmosphere. Having trouble visualizing this? This activity can help you visualize the relative amounts of freshwater on earth!

## Materials:

1. ~1 gallon of water
2. Large 1+ gallon bucket or container
3. Liquid measuring cup
4. Tablespoon
5. 8 ice cubes
6. Teaspoon
7. Eye dropper
8. Extra containers to hold water

## Directions:

1. Measure 1 gallon (16 cups) of water into the bucket. This represents all the water on earth.
2. From the water in the bucket, remove  $\frac{1}{4}$  cup of water and set it aside. Replace it with **8 ice cubes**. These represents earth's **frozen water** like glaciers.
3. From the water in the bucket, measure **2 tablespoons** into an extra container. This represents earth's **fresh groundwater**.
4. From the water in the bucket, use an eyedropper to measure **8 drops** of water into an extra container. This represents all the **surface water** on earth, such as streams and lakes.
5. From the water in the bucket, use an eyedropper to measure **1 drop** of water into an extra container. The amount of **water vapor** in our atmosphere at any time is represented by slightly less than this amount!
6. Look at the water remaining in the bucket. This represents the saltwater on earth: mainly the water in oceans but also including salty groundwater near coasts and saltwater lakes, ponds, and wetlands.
7. When you are finished, please reuse the water from this activity. Water a plant or wash dishes!

# Visualize Earth's Fresh Water in the Bathtub!

**Intro:** When reading about the water cycle, you may have learned that most of the water on earth is saltwater (~97.5%), like the water in our oceans. Also, a large amount of earth's water is frozen such as glaciers and ice sheets (~1.7%). Fresh groundwater makes up ~0.75% of the water on earth, and fresh surface water such as the water in streams and lakes is only about ~0.01% of the water on earth. Additionally, about ~0.001% of earth's water is in gas form as water vapor in our atmosphere. Having trouble visualizing this? Next time you fill up the bathtub, try this activity!

## Materials:

1. ~30 gallons of water
2. Bathtub
3. Half gallon container (e.g., empty half-gallon milk carton)\*
4. Liquid measuring cup\*
5. Teaspoon
6.  $\frac{1}{4}$  teaspoon
7. Extra containers to hold water\*

\*for safety, glass containers are not recommended

## Directions:

1. Fill up the bathtub, an average bath uses about 30 gallons of water. This represents all the water on earth.
2. From the water in the tub, fill up a **half gallon** container. This represents earth's **frozen water** such as in glaciers and ice sheets.
3. From the water in the tub, use a liquid measuring cup to measure out **3.5 cups** into an extra container. This represents earth's **fresh groundwater**.
4. From the water in the tub, measure **2 teaspoons** into an extra container. This represents all the **surface water** on earth, such as streams and lakes.
5. From the water in the tub, measure on  $\frac{1}{4}$  **teaspoon**. This represents the water on earth that is in the form of **water vapor** in our atmosphere at any time.
6. Look at the water remaining in the tub. This represents the saltwater on earth: mainly the water in oceans but also including salty groundwater near coasts and saltwater lakes, ponds, and wetlands.