

Surface Water

Engage

Materials: colored pencils

What To Do:

1. Look at the 1L water bottle pictured below.
2. Pretend it is the Earth.
3. Predict how much of the bottle (Earth) has water and how much has land by coloring your prediction for water blue and coloring land brown.



4. Draw a line across the water to predict how much of the water is saltwater and how much is freshwater.
5. Be sure to label your predictions.

Explore

Materials: Blowup Globe of the Earth, calculator

What To Do:

1. Your teacher will place a tally sheet like the one below on the whiteboard.
2. Everyone will form a circle around the room.
3. Your teacher will give one person the blown up globe of the Earth.
4. The student who has the globe will check where their right thumb or pointer finger is on land or water.
5. The student will call out their result, and the teacher will mark the tally on the board.
6. The student with the globe will toss it to another student and that student will check their result and call it out.
7. This needs to be repeated for 50-100 tosses to insure an accurate sample.
8. Copy the information on the board into the tally sheet below.
9. Calculate the percentage of land and water using the following formulas.

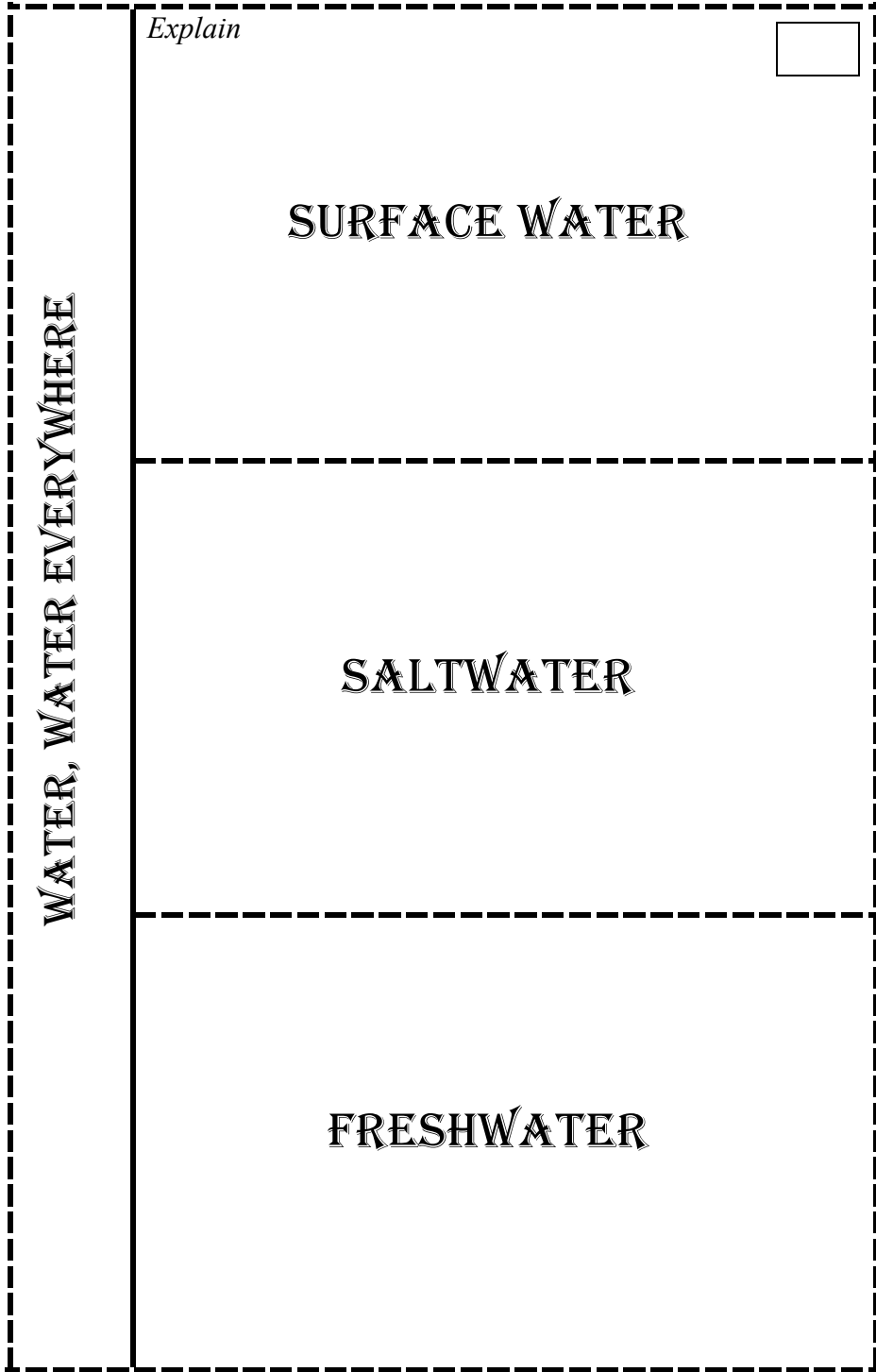
Land	Water

Land

$$\frac{\text{Total Land}}{\text{Total tosses}} \times 100 = \text{Percentage of land} \%$$

Water

$$\frac{\text{Total Water}}{\text{Total tosses}} \times 100 = \text{Percentage of water} \%$$



Elaborate

What To Do:

1. Watch the video “Show Me The Water” from <https://www.youtube.com/watch?v=4HSFKwho7MQ>
2. Use the Word Bank below to help you fill in the blanks while the video plays.

WORD BANK			
reservoirs	water	power	precipitation
ocean	one	freshwater	

1. As humans, we're well aware we need _____ to live.
2. A giant 97 percent of Earth's water is in the _____, so we can't use that.
3. Three percent is _____, but even in that small sliver, about two percent is locked in glaciers, ice caps, and groundwater.
4. That leaves about _____ percent of the freshwater on Earth that is accessible and usable by humans.
5. In the United States, about 49 percent is used in thermoelectric _____ production.
6. The water coming out of our faucets largely comes from _____.
7. Precipitation replenishes these tiny _____ of freshwater.

What To Do:

1. Go back to the first two pages and compare what you thought and what you found with the following information.
2. Answer the questions.

71% of the Earth's surface is covered in water.

1. How does the class percentage compare to the actual percentage?

2. How does your prediction of the amount of land and water in the bottle compare with this information?

97% of the Earth's water is salt water.

1. How does your prediction of the amount of saltwater and the amount of freshwater compare with this information?

2. Can salt water be used for drinking water? _____

3. Can salt water be used for watering plants? _____

4. Where is the salt water located? _____

3% of the Earth's water is freshwater.

1. How much of this freshwater is available for human use?

2. How is the freshwater resupplied for human use?

Evaluate

Name _____ period _____

EXIT TICKET

Surface Water

1. If water contains low concentrations of dissolved salts, it is known as –

- A. Saltwater
- B. Freshwater
- C. Brackish water
- D. Polluted water

2. If water contains high concentrations of dissolved salts, it is known as –

- A. Saltwater
- B. Freshwater
- C. Brackish water
- D. Polluted water

3. Most of the water found on the Earth is found –

- A. Underground
- B. In the ocean
- C. In lakes and rivers
- D. In glaciers

4. The Earth's surface is mostly covered by –

- A. Land
- B. Ice
- C. Water
- D. Islands

5. Water that is on top of the Earth's surface is known as –

- A. Groundwater
- B. Surface water
- C. Land water
- D. Polluted water