



1st Grade

Unit 1: Explore My School

Essential Question #3: How do we investigate the natural world at school?

Lesson Title: Earth's Water

SC Standard II, Objective 1
SS Standard III, Objective 2

Implementation Time: 40 minutes

Media Resources Needed:

Water by Alice Flannigan, Compass Point Books

Materials Needed:

Inflatable Globe Ball	2 Clear Cups
Blue Squares of Construction Paper (50-100)	Measuring cups
Brown Squares of Construction Paper (50-100)	Water Category Labels
Board or Chart Paper to make a Class Graph	Salt
25 cups of Water	Blue food coloring
Container to hold water (large bowl or bucket)	Art paper
Measuring Cups (1 cup, $\frac{1}{2}$ cup, and $\frac{1}{4}$ cup)	Watercolors

Procedure:

Introduction/Engage: The planet Earth is very unique. It is the only planet in our solar system that has life. That is because our Earth has liquid water.

1. Show students an inflatable globe ball. Identify that the blue parts represent water and the brown and green parts represent land.
2. Stand in a circle and have the students toss the inflated globe ball to one another. As a student catches the ball, they look to see where their left thumb touches the ball. If it is on water, they will take a blue square of construction paper and add it to the class graph on the board or a piece of chart paper. If their left thumb lands on land, they will add a brown piece of construction paper to the class graph.
3. Repeatedly toss and catch the ball to add many squares to your class graph. When you are finished, rearrange the squares if needed to clearly create a class bar graph comparing water and land. There should be more blue squares than brown, since there is more water on Earth than land. (The Earth is 70% water.)
4. Explore: Ask the students, "Where can you find water on the Earth?"



Brainstorm and discuss ideas together as a class.

Examples: oceans, lake, Great Salt Lake, kitchen sink, river, rain, snow, etc.

5. Show students a large bowl or bucket that will be a model that represents all of the water on the Earth.
6. Have one student at a time come up and fill a 1-cup measuring cup with water and pour it into the container until you have 25 cups in the container. This will represent all of the water on our Earth.
7. Tell students that scientists divide our water sources into three categories.
Salt Water (oceans), Frozen Water (glaciers) and Fresh Water (streams, lakes, rivers, etc.)
8. Place a label for each of the three categories of water on the board. Ask the students:
How much of our water (how many cups) do you think will be in each of our categories?
9. Discuss student ideas and predictions and reasons for their predictions.
10. Let's find out! Model the 3 different categories of water.

Frozen Water

- Invite one student volunteer to represent "Frozen Water"
- Have that student use a measuring cup to remove $\frac{1}{2}$ cup of water from the large container. Pour the $\frac{1}{2}$ cup water into a clear cup. Add a drop of blue food coloring to the cup.
- Have the student read the back of the Frozen Water label: "1/2 cup of water represents frozen polar water."
- (*Note: You may even want to freeze $\frac{1}{2}$ cup of water overnight before this lesson*)

Fresh Water

- Invite one student volunteer to represent "Fresh Water"
- Have that student use a measuring cup to remove $\frac{1}{4}$ cup of water from the large container. Pour the $\frac{1}{4}$ c. water into a clear cup.
- Have the student read the back of the Fresh Water label: "1/4 cup of water represents fresh water in rivers and streams."

Salt Water

- Invite one student volunteer to represent "Salt Water"
- Have that student pour salt into the water still left in the large container.
- Have the student read the back of the Salt Water label: "24 $\frac{1}{4}$ cups of water represents salt water in the ocean."

11. Explain: Have the students look at the containers of water you have created. Briefly discuss each category.

Frozen Water: What does frozen mean? (This water is solid ice). Can we drink frozen water? (No). This water is found at the north and south poles. It is frozen in big pieces called glaciers.



Salt Water: What is salt water? (Water that has salt dissolved in it). Where is this water found? (Our oceans are full of salt water). Show students the inflatable globe ball. Identify the oceans and notice how large they are. Most of our world is covered in salt water. Can we drink salt water? (No).

Fresh Water: What is fresh water? Where is this water found? We have fresh water in rivers, lakes, reservoirs, streams, etc. Can we drink fresh water? (Yes)! Look at how much fresh water we have compared to frozen and salt water. There isn't as much fresh water on our Earth for us to drink. (*Note: This is a great time to talk about water conservation!*)

12. Elaborate (optional): Have the students write a story about Earth's water. What would happen if we had more water on Earth? What if we had only water and no more land? What would you do? Where would you live? What would you eat? How would life be different?

Or

What would happen if we had less water on Earth? What if all the water disappeared? What would you do? Could you survive? What would you eat? How would you get clean? How would life be different?

Illustrate your story or create a cover with watercolors. (Of course! ☺)

Assessment:

Check for student understanding of the different categories of water during the activities and discussion.

Read student water stories to check for understanding of the uses and importance of water in our world.

Extension

Read the book *Water* and discuss with the class



Water Category Cards – Side 1

Frozen Water

Fresh Water

Salt Water



Water Category Cards – Side 2

$\frac{1}{2}$ cup of water represents frozen
polar ice

$\frac{1}{4}$ cup of water represents fresh
water in lakes, rivers and streams

24 $\frac{1}{4}$ cups of water represents salt
water in the ocean