

Grade 4	Lesson: 1-1 Water World	Reference to English
Standard(s): 1.OA.1	Domain:	
Content Objective(s):	Language Objective(s):	
Identify the relative amount and kind of water found in various locations on Earth		
Essential Understanding:	Academic Vocabulary for Word Wall: Listen: Read: Write: Speak:	
Materials: <ul style="list-style-type: none"> • “My Water Cycle Book” (1 per student) • 100 Pennies • Globe • 2 Liter Pop Bottle • Water • Graduated Cylinder (or use ¼ cup, 1/3 cup, and Tablespoon) • 2 Clear Plastic Cups • Salt • Watercolors 	Additional Lesson Vocabulary: Sentence Frames:	
Lesson: Water World	Instructional Time:	

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Opening: (10 minutes)

T: 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.

T: Where can you find water on the Earth?

- Have the students brainstorm many possible sources. Record ideas in their "My Water Cycle Book."
- Examples: oceans, lake, Great Salt Lake, sink, river, rain, snow, etc.

Introduction to New Material (Direct Instruction): (7 minutes)

T: Scientists divide our water sources into categories. Let's divide our list into three categories: oceans, glaciers, and freshwater.

- Have the students write these category labels in their "My Water Cycle Book."

T: Transfer the items from your brainstormed list of sources to the three categories.

- Ex:

<u>Oceans</u>	<u>Glaciers</u>	<u>Fresh Water</u>
Pacific Ocean	glacier	rain
Atlantic Ocean		river
		lake
		snow
- Now have the students predict what percentage of the Earth's water is contained in each category. Record predictions. (Note: Be sure the percentages add up to 100%)

Pennies:

T: Percentages are based on the number 100. Let's use 100 pennies to help us understand what each percentage looks like.

T: Oceans 97% = 97 pennies

T: Glaciers 2% = 2 pennies

T: Fresh Water 1% = 1 penny

T: Compare the stacks of pennies and discuss the distribution of water on Earth.

T: Record the actual percentages of each category.

Guided Practice: (10 minutes)**Water:**

T: The pennies can help us understand the percentages better. Now let's use actual water to see these categories.

- Show students a globe. Have them identify all blue (water) areas. Our Earth is 70% water. When seen from space, we are often called the "blue planet." Compare the size of oceans to rivers and lakes.

T: Fill a 2 Liter pop bottle with 2000 mL (2 L) of water. This will represent all the water found on Earth (all the blue areas on the globe).

T: Pour 40 mL (~¼ cup) of water from the 2 Liter bottle into a cup and place it in the freezer. This represents the water on Earth contained in glaciers.

T: Pour 20 mL (~2 Tbsp) of water from the 2 Liter bottle into a cup to represent the fresh water on Earth.

T: The remaining water in the bottle represents in the oceans. Water in the oceans consists of 3.5% salt. Add 68 mL of salt (~1/3 cup) to the water in the 2 Liter bottle.

T: Compare the water containers and discuss.

Independent Practice: (6 minutes)**Water Story:**

- Have the students write a story about Earth's water.

T: What would happen if we had more than 70% water? 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

T: What would happen if we had less than 70% water? What if we only had 50% or 30% water? 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?

Closing: (4 minutes)

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

Assessment: