

Grade 4	Lesson: 1-2 Evaporation	Reference to English
Standard(s): 1.OA.1	Domain:	
Content Objective(s):	Language Objective(s):	
Identify the sun as the source of energy that evaporates water from the surface of 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) • Sponge • Chalk Board • Paper Cups (1 per student) • Paintbrushes (1 per student) • Paper towels • Paper Plate • Ziploc Bag • Aluminum Foil (1 piece per group) • Water Pipette or Eye Dropper (1 per group) • Rulers (1 per group) • Food Coloring • Ice Cube Trays • White Construction Paper 	Additional Lesson Vocabulary: Sentence Frames:	
Lesson: Evaporation	Instructional Time:	

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Opening: (10 minutes)

- Play the game “Evaporation.”
- Use a wet sponge to write a word or phrase on the chalk board. Have the students observe the water “disappearing.”

T: Why does the word disappear? Where does it go? The water is evaporating off the board into the air. Evaporation is the process of liquid water changing to water vapor. Record this definition in their “My Water Cycle Book.”

T: Use the wet sponge to continue writing math problems, spelling words, or other items on the chalk board. Have the students see how many times they can copy what you have written on their paper before it disappears.

- When the item completely disappears yell out, “Evaporation.” Repeat with a new problem or word. Can they beat their score?
- Students can also participate in writing with “disappearing ink” by painting with water on the sidewalk outside. This is a great way for them to practice writing their spelling words, answers to mental math problems, reviewing geometric shapes, and more!
- Help the students understand that outside the sun’s energy is changing the liquid water to water vapor.

Introduction to New Material (Direct Instruction): (7 minutes)**Guided Practice: (10 minutes)***Evaporation Experiment #1: Paper Towels*

T: Have you ever been swimming? When you first get out of the pool and lie down on the grass, you are wet. If you stay there long enough, you will eventually be dry? What is causing the water on your body to evaporate?

- Remind students that the sun’s energy is changing the liquid water to water vapor.

T: Let’s experiment with evaporation.

T: Wet several paper towels and take them outside.

- Have the students select several locations outside to test. Examples:
 - grass – playground slide – sunny area
 - side walk – wood chips – shaded area
 - asphalt

T: Place two paper towels in each area to be tested. Leave one paper towel wadded up in a ball and stretch the other open flat.

T: Wait 10–15 minutes to allow time for evaporation.

T: While you are waiting, record in their “My Water Cycle Book” the locations selected and predictions for which area will be the wettest or driest.

- Also, discuss student predictions while you are waiting. Which area will be the wettest? The driest? Why?

T: After 10–15 minutes, return to collect the paper towels.

T: Record how wet each paper towel is in their “My Water Cycle Book” using a scale of 1–5. 1=very wet to 5=very dry.

T: Compare the results to their predictions. Were they correct? Discuss the results and evaluate how the sun affected the results.

- Make a connection to their wet clothing after swimming or a bath. Which towel will dry first, one left in a pile on the floor or one hung up?
- Have the students record what they have learned about evaporation in their “my Water Cycle Book.”

Evaporation Experiment #2: Plate, Bag, and Cup

T: Draw a line half-way up the side of a paper cup.

T: Fill the cup with water to the line.

T: Pour the water slowly into a paper plate.

T: Fill the cup with water to the line again.

T: Pour the water into a Ziploc Bag and seal shut.

T: Fill the cup with water to the line one more time.

T: Place the paper plate, Ziploc bag, and cup in a sunny area outside where they will not be disturbed and can be observed. Record the time the experiment started in their “My Water Cycle Book.”

T: What will happen to the water if we leave them outside in the sun? (The water will evaporate.)

T: What will cause the water to evaporate? (The sun’s energy.)

- Have the students predict which one will evaporate first, the cup, the bag, or the plate of water? Which will be last? Why? Record their predictions.
- Check on the paper plate, bag, and cup regularly until they have completely evaporated. Record the time for each.

T: Which one evaporated first? Last? Why?

T: Discuss the differences in the experiment. Although we used the same amount of water in each container,

Assessment:

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