

**Project FOCUS
Best Lessons
FIRST GRADE**

Title of Lesson: The Water Cycle and Conservation

Theme: Earth/Space Science

Unit Number: 2 Unit Title: Water, Water, Everywhere

Performance Standard(s) Covered (enter code):

S1CS3

S1E2

Enduring Standards (objectives of activity):

Habits of Mind

- Asks questions
- Uses numbers to quantify
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

Content (key terms and topics covered):

Water cycle (evaporation, condensation), water conservation

Learning Activity (Description in Steps)

Abstract(limit 100 characters): This lesson introduces the students to the water cycle and the processes involved in it.

Details: 1. Introduce the concepts of evaporation and condensation. Tell the students they will now watch the process in action.

2. Set up apparatus. Cover experimental area with paper towels. Set pan/beaker on top of the hot plate, pour in about 2 cups of water and bring to a boil.

3. In the cookie sheet, put about two cups of ice, or enough to fill the cookie sheet.

4. Hold or prop up the cookie sheet about 1.5 feet above the boiling water. The water that evaporates from the beaker will encounter the cold surface of the bottom of the cookie sheet and will begin to condense. This process takes a bit so this is a good time to talk about the concepts and how they might relate to the world around us. Also, make sure to ask for observations from the students and gather hypotheses as to what they think is happening.

5. As the droplets gather and get heavier, they will eventually begin dropping to the ground, illustrating rain.

6. Hand out the worksheet and walk through the water cycle with the students. Make sure to point out where evaporation and condensation take place.

7. Explain that even though water is recycled, it still needs to be conserved because it is a natural resource and thus is limited.

8. Ask the students to write down on a piece of paper one or two things they did that morning with water, i.e. brushing teeth, drinking, washing dishes.
9. Pour about 4 cups of water into the plastic container. Explain that the container represents the earth and the water inside it represents the water on earth. The sponges represent things that humans use water for. Mark the starting water level with chalk or a marker.
10. Ask the students to come up one by one and share how they used water that morning with the class. Each student, after sharing their water usage, takes a sponge and drops it (gently) into the bowl of water. You can pull the sponge out and place it in an empty container.
11. Ask the students to observe the change in the water level as everyone comes up and uses some water. The water level should drop significantly.
12. When everyone has gone, mark the new water level.
13. Next, ask the class to think about how they used water that morning and one way they could reduce their water usage, i.e. turn the water off when brushing teeth, take showers instead of baths, etc.
14. Then, go around the class and ask the students to share how they could conserve water. For every student, squeeze some of the water from the soaked sponges back into "earth." Observe water level.
15. Explain how one person's conservation may not make a noticeable difference but when everybody conserves, it makes a great difference. This activity should demonstrate that concept.

Materials Needed (Type and Quantity):

Water
Ice
Pot/beaker
Cookie sheet
Hot plate
Paper towels
Oven mitts
2 plastic containers, 1 with a wide mouth
4 sponges, each cut into 6 pieces
Chalk/marker/tape

Notes and Tips (suggested changes, alternative methods, cautions):

For the water cycle activity, make copies of the water cycle flow chart and obtain the materials. It is a good idea to do the activity at home first. The activity involves boiling water and a hot plate. Thus, it is very important to go over lab safety rules before performing the activity.

Sources/References:

- 1) <http://www.enchantedlearning.com/geology/label/watercycle/labelanswers.shtml>
- 2)
- 3)