
Walter Molecule Introduces the Water Cycle

Cart Title: Water Cycle

Core Connection



Fourth Grade Science Standard I: Students will understand that water changes state as it moves through the water cycle.

Objective 1: Describe the relationship between heat energy, evaporation and condensation of water on Earth.

Objective 2: Describe the water cycle.

Summary: Cart Four at the Museum focuses on the water cycle and presents the lesson through an animated computer program and a three-dimensional cut away model. The computer program follows the adventures of Walter Molecule as he changes from one form of water to another.

Lesson Learning Objectives:

1. Students will explain the water cycle as depicted in the program.
2. Students will describe the effects of sun and temperature on the process.

Materials:

paper/pencil

Instructions:

1. After returning to the classroom, divide students into groups representing each phase of the water cycle and pictorially explain the process.
2. Bring the class back together and have them place the processes in the correct order and explain what their phase does as well as the effects of the sun and water on the process.

Time Approximate: 50 minutes

Extension:

Select one or more of the extension activities that follow.

Weather/Water Cycle Extension Activities

1. Write your own story.

Students are to create a story about the water cycle. They should identify a main “character” and have this character travel. Students should then work together to edit and finalize their stories. Using a variety of art supplies students should create a picture depicting a part of the story.

2. Create a class mural.

Make a water mural that depicts the many ways in which the water cycle affects our everyday life. Be sure to include examples from your own neighborhood and community. Students may cut out pictures from magazines or draw their own.

3. “3 Ps” for surface tension

You will need a penny, petri dish, pepper, toothpick, drop of dishwashing liquid, and water. Fill the petri dish nearly full of water. Sprinkle some pepper on the surface of the water. Make a note about what you are observing. Write a hypothesis, an ‘if – then’ statement, to predict what will happen if you touch the surface of the water with a toothpick that has been dipped in detergent. How do your findings compare with your hypothesis?

4. Surface and ground water model

You will need a large jar or small aquarium, plastic straw, sand and gravel mix, small pebbles, plastic trees and plants, and water.

Position the gravel in the jar or aquarium at about a 45-degree angle. Slowly add water until the it covers about half of the gravel slope. Place the pebbles and plants on the dry half to simulate land. Students should observe that some water is visible (surface water) and some water is only visible through the glass sides of the container (ground water). Use a piece of plastic straw to “drill” a well into the gravel to the water table. Write a hypothesis, an ‘if – then’ statement to predict what will happen to the ground water if more water is added to the visible pool. Observe. How do your findings compare with your hypothesis? Write a hypothesis, an ‘if – then’ statement to predict what will happen to the water if more water is added to the dry portion of the gravel. Observe. How do your findings compare with your hypothesis?