



Drip Drop

Grades K-1



Overview

As a whole group, the class will observe the three forms of water (*solids, liquids & gases*). The students will explore water by dropping it on different kinds of materials. The students will have a water drop race with a partner.

Objectives

- To help students develop a better understanding of water
- To help students understand that some paper will absorb water while others will repel it

Materials

For presenter:

- a small frozen block of ice
- electric pot for boiling water to make steam
- 2 glasses - 1 filled with water
- medicine dropper
- plastic bag with samples of different materials (same as student's bag)
- 5 oz cup of water
- paper towels
- rolls of masking tape

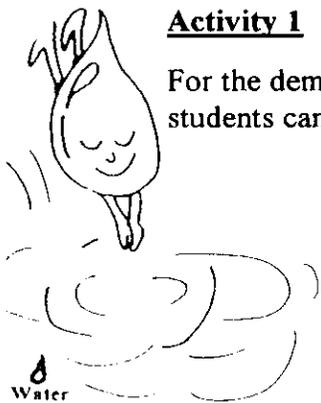
For each student

- medicine dropper
- 5 oz cup 1/3 full of water
- 1 plastic sandwich bag
- 3" x 3" pieces of each of the following: plastic, aluminum foil, toilet paper, velvet, wax paper, tissue, tissue paper, paper towel, thin card board
- 1 drinking straw
- One 11" x 16" piece of wax paper for the water drop race (1 piece for every two students)

Getting Ready

Activity 1

For the demonstration you will need to have water boiling in some type of container (so the students can see steam), a piece of ice, and two glasses, one filled with water.



Activity 2

Cut enough papers so that each child will have one of each kind. Each student should have a plastic bag with nine different pieces of paper in it. Fill the 5 oz paper cups 1/3 full of water and place them along with the bags of paper and medicine droppers on a table with easy access by the students.

Activity 3

Cut the wax paper in 11" x 16" pieces. You will also need to have rolls of masking tape to tape the paper on their desks and a drinking straw for each student.

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Procedures

Activity 1: The Forms of Water

Begin by telling the students that they will be doing some experiments with water. Use the questions below, to help get them interested and stimulate thinking.

Questions:

"What do you know about water? What is water like? What does it smell, taste, feel and sound like? What shape is water? Is water always a liquid?"

Show the children the container with boiling water. For safety reasons, children should be sitting in their desks for this demonstration. Make sure steam is coming out so they are able to see water in the form of a gas. Ask the students: "What do you see? Where does the steam or gas come from? Is steam one form of water?" Next, show them the two glasses. Pour the water from one glass to the other a couple of times. Ask the students: "What do you see? What form of water is this? How is it different than the gas? Could we turn this liquid into gas? How? Can we turn steam into water? How?" Some students may know the answers to these questions, other may not; it is not necessary that they understand this concept, the questions are used to stimulate thinking for those students who are at a higher level of understanding. "What is another form of water that I haven't shown you yet?" (*ice or solid*) Show them the block of ice. "How is it different from a liquid or a gas?" (*hard, frozen, white etc.*) "Could we turn it into a liquid or a gas? How?" At the end of the discussion hold up the ice, water and steam one more time and ask: "Are these all water?" (*yes*) "Are they in different forms?" (*yes*)

Activity 2: Water Drops and Paper

1. Show the students how to use a medicine dropper. Demonstrate dropping drips of water one at a time back into your cup. Tell the students that they will each get a cup of water and a dropper. The first thing you want them to do is practice dropping water back into the cup, one drop at a time. Tell them that they will need to be able to do this for the first experiment. Remind the students to be very careful to keep the water in their cups and droppers. The droppers are to be used only for the experiment.
2. Hand out a cup of water and a dropper to each student. Walk around and make sure they all are able to drop the water one drop at a time.
3. Have all students put down their droppers and look up at you. Show them the bag of papers and explain to them that they will be experimenting with paper to see what happens when you drop water on it. Tell them to take one piece of paper out at a time and place one drop of water on it. Watch to see what happens. Add another drop and see if the same things happens. Demonstrate with one piece of paper how you want them to do this.
4. Hand out the bags of paper. Move around the classroom and ask the children questions about what they are discovering. "What happened to the water drop? Did it soak into the paper?"
5. When they have had plenty of time to test all the papers, ask the students to put down their droppers
6. Begin by holding up your sample of the toilet paper, ask the students what they observed when they dropped water on it. When they respond that it soaked in, introduce to them the word **absorb** and write it on the chalkboard. Ask the students: "Did any other papers absorb water?" Have students show the other papers that absorbed water. Discuss with them what was different with each one when they put water on it. "What paper would be the best for mopping up water?"
7. Hold up the piece of plastic and ask what the students observed when they dropped water on it. They will probably say it rolled off - when they have given their explanation, introduce the word **repel** and write it on the chalkboard. Ask the students: "What other papers repelled water like the plastic? Can you think of things that are made from these materials? What makes it a good material for rainy weather? Which one of your samples could you cook in? Why?"
8. Tell the students to put all their papers in their plastic bags. Have one student bring around the garbage for collection.

Activity 3: Water Drop Race (You may want to save this activity for a follow up lesson another day.)

1. Before handing out the materials, demonstrate with another student how to have a water drop race. Take a piece of wax paper and tape it down to a desk. You and your partner each put one drop of water on the bottom edge of the paper. With a straw, you each blow on your drop to see who can get their whole drop to move to the top edge of the paper first.
2. Hand each pair of students a piece of paper, tape and two straws.
3. When they have their paper taped down, they can begin by each putting a drop on their paper.
4. Straws ready.....blow!!!!!!!!!!

Closure

Tell you neighbor two things you learned about water today. Choose a couple of students to share with the whole class what they learned.

Clean Up

Have each pair of students throw away their garbage, pour their cups of water in the sink and wipe off their desk with paper towel.

