Lesson Plan- Water Investigations

Objectives: Students will explore water's properties and how it interacts with different surfaces. They should understand the concepts of absorption and beading of water.

Materials:
Droppers
Cups
Paper towels
Wax paper
Foil
Trays
Pitchers or beakers to hold water

Procedure:

1. Ask students what they know about water and what they would like to know (questions they have). Review the concept of a "property". (5 minutes)

2. Demonstrate the experiment- how to use the dropper, model dropping onto different surfaces. Review expectations for using equipment- what are appropriate and not appropriate behaviors? Assign jobs (5 minutes)

3. Pass out materials to the each group of four. First the journals- explain that they are expected to draw what they see and write observations. Then have one student from each group come and pick up their trays of materials – cups, droppers, foil, paper, wax paper, and paper towel. Go around and pour water in each group's cups when they are ready.

4. Let them investigate on their own for about five minutes, walking around the room to observe the students' experimentation processes, then pose the following questions on the overhead and let them work for an additional ten minutes:

    a. What happens to the circles of water as more and more drops are added to make big drops?
    b. How close together can you put two drops of water without them touching? What happens when they do touch?
    c. Can a drop of water bounce off another drop of water?
    d. Can you drag a drop of water around with the dropper tip?
    e. What shape are the drops of water as they fall through air?

5. Clean up- five minutes. Put away materials, wipe up tables.
6. Have students write in their journals quietly for five minutes about their observations. Keep the questions on the overhead as a reference.
7. Discuss as a class what the students learned about water, making sure to discuss the concepts of water being absorbed in certain materials and beading up on other

materials. Also include a word bank of new words that they learned during this experiment. (5-10 minutes)

a. What happened when water was dropped onto foil? Wax paper? Paper towel? Plain paper?
b. What did we learn about the properties of water?
c. Did any other questions about water come up after performing this experiment?
d. What new words did we learn today?

Assessment: Students' recorded observations in their journals will serve as an assessment for this lesson. I will also assess students formatively by walking around during the investigation and talking with each group about their observations and ideas, asking or answering questions as they arise. I will also ask questions at the end of the lesson about what we have learned as a class from this experiment, which should indicate the extent to which the students grasped the concepts of absorption and beading of water.