They're Dancing

TIME REQUIRED: About 25 minutes.

SCIENCE INFORMATION: Some objects sink when placed in water and others float on the surface. Sometimes when something else is added to the water, like seltzer tablets, it affects what happens to the objects placed in the water. Bubbles are created from the mixture of water and seltzer tablets and these bubbles cling to the surface of the objects.

The objects become buoyant and begin to rise to the surface. In this activity, the results of adding something to the water are amusing, as well as instructive.

PURPOSE: The purpose of this lesson is to help children learn to observe carefully the affect of adding a foreign substance on objects placed in a container of water.

OBJECTIVES: The learner will be able to observe and describe what takes place during this activity. The learner will be able to cooperate with others in his/her group during the learning activity.

PROCESS SKILLS: observing, hypothesizing, describing and predicting.

MATERIALS NEEDED:

4 10 oz. clear, plastic cups
2 seltzer tablets
8 - 12 beans, seeds, uncooked macaroni,
etc. of various sizes
Water to fill each cup about 3/4th's full
1 bucket for collecting water
1 roll of paper towels

INSTRUCTIONAL STRATEGIES:

Group the students in pairs or threes. Have them come in turns to a central location in the room to pick up the materials they will need for the learning activity.
Model how the students will experiment to observe whether an object will float or sink. Then encourage them to predict which objects will float.
In their different cups, the students place different items (beans, seeds, etc.) after first predicting if the items will float in the water each cup contains. Have the students check their predictions against their observations.
Have the students add 1/2 seltzer table to one of their cups and observe what changes occur. Proceed until they have added 1/2 seltzer tablet to each cup.
Have the students take turns describing what they observed. Ask for volunteers to explain what they think is taking place.
Allow containers to sit overnight; have the students discuss what they observe when returning to school the next day.

VOCABULARY WORDS:

tablet floating experiment
bubbling sinking changing
mixing dissolve half
fizz

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WHAT DID YOU LEARN?

1. What objects floated on the water?
Answers will vary depending on objects used.
2. What changes occurred when you placed the tablet in the water?
The tablet fizzed and dissolved into the water. Some objects which had been sunk, then floated.
3. What caused these changes?
The water was changed by the tablet.
4. How did your partner help you?
My partner helped with the materials and with good ideas.

EXTENSION IDEAS:

Repeat the activity using 4 tablespoons of salt in a 10 oz. cup of water (add more as needed). Encourage the students to add beans, seed, etc., and tell about what they observe. To demonstrate the affect of salt water on plants, prepare two paper cups containing dirt and a small plant in each. Mark one cup "salt water" and the other "clean water." Make a mixture of salt water and label the container "salt water." Have the clean water container marked "clean water." The children will use the salt water to see what happens to the plant when impure water is used for watering plants.
They will compare the results of salt water and clean water on plant life.
Have children make a watering chart for the plants and write their observations in a journal daily.

NOTE TO TEACHERS:
This would be a good activity to introduce the concept of irrigation water and farming. Children will develop an awareness discovered by many farmers about the impact of impure water on crops.