

SOAP SLICK

Materials:

- *saucer
- *pepper
- *liquid detergent
- *water
- *two toothpicks

QUESTIONS TO ASK:

1. What happened when you dipped the toothpick without detergent into the water?

2. What happened when you dipped the toothpick with the detergent into the water?

Objective: Learn about the effect of adhesion on particles in water.

VOCABULARY WORDS:

Adhesion – attraction of water drops to each other.

Surface tension – attraction of water drops to the surface.

INSTRUCTIONS:

1. Cover the bottom of the saucer with water.
2. Cover the surface of the water lightly with ½ teaspoon of pepper.
3. Dip one end of a toothpick into the center of the water.
(watch what happens to the pepper)
4. Take the other toothpick and dip one end into liquid detergent.
5. Dip the end of the toothpick with detergent on it into the center of the water. (watch what happens to the pepper)

HOW DOES IT WORK?

Pepper will float on the surface of water due to adhesion. Water drops are attracted to the surface. The water drops then push the pepper all the way around the water surface. Adding detergent breaks the surface tension of the water and the pepper is pulled to the edge of the saucer by the tugging of water molecules on one side of the pepper particle. Because of adhesion, water drops cling to the side of each pepper particle.