



Surface Tension Lesson



In this lesson, children will learn about the wonderful properties of water. This activity also demonstrates the importance of hand washing.

BACKGROUND:

Water molecules have a relatively high attraction to each other due to a web of hydrogen bonds, which makes these molecules have stronger surface tension compared to most other liquids. Adding soap lowers the water's surface tension so the bonds become weaker and break apart quickly. Breaking the bonds between water molecules is how soaps clean dishes and clothes more easily.

MATERIALS:

- Plate with rounded edges
- Small bowl
- Water
- Pepper
- Liquid dish soap
- Dish towel

PROCEDURE:

- Have a discussion as a family about germs and the importance of hand washing.
- At each point of this experiment, have children practice science skills and make observations. Have older children write down their observations or sketch what they see.
 - Ask them:
 - What do they see?
 - What do they notice?
 - What do they wonder about?
- Fill a dish with water then sprinkle pepper on top of the surface.
- Dip an index finger into the center of the water and pepper mixture.
- Wipe off index finger and then dip into small bowl of dish soap. Coat index finger in dish soap.
- Place soap coated index finger in dish with water and pepper mixture.

CONCLUSION:

Have a conversation to discuss what was observed throughout the experiment and what each family member thinks is happening in order to make the pepper move. Explain the science behind the activity and share the background information on surface tension.



The City of San Bernardino Municipal Water Department has partnered with the Inland Empire Resource Conservation District to bring you a series of virtual lessons and activity write ups on water education and conservation.

