



August Science Activities

Exploring Surface Tension with Black Pepper

Age Range: All Ages

Supplies: Black pepper, bowls, water, liquid soap

Set Up: N/A

Instructions: Fill the bowl with a thin layer of water. Sprinkle the pepper on to the water, covering as much of the water surface as possible. Dip your finger into the liquid soap. Touch the pepper and see what happens!

What's happening: The soap is breaking the surface tension of the water. Surface tension exists in water because the water molecules like to stick together. Water has high surface tension, which means the molecules like to pull towards each other and stick together very strongly. But, when the soap is added, it breaks the surface tension. The molecules close to your fingers are pulled away by molecules that are farther away from your finger.

SUNSHINE DAY CAMP

August Science Activities

Light Refraction Magic

Age Range: All Ages

Supplies: Piece of paper, marker, glass, water

Set Up: N/A

Instructions: Get a sheet of paper and draw two big arrows on it, one near the top, and one near the bottom. Make the arrow point in the same direction. Next, fill a glass with water. Slowly lower the piece of paper behind the glass of water. Look through the glass of water, and watch in amazement!

What's Happening: Refraction is the bending of light and it happens when light travels from one medium to another, like from air to water, or water to air. In this experiment, the light traveling from the paper through the air, then through the glass and into the water, and finally out of the glass and into the air one more time before ever reaching our eyes.

Light travels the fastest through air, and a little more slowly through water, and even MORE slowly through glass. That means that the light bends when it travels through the glass cup into the water, and then it bends again when it travels out of the glass cup into the air.

The light paths actually cross and the image appears to be flipped.

