

# Exploring Surface Tension

Surface tension is the tendency of liquid surfaces to shrink into the minimum surface area possible. This property is caused by the molecules in the liquid being attracted to each other, and is responsible for many of the behaviors of liquids.

## Try This!

1. Fill the jar  $\frac{3}{4}$  full of water and carefully place a paperclip on the water's surface.
  - Does it float?
  - What happens if you add a bit of soap to the water?
2. Using an Eye Dropper, add one drop of water at a time to the surface of penny.
  - What is the shape of the added water?
  - How many drops can you add before the water spills over?
3. Go on a walk. Look for water droplets on leaves, or insects skating the surface of puddles.
  - How does the water sit on leaves?
  - What to the insects have in common?

## Materials

Glass Jar  
A Penny  
A Paper Clip  
Eye Dropper  
Dish Soap



## What's Happening?

A water molecule is made of one oxygen atom bonded to two hydrogen atoms. Like a magnet it has a positive charge where the hydrogens are, and a negative charge with the oxygen. This polarity makes opposites attract, and water molecules bond to one another, positive pole to negative pole, just like a magnet!

Soap molecules are composed of long chains of carbon and hydrogen atoms. This separates the water molecules from each other, and like magnets, as the water molecules are pushed farther apart, the attraction between them weakens, and the surface tension decreases.

