Soapy Shipwreck

What does soap do to water that makes washing easier? Watch!

**What to do:** Float the pin on the water in the cup. It's easiest if you lower the pin with a pair of tweezers. Then carefully add the liquid soap one drop at a time.

**What happens:** As you add the soap, the pin sinks.

**Why:** To start with, the pin is not actually floating. It is resting on the water's invisible elastic skin.

Water molecules are strongly attracted to one another and stick close together, especially on the surface of the water. This creates tension—enough tension to support an object you would think would sink. Surface tension also prevents water from surrounding the particles of dirt, soot, and dust on your skin or clothes.

When dissolved in water, soap separates the water molecules, reducing the surface tension. That's the reason the pin sinks—and the reason soapy water washes dirt away.

**YOU NEED**

- Straight pin
- 1 cup of water
- Tweezers
- 1 teaspoon of liquid soap (either dishwashing or laundry detergent)
- Medicine dropper