

Water Lab

Water is the most important molecule in biology. it is polar, meaning that it has a **positive end (H)** and a **negative end (O)**; **like a magnet**. The fact that it is *polar* allow it to *hydrogen bond with itself*. The negative end is attracted to the positive end. When water molecules stick together it is called **cohesion**. *Cohesion can lead to surface tension*- the ability for light objects to float or even walk on the surface of water. **Answer the following pre-lab questions before starting the procedure.**

Pre-Lab Questions:

1. What is a polar molecule?
2. What are hydrogen bonds?
3. What is cohesion?
4. What is surface tension?
5. Draw the structure of a water molecule.

Procedure:

1. Get a pie pan and fill 1/2 full with tap water.
2. Lightly sprinkle a pinch of cornstarch over the water.
3. Touch the center of the floating cornstarch with a clean toothpick.
4. Dip the toothpick in the dish soap and touch it to the cornstarch.
5. Observe what happens and answer the questions below.

Conclusion Questions:

1. What did you observe when you first touched the toothpick to the cornstarch?
2. What did you observe when you touched the soap toothpick to the cornstarch?
3. What allowed the cornstarch to float on the water?
4. Why would the soap change what happened?