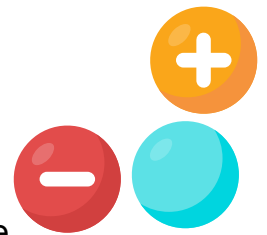


Dramatic Static

All matter is made up of atoms, and all atoms are made up of protons, neutrons, and electrons. Protons have a positive charge, neutrons have no charge, and electrons have a negative charge. Each atom usually has a balance of protons, neutrons, and electrons, but what happens if they move from one object to another?



Materials:

- Balloon
- Plate
- Salt
- Pepper
- Sink Faucet

If the air is too humid, the experiment may not work

Procedure:

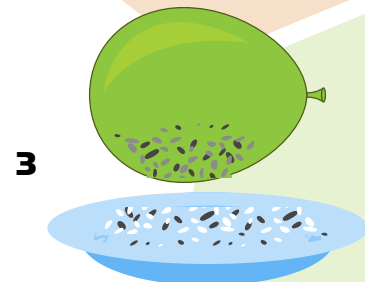
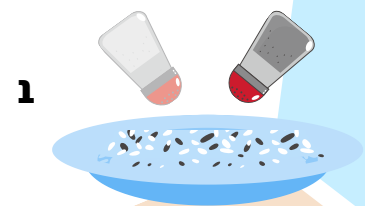
Part One

1. Pour some salt and pepper onto a plate and mix them together.

2. Prepare your balloon by blowing it up and tying it shut. Then rub the balloon on your hair – this will charge the balloon.

The rubbing must be done by the person doing the experiment

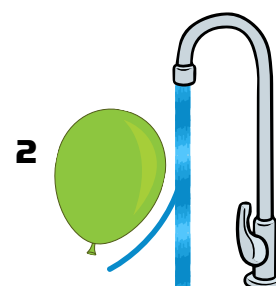
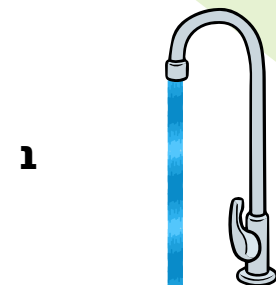
3. Hold your charged balloon near (but not touching) the salt and pepper mixture. *What do you see happening?*



Part Two

1. Turn on your faucet and leave a small stream of water flowing out.

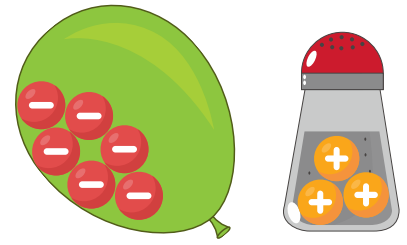
2. Charge your balloon again by rubbing it on your hair, then hold it near the stream of water. Now what happens?



Dramatic Static

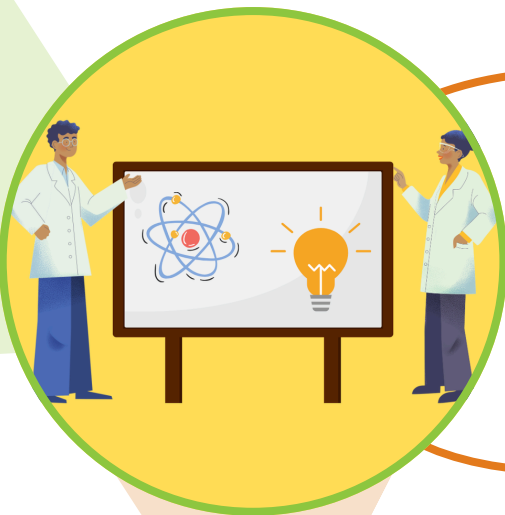
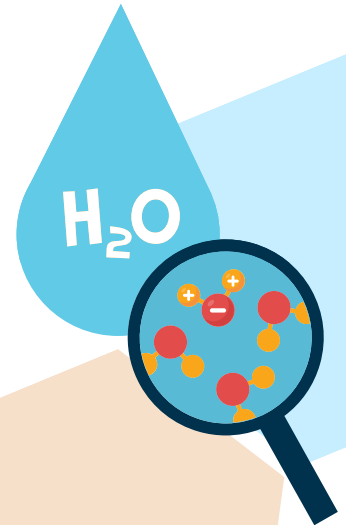
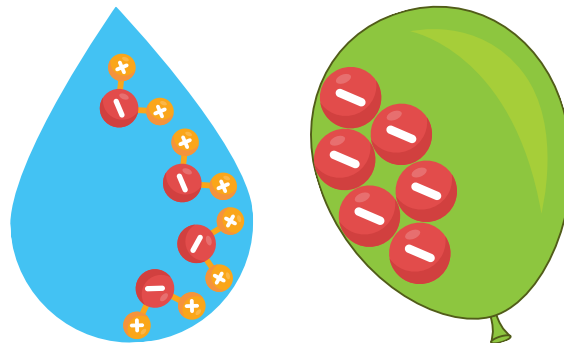
WHAT'S HAPPENING?

When you rub the balloon on your hair, some of the electrons from your hair move over to the balloon causing it to be negatively charged. Because the pepper is positively charged, when you hold the balloon close to the salt and pepper, the pepper jumps up to the balloon.



The water experiment you did is a little more complicated. The balloon is still negatively charged, but water is neutral (not positively or negatively charged). However, the molecular structure of water is polar – it has a positive end and a negative end.

When you put the negatively charged balloon near the stream of water, the positive ends of the water molecules are pulled towards the balloon while the negative end is repelled. This causes the water to bend!



DID YOU KNOW?

A **physicist** is someone who studies particles, atoms, and energy – like electricity! If you liked exploring this activity, maybe physics is for you!