

Static Electricity

(suggested age: 8+, though fun for all!)

Gather

- Balloons
- Salt
- Bits of paper
- Empty aluminum can

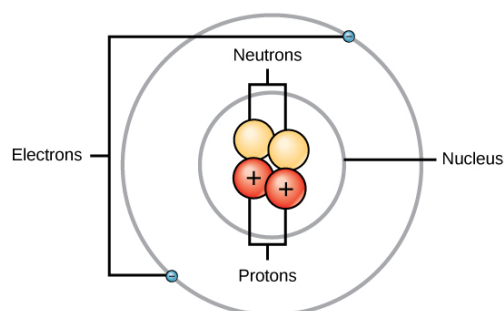


Let's Experiment!

1. Sprinkle some salt on a plate.
2. Blow up the balloon, tie it off, and rub it against your shirt several times.
3. Bring the balloon close to the salt. What happens?
4. Rub the balloon against your shirt again and bring it close to some torn up bits of paper. What happens?
5. Set an empty aluminum can on its side. Rub the balloon on your shirt again and bring close to the side of the aluminum can. What happens?

How Does it Work?

All matter is made up of things called atoms. They are SUPER tiny! Millions and millions of them could fit on the head of a pin! Even though they are so small, they are made up of even smaller particles called protons, neutrons, and electrons. These particles have a behavior like that of magnets, opposites attract and likes repel. The protons in an atom have a positive (+) nature and are found in the center of the atom with the neutrons; the electrons have a negative (-) nature and are found on the outer edges of the atom. Normally, the amounts of positive and negative charge are equal or balanced with each other. However, when you rub the balloon on your shirt, you transfer the negative electrons from one surface to another, creating a buildup of static electrical charge. This buildup of charge will attract opposite charges around it and repel like charges around it - so which of your objects were attracted to or repelled from your balloon? What kind of charge buildup did you have on your balloon, positive or negative?



Take it Further!

Try out some other small items and see if you can move them with your balloon - small sequins, cereal, and thread are good options. For more static scenarios, watch:

<https://www.youtube.com/watch?v=ViZNqU-Yt-Y>