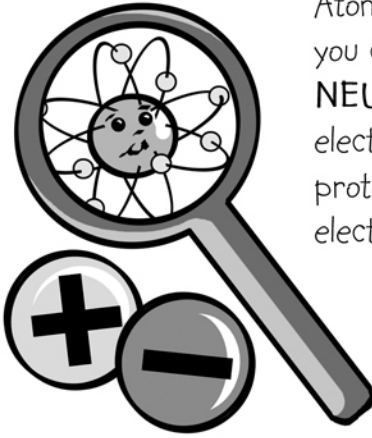


ELECTRIC ENERGY

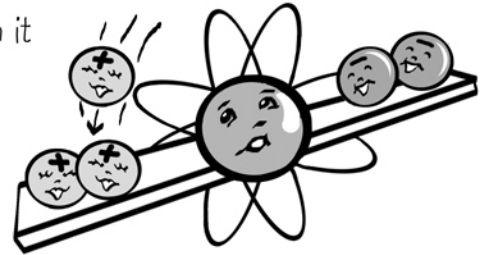


A GIANT Look at the Tiny ATOM!

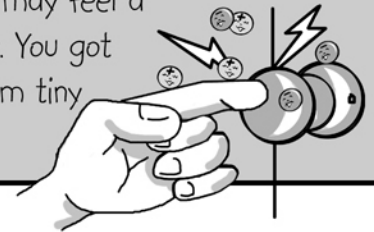
Atoms make up all things. You can't see atoms because they're so tiny but you can imagine what they look like. Each atom is made up of **PROTONS**, **NEUTRONS** and **ELECTRONS**. Protons have a positive (+) charge, electrons have a negative (-) charge and neutrons have no charge. The protons and neutrons make up the **NUCLEUS** or center of the atom. The electrons circle around the nucleus like the planets orbit around the sun.

The Great Balancing Act!

Atoms like to be in "balance." If the atom has the same number of protons and electrons it is **balanced** and has a *neutral charge*. When an electron gets "knocked" out of its orbit, then it is called a "free electron;" this means the atom has a *positive charge*. The free electrons then may join another "balanced" atom giving it a negative charge. Atoms with the same charge move away from each other. But atoms having a different charge attract each other.



When the air is dry and you shuffle your feet across the carpet, you may feel a **shock** when you reach for a door knob. That's static electricity. You got "**CHARGED UP**" moving across the carpet. The shock you feel is from tiny **electrons** jumping between your hand and the grounded doorknob.



Charge Up Your Cheerios!

What you need:

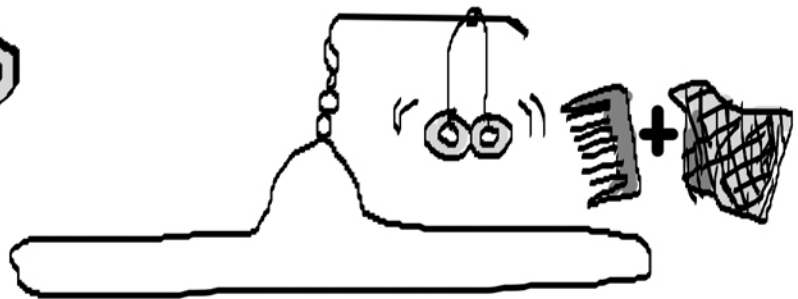
2 Cheerios

Wire coat hanger

Thread

Plastic comb or pen

Piece of wool or felt



Bend the coat hanger so it makes a stand. Bend the top part out flat as shown in the picture. Tie one cheerio to each end of the thread and wrap it around the end of the coat hanger top. Make sure the cheerios are even and are not touching the table.



Now, rub the comb through the piece of wool and touch the comb to the cheerio and see what happens! Try rubbing other materials like cotton, silk, a balloon, or even combing your hair to make a charge.

