



Science Fun!

What is Static Electricity?

Everything we see is made up of tiny little parts called atoms. The atoms are made of even smaller parts. These parts are called protons, electrons and neutrons. They are very different from each other in many ways. One way they are different is their "charge." Protons have a positive (+) charge. Electrons have a negative (-) charge. Neutrons have no charge.

Usually atoms have the same number of electrons and protons. Then the atom has no charge. It is "neutral." But if you rub things together, electrons can move from one atom to another. Some atoms get extra electrons. They have a negative charge. Other atoms lose electrons. They have a positive charge. When charges are separated like this, it is called static electricity.

If two things have different charges, they attract, or pull towards each other. If two things have the same charge, they repel or push away from each other.

So, why does your hair stand up after you take your hat off? When you pull your hat off, it rubs against your hair. Electrons move from your hair to the hat. Now each of the hairs have the same positive charge. Things with the same charge repel each other. So, the hairs try to move away from each other. The farthest they can get is to stand up and away from all the other hairs!

If you walk across a carpet, electrons move from the rug to you. Now YOU have extra electrons. Touch a door knob and ZAP! The electrons move from you to the knob and you get a shock!



Here's An Experiment For You To Try! **Bending Water**

SAFETY NOTE: Please read all instructions completely before starting. Observe all safety precautions.

What you need:

- a hard rubber or plastic comb
- a sink and water faucet

What to do:

1. Turn on the faucet so that the water runs out in a small, steady stream, about 1/8 inch thick.
2. Charge the comb by running it through long, dry hair several times or rub it vigorously on a sweater.
3. Slowly bring the comb near the water and watch the water "bend."

What happened:

The neutral water was attracted to the charged comb and move towards it.