

Suzy's World

Static - Why does your hair go tingly when you comb it?

Fact

- The plastic comb creates friction when it is pulled through your hair and charges your hair with static electricity.
- When an insulator like plastic is rubbed against something like your hair tiny particles called electrons are either added to or taken away from the insulator.
- The comb and the hair get charged with opposite electrons; either positive + or negative -
- When every strand of your hair has the same charge it feels tingly and makes your hair stand up. The hair is charged with the same electron and tries to move away from that charge. (Just like two magnets repelling each other from the same pole).



Do you know

- Nylon and wool are insulators too.
- Lightning is made by the pieces of ice and hail rubbing together in a cloud and causing static electricity.

Experiments you can do

Charge!

Remember Static Electricity works best on days that are cold and dry

What you need:

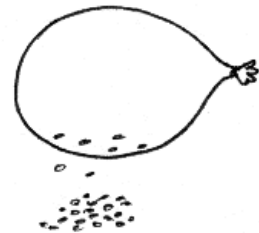
A balloon, blown-up and knotted so the air won't escape.

Small items like tiny pieces of paper, breakfast cereal, tiny pieces of wool, material, sand, salt, pepper, dirt, crumbled polystyrene, a saucer of water, leaves, twigs - in fact whatever you want to test.

What you do:

Rub the balloon for against a woollen jumper for at least a minute. Then hold it above the pile of tiny pieces of paper. Note what happens. Do the same with all the things you have collected to test and note down what happens. (You may need to rub the balloon on the wool every now and then) What things have an opposite charge to the balloon and are attracted to it?

Why do you think some things aren't attracted to the balloon?



Other Investigations

What you need:

Two inflated (blown-up) balloons, knotted so the air won't escape

Two pieces of string about half a metre long

A ruler

What you do:

Tie each balloon to a piece of string and tie the other end of the string to the ruler so the balloons hang from the ruler side by side.

Rub both balloons with a woollen jumper for at least a minute then let them hang back down.

What happens? What is it about the charge that they now have that makes them do that?