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# Science
## Electricity

# Static electricity

Whenever you see stormy lightning leaping to the Earth, you are watching a sudden zap of static electricity. This is the kind of electricity that happens when many electrons gather in one place. No one has yet managed to work out how to capture lightning, but static electricity has plenty of other uses. It can power photocopiers and printers, and scrub black smoke from chimneys.

**_____ is a sudden zap of static electricity.**

**Static electricity happens when many _____**

**gather in one place. It has plenty of uses, like:**

- ❑ **powering photocopy machines**
- ❑ **powering lightbulbs**
- ❑ **powering trains**
- ❑ **powering printers**
- ❑ **scrubbing smoke from a chimney**
- ❑ **scrubbing dishes in a dishwasher**

*1. As you rub on a car seat, electrons flow from the seat to your body.*

*2. The electrons cling to your clothes and body, even when you get out of the car.*

*3. When you touch the metallic handle, the electrons can flow into it, giving you a shock.*

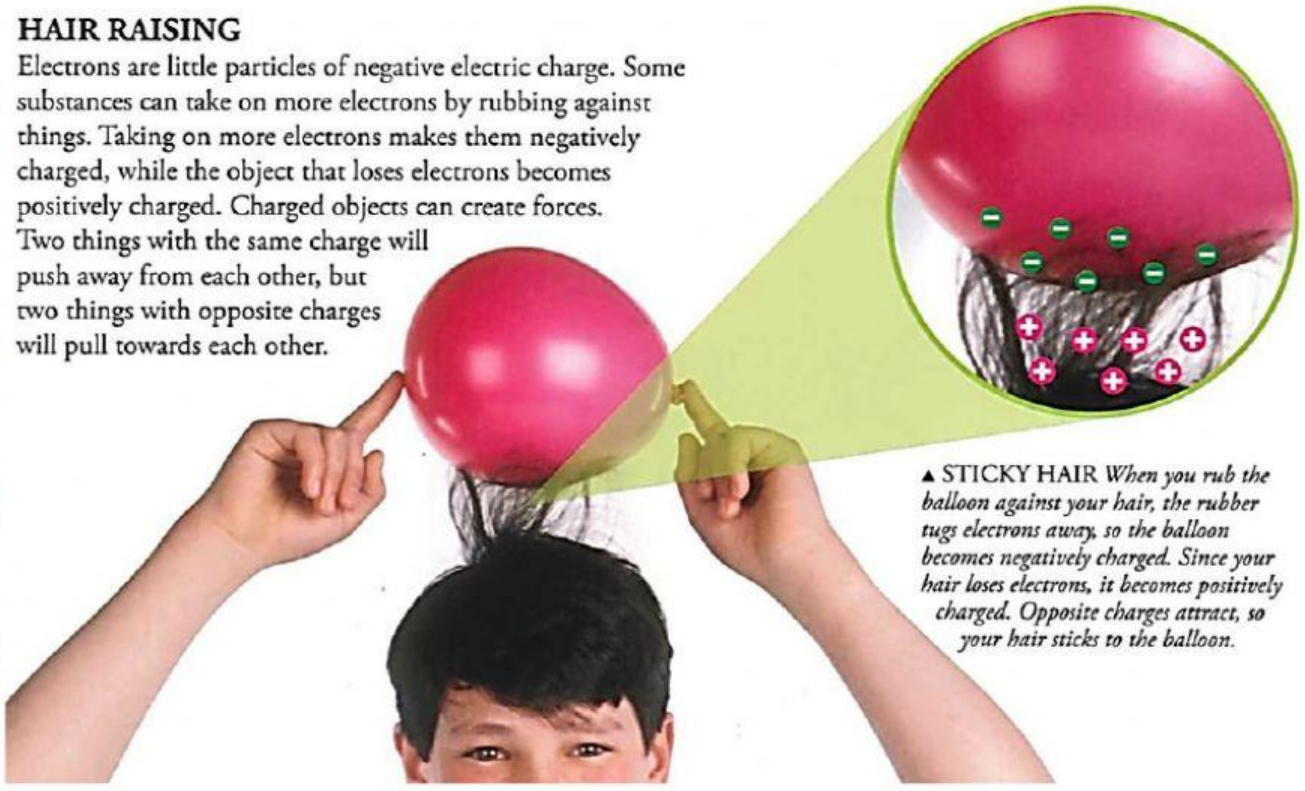
## SHOCKING STUFF

Have you ever had a tiny shock when you touched a door handle? It happens because your body builds up static as it rubs against things. The static stays on you until you touch something metal. Then it moves from your body, through the metal, to the Earth – giving you a shock.

**In your own words - explain why you sometimes get a tiny shock from stuff.**

## HAIR RAISING

Electrons are little particles of negative electric charge. Some substances can take on more electrons by rubbing against things. Taking on more electrons makes them negatively charged, while the object that loses electrons becomes positively charged. Charged objects can create forces. Two things with the same charge will push away from each other, but two things with opposite charges will pull towards each other.



▲ STICKY HAIR *When you rub the balloon against your hair, the rubber tugs electrons away, so the balloon becomes negatively charged. Since your hair loses electrons, it becomes positively charged. Opposite charges attract, so your hair sticks to the balloon.*

**Electrons are little particles of negative _____ charge. Some substances can take on more electrons by _____.**
**Taking on more electrons make them _____ charged, while the object that looses electrons becomes _____ charged.**

# Please watch this video:

**In your own words - What do you remember?**

Click here: