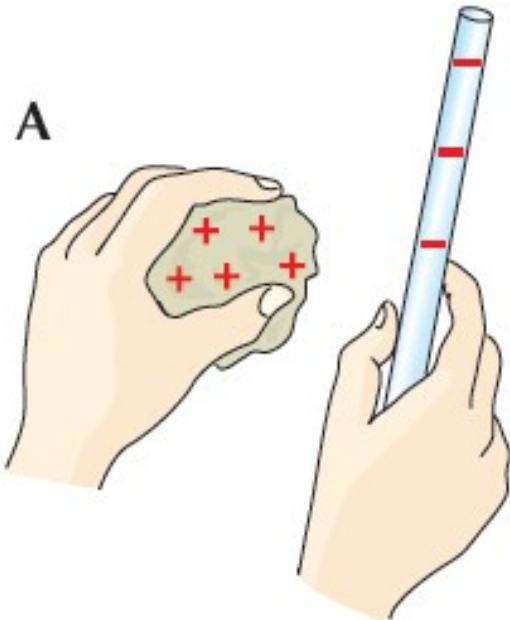


# Chapter 50: Static Electricity

Static electricity is electricity that does not move. It is a build-up of electric charge.

An example of this is lifting small pieces of paper with a biro or Lightning.

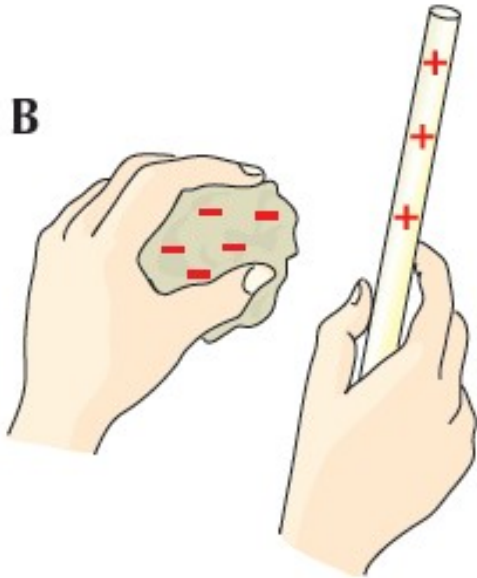
## Charging Polythene Rods



When a polythene rod is rubbed with a woollen cloth, it becomes negatively charged.

This is because it gains electrons from the cloth (and electrons are negative)

## Charging Perspex Rods



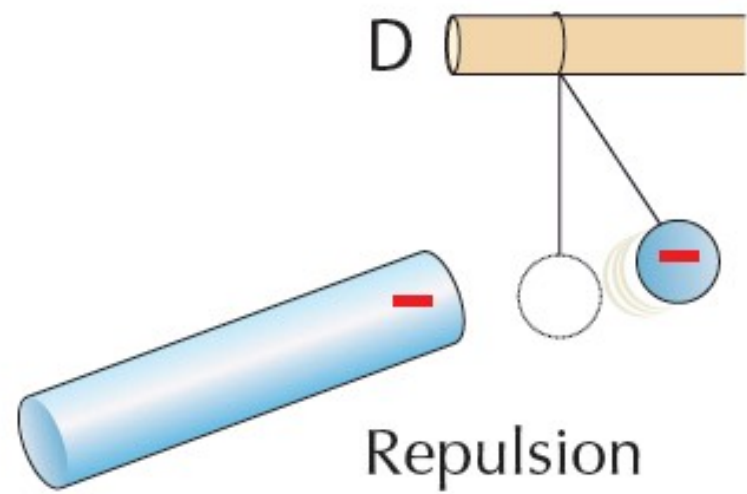
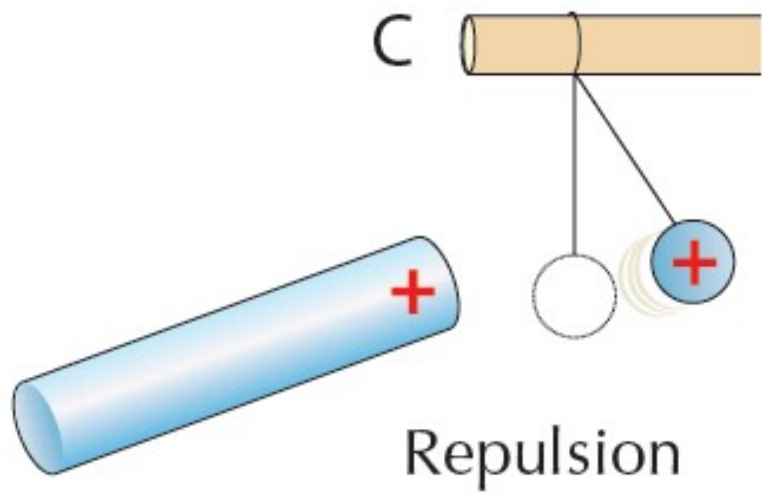
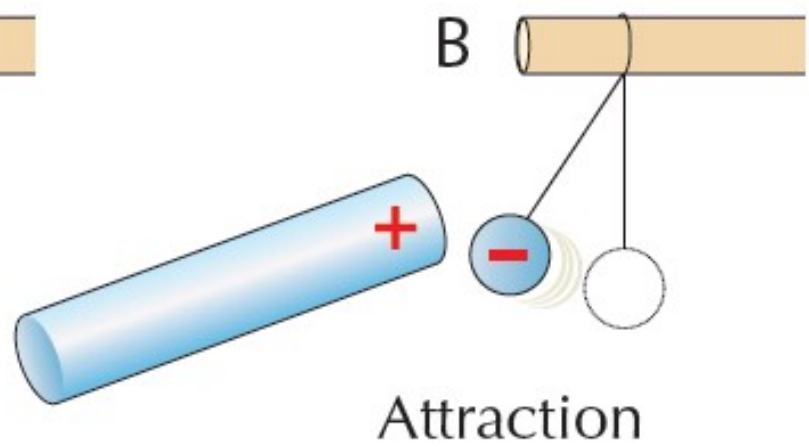
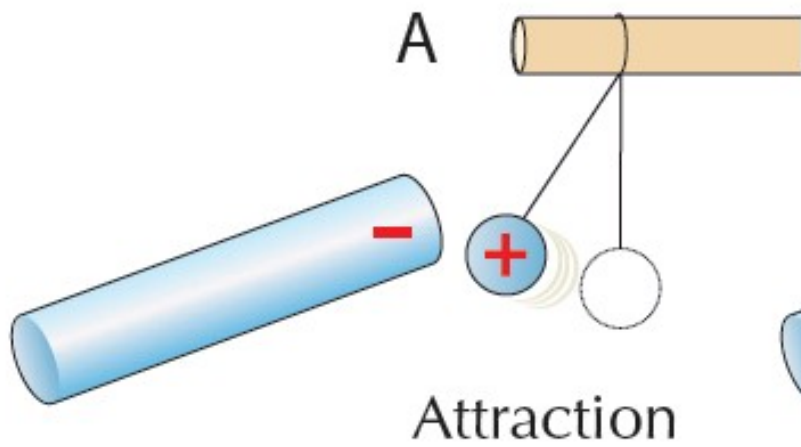
When a Perspex rod is rubbed with a woollen cloth, it becomes **positively** charged.

This is because the Perspex rod loses electrons to the cloth.

Like magnetism, static electricity follows the same rules for charges.

Like poles repel. Unlike poles attract.

Static electricity builds up on good insulators (Perspex), because it flows through conductors (metal).



## Earthing.

Earthing means connecting an object to earth using a conductor so that the objects loses it's charge to the earth.

Large buildings (e.g. Churches) are fitted with lightning conductors. This consists of a spike at the top of the building which is connected to a copper strip buried in the ground.

This protects the building from lightning damage by taking the charge and safely moving it into the ground.



Fig. 4 Damage to a church caused by a bolt of lightning.

