AQA Physics GCSE

4.2.5 - Static Electricity (Physics Only)

Flashcards

What can happen when insulating materials are rubbed together?

What can happen when insulating materials are rubbed together?

They can become (statically) electrically charged.

Why can insulators become electrically charged when rubbed together?

Why can insulators become electrically charged when rubbed together?

- Electrons are rubbed from one material onto the other
- The material gaining electrons becomes negatively charged
- The material losing electrons becomes equally positively charged

What happens when two electrically charged objects are brought close together?

What happens when two electrically charged objects are brought close together?

They exert a force on each other.

What happens when two identically charged objects are brought close together?

What happens when two identically charged objects are brought close together?

They exert a repulsive force on each other and repel.

What happens when two oppositely charged objects are brought close together?

What happens when two oppositely charged objects are brought close together?

They exert an attractive force on each other and attract.

Give an example of a non-contact force.

Give an example of a non-contact force.

The repulsive or attractive force acting between two electrically charged objects.

What is an electric field?

What is an electric field?

A region in which a charged object will experience a non-contact electrical force.

Where can electric fields be found?

Where can electric fields be found?

Surrounding any charged object.

Describe the electric field around a charged particle.

Describe the electric field around a charged particle.

- Strongest closest to the object
- Decreases in strength as you move away from the object

What happens to the force between two charged objects when they are moved closer together?

What happens to the force between two charged objects when they are moved closer together?

The force between them becomes stronger as the separation reduces.

In situations where sparks are unwanted, what precaution must be taken to prevent the build up of static charge?

In situations where sparks are unwanted, what precaution must be taken to prevent the build up of static charge?

Any surfaces that are rubbing against each other should be earthed to allow the charge to flow off the materials.