

# OCR (B) Physics GCSE

## Topic 3.1 - What is Electric Charge?

### (Physics Only)

### Flashcards

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# What is the charge on an electron?



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Electrons are **negatively** charged  
(relative charge: -1).



What happens when two objects are rubbed together?



What happens when two objects are rubbed together?

They become charged because negatively charged electrons are transferred from one object (which becomes positive) to the other (which becomes negative).



# Where are electric fields found?



# Where are electric fields found?

Around every electric charge.



# What is an electric field?





## What is an electric field?

A region of space in which the effects of charge can be felt. When another charge enters the field, both charges interact and experience a force.



# Objects with the same charge...



Objects with the same charge...

...repel.



# Objects with opposite charges...



Objects with opposite charges...

...attract.



# Define an insulator



## Define an insulator

An object which does not conduct electricity. Electrons cannot flow through the material.



# How is static electricity produced?





# How is static electricity produced?

When two insulators are rubbed together, transferring electrons, to form a positive and a negative charge.



# How does sparking occur?



## How does sparking occur?

Sparking occurs when enough charge builds up between two statically charged objects. A spark is produced by the charge jumping through the air from the negative to the positive object to restore the charges (back to two neutral objects).



# Define a conductor



## Define a conductor

A conductor is a material which **can** conduct electricity; electrons are able to flow through it.



# Why can conductors not produce static electricity?



Why can conductors not produce static electricity?

Electrons flow through the materials when they are rubbed together to cancel out any charging effect.

