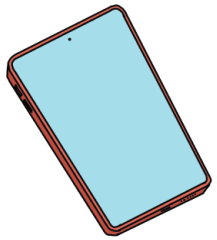
Electricity Knowledge Organiser

Electrical Appliances



Most big appliances in our house have to be **plugged in**. Theseare powered by **mains power**. Some smaller appliances can bepowered by **batteries**. Some appliances have batteries that need to be **charged** by mains power.

How is electricity made?

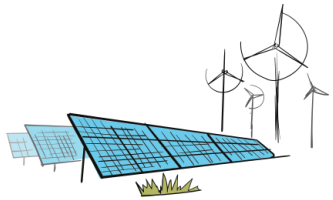
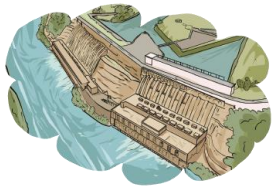
Electricity can be made using a simple **generator**. We could make one in school using a **magnet** and a **coil of wire**. If we turn a magnet around inside a coil of wire, it creates **electricity in** the wire. Doing this only makes a **small amount** of electricity so we need large generators to make enough for everyone. These generators are usually in **power stations**. There are **different types** of power stations.

Non-renewable Mains Power

Most of the electricity in the UK is made using **non-renewable** power stations. These power stations **burn oil**, **coal** or **gas** to create **steam** which turns the generator.
Oil, coal and gas are **fossil fuels**. They are non-renewable which means that they will eventually run out one day. This is because they are naturally occurring and take thousands of years to make. Burning these fossil fuels can also damage **the environment** as they produce gases such as **carbon dioxide** and **methane**.

Renewable Mains Power

We can also make electricity using renewable energy. Renewable energy sources like **the Sun**, **wind** and **sea** can be used over andover again and should not run out. We are beginning to use thesesources more as they do not damage our environment.

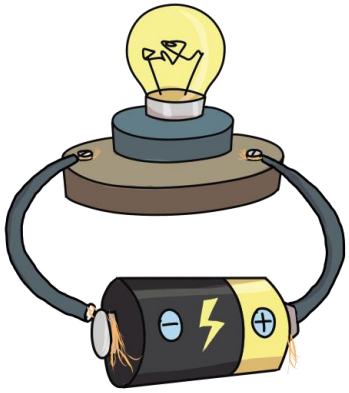



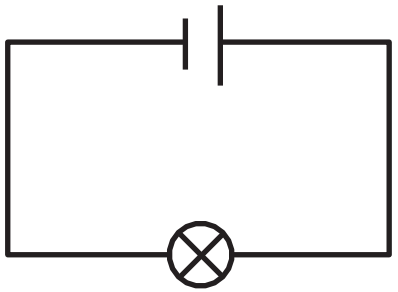
Scientific Symbols

When scientists draw electrical circuits, they use **scientific symbols** to show **different components.**

battery or cell	bulb	wire	open switch (off)	close switch (on)	motor	buzzer

Simple Circuit





The circuit has to be complete to allow the **electricity** to travel all the way around it.

Key Vocabulary

appliance – a device or piece of equipment that has been made to perform a specific task
battery – a small item used to power small appliances
circuit – a route through which electricity flows
components – the parts of a circuit
conductor – allows electricity to flow through it
electrical – something that uses electricity to work
insulator – doesn't allow electricity to flow through it
mains power – electricity provided by power stations
portable – can be easily carried around
pylon – a tower used for keeping electrical wires above the ground