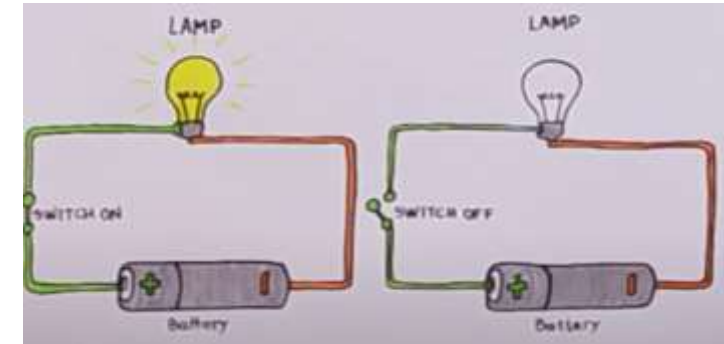




# Electricity

## Main Facts

- Many common appliances that we use require electricity to run.
- Electricity has a source, for example a mains battery.
- Electricity sources push electricity around a circuit.
- More batteries will push the electricity around a circuit faster.
- Devices work harder when more electricity goes through them.
- Electricity travels at the speed of light (nearly 300,000km per second).
- A lightning bolt can measure 3,000,000 volts and can reach temperatures of 30,000°C. This is five times hotter than the surface of the sun!
- Electric eels have an electrical current of about 500V, for protection and hunting.



## Simple Circuit

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

Insulators	Conductors
fabric	tin foil
plastic	tin can
paper	steel spoon
string	penny
wood	



**Motor**

Uses electricity to spin.



**Bulb**

Uses electricity to light up.



**Crocodile Clips**

Some wires have clips on each end to make it easier to attach to the component.



**Battery or cell**

In science, a cell is one single battery like the one shown. A battery is two or more of these together.



**Buzzer**

Uses electricity to make a sound.

**Wires**

Wires connect all the different components together and allow electricity to travel through the circuit.



**Switch**

Switches can put a gap in the circuit to stop the flow of electricity.

## Key Vocabulary

<b>Mains</b>	Mains electricity is the electricity that is delivered to homes and businesses through an electric grid
<b>Cell</b>	An electrical cell is the part of a circuit that makes the electricity flow.
<b>Energy</b>	Energy is the ability to do work. Energy makes things move. It makes machines go. Energy also makes living things grow.
<b>Power</b>	Power is a measure of how fast electrical energy is turned into another type of electrical energy, such as heat or light.
<b>Device</b>	These are pieces of technology that are used with computers, such as printers or keyboards
<b>Appliance</b>	A device or machine in your home
<b>Current</b>	A current is an electrical flow caused when electrons move through a conductor and carry electrical energy from one place to another place.
<b>Insulator</b>	Materials that do not allow electricity to pass through them.
<b>Conductor</b>	Materials that do allow electricity to pass through them.



What would our lives be like without electricity?

## Electrical

Lots of **appliances** around our house use **electricity** to work.



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

## Battery Power

Battery powered appliances are **portable** which means you can use it anywhere without it having to be plugged into a **plug socket**. There are different types of battery for different appliances.



## Mains Power

Mains power is produced mainly in a **gas, coal or nuclear power station**. **Wind turbines, solar panels** and **hydroelectric dams** are also used to produce mains power but are not used as often.