
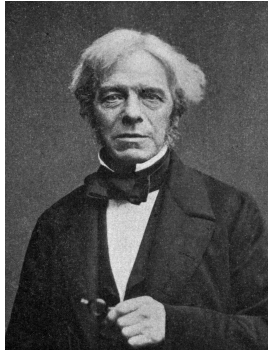


Upper Key Stage 2: Electricity

Key Vocabulary		How is electricity made
circuit	A system of electrical conductors and components forming an electrical circuit.	<p>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 create electricity inside 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.</p> 
complete circuit	A complete and closed path around which a circulating electric current can flow.	
circuit diagram	A graphical representation of an electrical circuit.	
circuit symbol	Receiving a quality or characteristic (in the form of genes) from a parent.	
cell	A device containing electrodes immersed in an electrolyte, used for generating current or for electrolysis.	<h3>Micheal Faraday</h3> <p>Faraday's greatest work was with electricity. In 1821, soon after the Danish chemist, Hans Christian Ørsted, discovered the phenomenon of electromagnetism, Davy and William Hyde Wollaston tried but failed to design an electric motor. Faraday, having discussed the problem with the two men, went on to build two devices to produce what he called electromagnetic rotation: a continuous circular motion from the circular magnetic force around a wire. A wire extending into a pool of mercury with a magnet placed inside would rotate around the magnet if charged with electricity by a chemical battery. This device is known as a homopolar motor. These experiments and inventions form the foundation of modern electromagnetic technology.</p> 
battery	A container consisting of one or more cells, in which chemical energy is converted into electricity.	
bulb	A device used to convert electricity into light, consisting of a source of illumination (e.g. an electric filament or one or more LEDs) enclosed within a transparent or translucent shell.	
buzzer	An electrical device that makes a buzzing noise and is used for signalling.	
motor	A machine powered by electricity or internal combustion, that supplies motive power for a device,	
switch	A switch responds to an external force to mechanically change an electric signal..	
voltage	A measure of the difference in electrical energy between two parts of a circuit. The bigger the difference in energy, the bigger the voltage.	
volume	The quantity or power of sound; degree of loudness.	
brightness	The quality or state of giving out or reflecting light.	
variable	An element, feature, or factor that is liable to vary or change.	

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Fun facts!

Facts

We use scientific symbols to represent the components (parts) of a circuit.

The brightness of a bulb or the loudness of a buzzer is affected by the number of cells in a circuit.

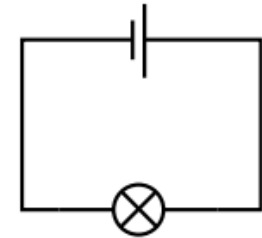
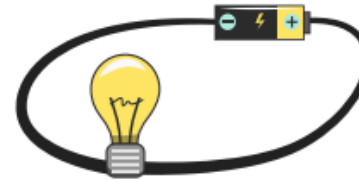
The brightness of a bulb or the loudness of a buzzer is affected by the voltage of cells in a circuit.

The number of components in a circuit can affect how they function.

The arrangement of components in a circuit can affect how they function.

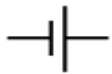
The length of wires in a circuit can affect how the components function.

Simple circuits



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

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



battery or cell



bulb



wire



open switch (off)



close switch (on)



motor



buzzer