




<b>electricity</b>	Electricity is the flow of tiny particles in materials from one place to another.
<b>mains</b>	Mains electricity is a big electrical circuit so when you <b>plug</b> something in at home, you complete the <b>circuit</b> from your house to the power station and back again.
<b>plug</b> 	A <b>plug</b> makes a <b>connection</b> between an <b>appliance</b> and the <b>mains</b> .
<b>electrical circuit</b>	An <b>electrical circuit</b> is a path <b>electricity</b> can flow around.
<b>complete circuit</b>	A <b>circuit</b> with a working power supply and an unbroken path so <b>electricity</b> can flow...
<b>cell</b>	An electrical power supply. A <b>cell</b> has two ends, labelled + ( <b>positive</b> ) and - ( <b>negative</b> ). A <b>cell</b> pushes the <b>electric</b> current from the <b>positive</b> terminal round to the <b>negative</b> one.
<b>battery</b>	Two or more <b>cells</b> can be connected end-to-end to make a <b>battery</b> . Sometimes we call a single cell a 'battery', although technically we ought to say 'cell'.

An **electrical appliance or device** is a machine that uses electricity. **Many household devices and appliances run on electricity.**

**Some plug in to the mains and others run on batteries.**



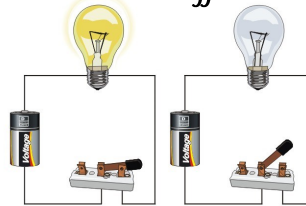
An **electrical circuit** consists of a **cell or battery** connected to a **component** using **wires**. **Electricity** can only flow around a **complete circuit**.



If there is a **break in the circuit**, a **loose connection** or a **short circuit**, the **component** will not work.








A **switch** can be added to the circuit to **turn the component on and off**.



switch on (closed), complete circuit, electricity can flow, bulb lights

switch off (open), incomplete circuit, electricity cannot flow, bulb does not light

<b>conductor</b>	Materials that let electricity flow through them easily.
<b>insulator</b>	Materials that do not let electricity flow through them easily.
<b>metal</b>	e.g. copper, aluminum, steel and brass are conductors of electricity.
<b>non-metal</b>	Materials that are not metal eg wood, plastic

<b>component</b>	Parts of an electrical circuit that do something when electricity flows through them.
<b>bulb</b> 	Bulbs light up when electricity passes through.
<b>buzzer</b> 	Buzzers make a sound when electricity passes through
<b>motor</b> 	Motors move when electricity passes through and can be used to drive something eg. a fan
<b>switch</b> 	Opens and closes a <b>circuit</b> to control the flow of electricity.
<b>crocodile clip</b> 	<b>Metal connectors</b> at the end of wires that clip to <b>components</b> .
<b>connect/connections</b>	join / a link between electrical components
<b>loose connection</b>	If links between components in a circuit are not firmly joined
<b>short circuit</b>	A short circuit is a problem in an electrical circuit where two or more wires that are not supposed to touch come in contact with each other .

**Metals are good conductors** so they can be used as wires in a circuit. **Non-metallic solids are insulators** except for graphite (pencil lead). **Water, if not completely pure, also conducts electricity.**

