



Skills and knowledge	
Questions	
1	What uses electricity?
2	How can I make a bulb light up?
3	What are parts of an electrical circuit called?
4	What conducts well and what insulates well?
5	How can I design and make a product with an electrical circuit?

### Interesting facts



Electrical energy is made in power stations.









Electricity is sent on wires.

### Key Vocabulary


Word	Definition
1 electricity	The flow of an electrical current through a material.
2 battery	A device that stores electrical energy. Two cells joined together is a battery.
3 circuit	A pathway that electricity can flow around, It is based on wires and a power supply.
4 appliances	A piece of equipment or device used to perform a particular job such as a washing machine.
5 electrical conductor	A material that will allow electricity to flow through it.
6 electrical insulator	A material that does not allow electricity to flow through it.


#### Components (Parts) Vocabulary

<p><b>cell:</b> Normally, we would call this a battery but scientifically, this is a cell. Two or more cells joined together form a battery.</p> 	<p><b>bulb:</b> Lights up in a complete circuit.</p> 	<p><b>buzzer:</b> Makes a noise in a complete circuit.</p> 
<p><b>wires:</b> Used to connect the different components in the circuit together.</p> 	<p><b>motor:</b> Produces movement in a complete circuit.</p> 	<p><b>switch:</b> Used to turn other components in the circuit on or off.</p> 


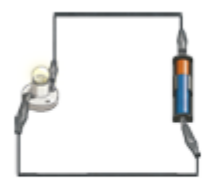


#### Appliances

Many everyday appliances rely on electricity for them to work. Some appliances use mains electricity (are plugged into a socket) and others have a battery to make them work. Examples of mains-powered appliances include toasters and televisions. Battery-powered appliances can include mobile phones and torches.




<p><b>mains-powered</b></p> 	<p><b>battery-powered</b></p> 
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<h4>Examples of Electrical Conductors</h4>  <p>copper steel</p>	<h4>Examples of Electrical Insulators</h4>  <p>wood plastic paper rubber glass fabric</p>
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<p><b>Series Circuit</b></p> <p>A <b>circuit</b> where the components are connected in a loop.</p> <p><b>Electricity</b> flows through each component in a single pathway.</p> 	<p><b>Complete Circuit</b></p>  <p><b>Electricity</b> can flow. The components will work.</p>	<p><b>Incomplete Circuit</b></p> <p>There is a break in the <b>circuit</b> that prevents the <b>electricity</b> from flowing. The components will not work.</p> 	<p>Switches can be used to open or close a <b>circuit</b>. When off, a switch 'breaks' the <b>circuit</b> to stop the flow of <b>electricity</b>. When on, a switch 'completes' the <b>circuit</b> and allows the <b>electricity</b> to flow.</p>  <p>push button switch      slide switch</p>
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Materials can be tested in a **circuit** to see if they are **electrical conductors** or **electrical insulators**.

 <p>10p = metal = <b>electrical conductors</b></p>	 <p>test <b>circuit</b></p>	 <p>ruler = plastic = <b>electrical insulators</b></p>
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