










Key Vocabulary	
electricity	The flow of an electric current through a material, e.g. from a power source through wires to an appliance .
appliances	A piece of equipment or a device designed to perform a particular job, such as a washing machine or mobile phone.
battery	A device that stores electrical energy as a chemical. Two or more cells joined together form a battery .
circuit	A pathway that electricity can flow around. It is based around wires and a power supply. Examples of components (parts) you can add in to a circuit are bulbs, switches, buzzers and motors.

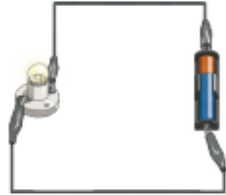
Components (Parts) Vocabulary		
<p>cell: Normally, we would call this a battery but scientifically, this is a cell. Two or more cells joined together form a battery.</p> 	<p>bulb: Lights up in a complete circuit.</p> 	<p>buzzer: Makes a noise in a complete circuit.</p> 
<p>wires: Used to connect the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

Series Circuit

A **circuit** where the components are connected in a loop. **Electricity** flows through each component in a single pathway.




Complete Circuit




Electricity can flow. The components will work.

Incomplete Circuit


There is a break in the **circuit** that prevents the **electricity** from flowing. The components will not work.



Switches can be used to open or close a **circuit**. When off, a switch 'breaks' the **circuit** to stop the flow of **electricity**. When on, a switch 'completes' the **circuit** and allows the **electricity** to flow.



push button switch

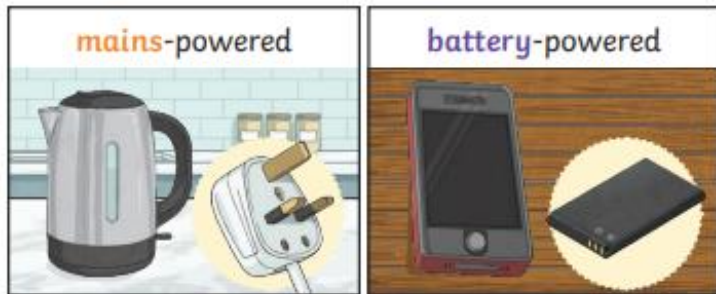


slide switch



Key Vocabulary	
mains electricity	Electricity supplied through wires to a building.
electrical conductor	A conductor of electricity is a material that will allow electricity to flow through it.
electrical insulator	Materials that are electrical insulators do not allow electricity to flow through them.

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.



Key Knowledge	
<p>Examples of Electrical Conductors</p> <p>water metal</p>	<p>Examples of Electrical Insulators</p> <p>wood plastic paper rubber glass fabric</p>

To work **safely** with **circuit** components in the classroom:

- None of the equipment needs to use mains power, so do not put any of it in or near plugs.
- Report any damaged or broken equipment to your teacher. Do not use it.
- Only use equipment as instructed.
- Connect equipment correctly.
- Disconnect equipment after use and put it away neatly.

Materials can be tested in a **circuit** to see if they are **electrical conductors** or **electrical insulators**.

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