







# Electricity

## Vocabulary

|                             |  |
|-----------------------------|--|
| <b>electricity</b>          | The flow of an electric current through a material, e.g. from a power source through wires to an appliance   |
| <b>appliances</b>           | A piece of equipment or a device designed to perform a particular job, such as a washing machine or mobile phone.  |
| <b>battery</b>              | A device that stores electrical energy as a chemical. Two or more cells joined together form a battery.  |
| <b>circuit</b>              | 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. |
| <b>mains electricity</b>    | Electricity supplied through wires to a building   |
| <b>electrical conductor</b> | A conductor of electricity is a material that will allow electricity to flow through it.   |
| <b>electrical insulator</b> | Materials that are electrical insulators do not allow electricity to flow through them.  |

## Components (Parts) Vocabulary

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

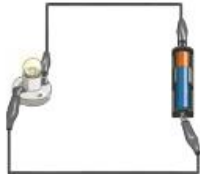
### Series Circuit

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



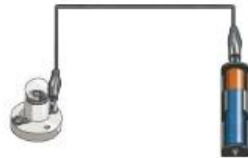
### Complete Circuit

**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.

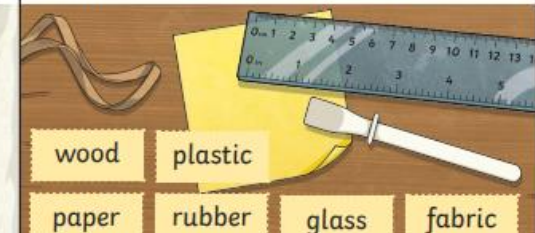


## Key Knowledge

### Examples of Electrical Conductors



### Examples of Electrical Insulators



### mains-powered



### battery-powered



## 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.

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



10p = metal = **electrical conductors**



test **circuit**



ruler = plastic = **electrical insulators**