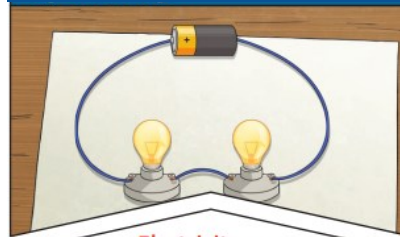


### Key Vocabulary

<b>electricity</b>	The flow of an electrical current through a material, e.g. from a power source through wires to an appliance
<b>generate</b>	To make or produce
<b>renewable</b>	A source of electricity that will not run out. These include solar, geothermal, hydro and wind
<b>Non-renewable</b>	This source of energy will eventually run out and so will no longer be able to be used to make electricity. These include fossil fuels— coal, oil and natural gas.
<b>appliances</b>	A piece of equipment or a device that has been designed to perform a certain job, such as a dish washer or mobile phone.
<b>battery</b>	A device that stores electrical energy as a chemical.
<b>circuit</b>	A pathway that electricity can flow around. It includes wires and a power supply and may include switches, bulbs or buzzers.

### Key knowledge



Electricity can only flow around a complete **circuit** that has no gaps. There must be wires connected to both the positive and negative end of the power supply/**battery**.

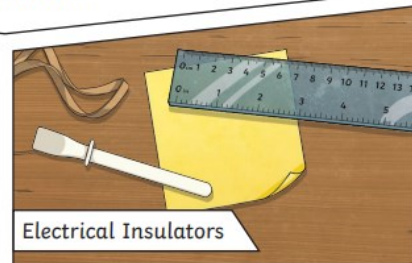
Switches can be used to open or close a **circuit**. When off, a switch 'breaks' the **circuit** to stop the flow of **electricity**. When on, a switch 'completes' the circuit and allows the **electricity** to flow.



A conductor of **electricity** is a material that will allow **electricity** to flow through it. Metals are good conductors. Materials that are electrical insulators do not allow **electricity** to flow through them. Wood, plastic and glass are good insulators



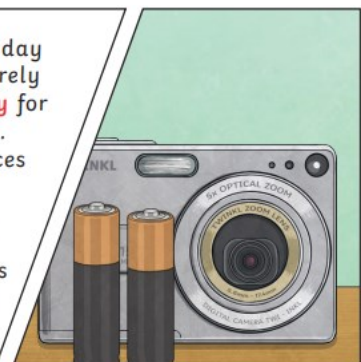
Electrical Conductors



Electrical Insulators



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.



### Famous Scientists



Nikola Tesla  
1856—1943



Hertha Ayrton  
1854—1923

### I will be able to

- Identify common appliances that run on electricity
- Build a simple series electrical circuit, identifying and naming the parts
- Identify whether or not a lamp will light in a simple series circuit
- Recognise that a switch opens and closes a circuit
- Recognise some common conductors and insulators

### Investigation

Does it conduct electricity?

Which objects will complete the circuit?  
Are they conductors or insulators?

Which materials would I recommend to complete the circuit?