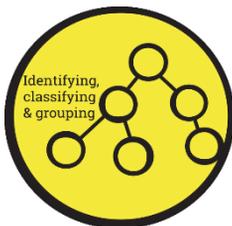


## Working Scientifically Skills



WHO?

Hertha Ayrton



Year 1 and 2  
Materials

Physics



### 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>mains electricity</b>	Electricity supplied through wires to a building.
<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>electrical conductor</b>	A conductor of electricity is a material that will allow electricity to flow through it.
<b>battery</b>	A device that stores electrical energy as a chemical. Two or more cells joined together form a battery.	<b>electrical insulator</b>	Materials that are electrical insulators do not allow electricity to flow through them.
<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.		

### WHAT?

An **appliance** is a **device**, piece of **equipment** or an **instrument** designed to **perform** a task.

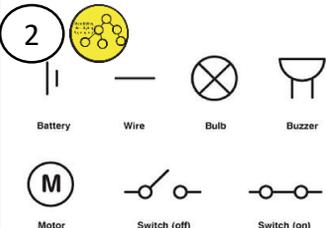
To use the **mains electricity**, you need to **plug** the **appliance** into a **socket**.

To use **battery electricity**, you need to insert a **battery** into the **appliance**.

In the **UK**, **mains electricity** is produced by **gas**, **coal** or **nuclear power stations**.

**Wind turbines**, **hydroelectric** and **solar panel power stations** are also used to generate **electricity**.

**Batteries** store **chemicals** which produce an **electric current**.

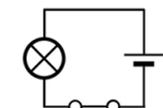


A **circuit** is a **complete** path around which **electricity** can **flow**.

A **complete circuit** requires **wires**, **battery** and a **bulb**. If there is a **break** in the **circuit** that prevents the **electricity** from **flowing**, the components will not work.

A **bulb** will only **light up** when a **circuit** is **complete**. This must include **two wires** (connected to each end of the battery) and a **bulb**.

A bulb can be made **brighter** by adding **more batteries**.



**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.

An **electrical conductor** is a material that **allows electricity** to pass through. A material that **does not allow electricity** to pass through is called an **insulator**.

