



WHO?

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Brand new  
topic

Physics



## Vocabulary

<b>electricity</b>	Energy that powers electrical appliances	<b>bulb</b>	The glass case that contained a filament to light up
<b>batteries</b>	Containers made of cells in which chemical energy is changed to electricity	<b>conductor</b>	Materials that allow electricity to flow through easily
<b>circuit</b>	A pathway that electricity flows around	<b>insulator</b>	Materials that do not allow electricity to pass through easily
<b>current</b>	The flow of electricity	<b>wind turbines</b>	A device that produces electricity by using wind

## WHAT?



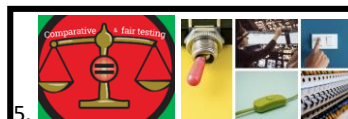
- 1.
- Some **electricity** is stored in **batteries** and some travel through **wires** into our homes.
  - When we plug an appliance into a socket, we get electricity.
  - Electricity is **useful** but **extremely dangerous**. If we touch an **electrical current**, we will get an **electric shock**. Some electric shocks are **fatal**.



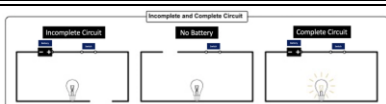
- 4.
- **Metal** is an **electrical conductor** because it allows electricity to pass through easily. Inside wires are made of metal so that the current can flow. **Water** is also a conductor.
  - **Plastic** is an **electrical conductor** because it stops electricity from passing through. **Wires** are covered in a plastic coating for **safety**. Other insulators are **wood**, **rubber** and **glass**.



- 2.
- A **battery** is a collection of **cells**. The electricity flows from the **positive** to the **negative** side of the battery.
  - All **electrical** items are part of a **circuit**, which is a path that electricity flows in.
  - All circuits need a **power source** (battery), **wires** and a **component** which uses the electricity (bulb, buzzer, motor).



- 5.
- **Electrical circuits** have **switches** so that we can **control the flow** of electricity to the appliance. It allows the flow to be turned on or off.
  - When a **switch is turned on**, it **completes** the circuit so that electricity can pass through. When a **switch is turned off**, there is a gap in the circuit making it **incomplete**.



- 3.
- **Electricity** can only flow through a **complete circuit** that has no gaps. If the circuit is **broken**, the current cannot travel through.
  - An **electrical current** flows through a complete circuit to power electrical appliances.
  - A **simple circuit** can be made from a power source, wires and a component.



- 6.
- Electricity can come from a **power station** where they burn fuels to create electricity. This is a **non-renewable** form of electricity.
  - **Renewable** energy can also provide us with electricity such as **wind turbines**, **solar panels** or **hydropower**.
  - The **force** of electricity that flows through a circuit is called the **voltage**.

## Helpful links

Hertha Aytton: The woman who tamed lightning!



What is physics?



What is electricity?



Learn the electricity song!

