



Year 6  
Topic: Electricity  
Strand: Physics

What I should already know.

- **Electricity** is a form of **energy** that can be carried by wires and is used for heating and lighting, and to provide **power** for **devices**.
- **Sources** of light and sound may need **electricity** to work.
- Where **electricity** comes from.
- Which **appliances** need **electricity**.
- What a circuit is, the **components** of a circuit and how it works.
- What **electrical conductors** and **insulators** are.
- What happens when a **switch** is added to a circuit.
- What **forces** and **resistance** are.

What will I know by the end of the unit?

What will make a bulb brighter or a buzzer louder?

More **batteries** or a higher **voltage** create more **power** to flow through the **circuit**.

Shortening the **wires** means the electrons have less **resistance** to **flow** through.

What is a **series circuit**?

A **circuit** that has only one route for the **current** to take.

If more **bulbs** or **buzzers** are added, the power has to be shared and so they will be dimmer or quieter.

If just one part of this series **circuit** breaks, the **circuit** is broken and the flow of **current** stops.

What will make a bulb dimmer or a buzzer quieter?

Fewer **batteries** or a lower **voltage** give less power to the **circuit**.

More **buzzers** or **bulbs** mean the power is shared by more **components**.

Lengthening the wires means the electrons have to travel through more **resistance**.

Vocabulary

<b>Ammeter</b>	Measures the current in a circuit.
<b>Appliances</b>	A <b>device</b> or machine in your home that you use to do a job such as cleaning or cooking. <b>Appliances</b> are often <b>electrical</b> .
<b>Battery</b>	Small <b>devices</b> that provide the <b>power</b> for <b>electrical</b> items such as torches.
<b>Bulb</b>	The glass part of an <b>electric</b> lamp, which gives out light when <b>electricity</b> passes through it.
<b>Buzzer</b>	An <b>electrical device</b> that is used to make a buzzing sound.
<b>Cell</b>	A synonym for <b>battery</b> .
<b>Circuit</b>	A complete route which an <b>electric current</b> can flow around.
<b>Component</b>	The parts that something is made of.
<b>Conductor</b>	A substance that heat or <b>electricity</b> can pass through or along.
<b>Current</b>	A flow of <b>electricity</b> through a <b>wire</b> or <b>circuit</b> .
<b>Device</b>	An object that has been invented for a particular purpose.
<b>Electricity</b>	A form of <b>energy</b> that can be carried by <b>wires</b> and is used for heating and lighting, and to provide <b>power</b> for <b>devices</b> .
<b>Energy</b>	The <b>power</b> from <b>sources</b> such as <b>electricity</b> that makes machines work or provides heat.
<b>Fuel</b>	A substance such as coal, oil, or petrol that is burned to provide heat or <b>power</b> .
<b>Generate</b>	Cause it to begin and develop.
<b>Insulator</b>	A non- <b>conductor</b> of <b>electricity</b> or heat.
<b>Mains</b>	Where the supply of water, <b>electricity</b> , or gas enters a building.
<b>Motor</b>	A <b>device</b> that uses <b>electricity</b> or fuel to produce movement.
<b>Power</b>	<b>Power</b> is <b>energy</b> , especially <b>electricity</b> , that is obtained in large quantities from a fuel <b>source</b> and used to operate lights, heating, and machinery.
<b>Resistance</b>	A force which slows down a moving object or vehicle.
<b>Resistor</b>	A part of an electric <b>circuit</b> that provides resistance to some of the <b>current</b> .
<b>Source</b>	Where something comes from.
<b>Switch</b>	A small control for an <b>electrical device</b> which you use to turn the <b>device</b> on or off.
<b>Voltage</b>	The force of an electric current as measured in <b>volts</b> .
<b>Wires</b>	A long thin piece of metal that is used to fasten things or to carry <b>electric current</b> .

Electrical Symbols

Symbol	Component
	ammeter
	battery
	bulb
	buzzer
	cell
	motor
	resistor
	Switch (open)
	Switch (closed)

Diagram – Electrical Diagrams

