



What? (Key Knowledge)

Key Individuals

Benjamin Franklin	Franklin was the first person to study electricity in depth. One of his most important findings was proving that lightning was electrical.
Alessandro Volta	Volta invented the first battery, which was known as the 'voltaic pile'. His name was also the basis for the words voltage and volt.
Thomas Edison	Thomas Edison invented the modern lightbulb. While lightbulbs were not a new idea, he did improve on the previous designs, which were not as useful as they did not stay lit for very long!
Michael Faraday	Faraday used Volta's discoveries and made an electric current move by using a magnet inside a wired coil. He was able to build an electric motor and generator.

Key Information

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.
Investigations	<p>What will make a bulb brighter or a buzzer louder?</p> <ul style="list-style-type: none"> 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.
Investigations	<p>What will make a bulb dimmer or a buzzer quieter?</p> <ul style="list-style-type: none"> 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.
Mains electricity	Power stations send an electric charge through wires to transformers and pylons. Then, underground wires carry the electricity into our homes via wires in the walls and out through plug sockets.
Battery electricity	Batteries store chemicals which produce an electric current. Eventually, even rechargeable batteries will stop.
Switches	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.

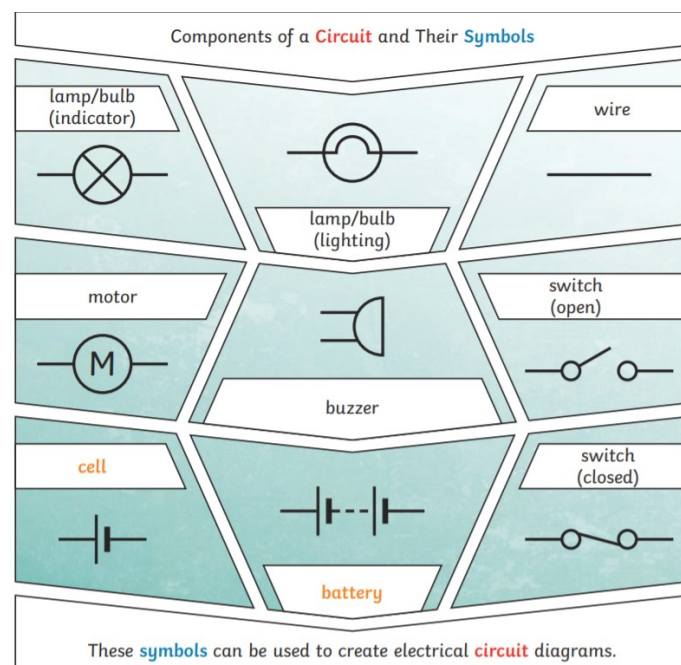
Possible experiences

- Linking to DT projects this year where an electrical circuit will be needed
- Opportunities to explore electrical safety
- Learning about how electricity has impacted on inventions

What? (Key Vocabulary)

circuit	A path that an electrical current can flow around
symbol	A visual picture that stands for something else.
cell/ battery	A device that stores chemical energy until it is needed. A cell is a single unit. A battery is a collection of cells.
current	The flow of electrons, measured in amps.
amps	How electric current is measured.
voltage	The force that makes the electric current move through the wires. The greater the voltage, the more current will flow.
resistance	The difficulty that the electric current has when flowing around a circuit.
electrons	Very small particles that travel around an electrical circuit.
electrical conductor	A conductor of electricity is a material that will allow electricity to flow through it. Metals are good conductors.
electrical insulator	Materials that are electrical insulators do not allow electricity to flow through them. Wood, plastic and glass are good insulators.
renewable	A source of electricity that will not run out. These include solar, nuclear, geothermal, hydro and wind.
non-renewable	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.
components	These are the different parts used within a circuit.

Symbols



Key Events		
1939	1 st September	German troops invade Poland.
	3 rd September	Britain and France declare war on Germany.
1940	10 th May	The Battle of France begins.
	26 th May	Allied forces are evacuated from Dunkirk in France.
	10 th July	The Battle of Britain begins.
	7 th September	The Blitz begins.
1941	22 nd June	Germany invades the USSR (Soviet Union).
	7 th December	Japan bombs Pearl Harbor in the US.
1943	16 th and 17 th May	The Dambusters bombing raid is carried out.
1944	6 th June	The D-Day landings.
1945	7 th May	
	6 th and 9 th August	

