

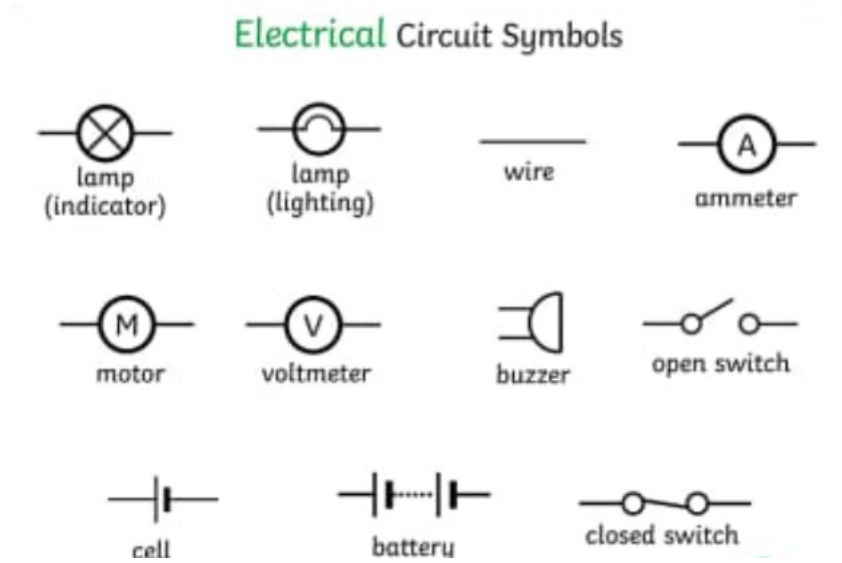
What? (Key Knowledge)	
Electricity	
What is Electricity?	<ul style="list-style-type: none"> <li>Electricity is created by generators, which can be powered by gas, coal, oil wind or solar</li> <li>The electrical energy can be converted into other types of energy such as light, heat, movement or sound.</li> <li>Electricity is dangerous, so can be careful when using electrical appliances.</li> </ul>
What are common appliances that run on electricity	<ul style="list-style-type: none"> <li>Any appliance that needs to be plugged in or contains batteries runs on electricity. E.g. Television, microwave, torch, remote control</li> </ul>
An electrical circuit	
A series circuit (one pathway around the circuit)	<ul style="list-style-type: none"> <li>Electricity can flow through the components in a complete electrical circuit.</li> <li>A circuit always needs a power source, such as a battery, with wires connected to both the positive (+) and negative (-) ends. (A battery is made from a collection of cells connected together).</li> <li>A circuit can also contain other electrical components, such as bulbs, buzzers or motors, which allow electricity to pass through.</li> <li>Electricity will only travel around a circuit that is complete. That means it has no gaps.</li> </ul>
What is a switch?	<ul style="list-style-type: none"> <li>You can use a switch in a circuit to create a gap in a circuit. This can be used to switch it on and off.</li> <li>When a switch is open (off), there is a gap in the circuit. Electricity cannot travel around the circuit.</li> <li>When a switch is closed (on), it makes the circuit complete. Electricity can travel around the circuit.</li> </ul>
Increase the brightness of a bulb or the volume of a buzzer	<ul style="list-style-type: none"> <li>The more cells that are used in a circuit, the brighter the bulb or louder the buzzer.</li> <li>If one cell is used, the higher its voltage, the more powerful the cell is.</li> </ul>

What? (Key Vocabulary)	
Spelling	Definition/Sentence
circuit	the planet on which we live; the world
circuit symbols	the natural satellite of the earth, visible (chiefly at night) by reflected light from the sun
cells/batteries	the star round which the earth orbits
volts	the collection of eight planets and their moons in orbit round the sun, together with smaller bodies in the form of asteroids, meteoroids, and comets
component	a celestial body moving in an elliptical orbit round a star
switch	shaped like a sphere
motor	move or cause to move in a circle round an axis or centre
buzzer	Stars are huge, glowing balls of gases. The closest star to Earth is the sun. Most of the pinpricks of light that shine in the night sky are also stars

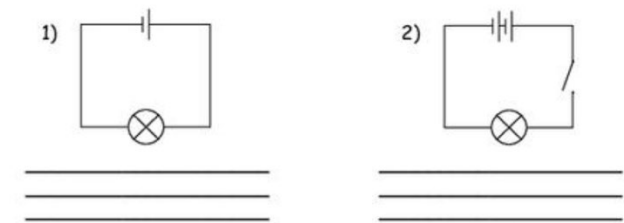
**Take it further at home...**

- Design and make a set of traffic lights or burglar alarm
- Identify the effects of changing a component in a circuit.
- Practise drawing the scientific symbols, how many can you do from memory.
- Fill in the vocabulary chart – try and do this from memory with them!

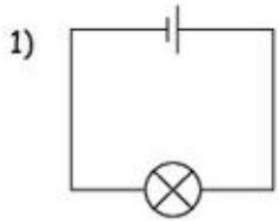
### Diagram and symbols



Looking at the below circuits. Circuit 1 will work because the circuit is complete. Circuit 2 won't work as the circuit is incomplete.



Look at the circuits below. Write 'will work' or 'won't work' and give a reason why for each circuit:



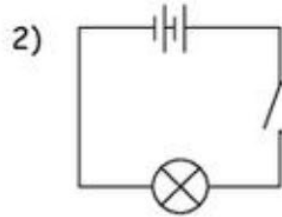

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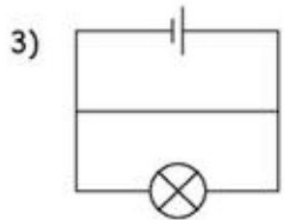

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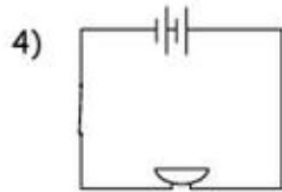

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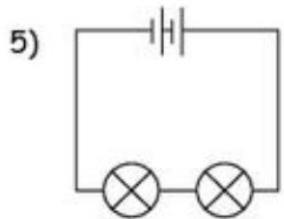

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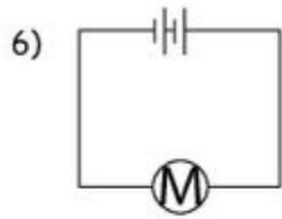

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