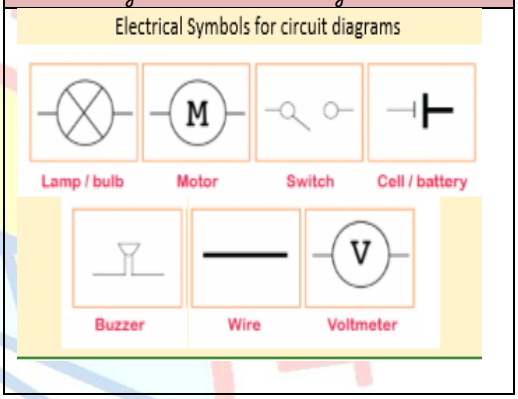
Science Knowledge Organisers

Science Focus	Electricity	Year 6	Autumn 1

Key Knowledge	
What is electricity?	Electricity is created by generators which can be powered by gas, coal, oil, wind or solar. ¤ The electrical energy can be converted into other types of energy such as light, heat, movement or sound. ¤ Electricity is dangerous, so be careful when using electrical appliances.
A series circuit	¤ Electricity can flow through the components in a complete electrical circuit. ¤ 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). ¤ A circuit can also contain other electrical components, such as bulbs, buzzers or motors, which allow electricity to pass through. ¤ Electricity will only travel around a circuit that is complete. That means it has no gaps
What is a switch?	¤ 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. ¤ When a switch is open (off), there is a gap in the circuit. Electricity cannot travel around the circuit. ¤ When a switch is closed (on), it makes the circuit complete. Electricity can travel around the circuit.
Increasing the brightness of a bulb or the volume of a buzzer	¤ The more cells that are used in a circuit, the brighter the bulb or louder the buzzer. ¤ If one cell is used, the higher its voltage, the more powerful the cell is.

Key Vocabulary	
Generator	A machine that makes electrical energy
Component	A part of something
Voltage	Is a measure of the difference in electrical energy between two parts of a circuit

Diagrams and Symbols



Greater Depth Thinking

Be familiar with, and use, technical terminology accurately and precisely. Build up an extended specialist vocabulary.

Make their thinking clear, both to themselves and others

Possible Experiences
Design and make a set of traffic lights or burglar alarm. Identify the effects of changing a component in a circuit.