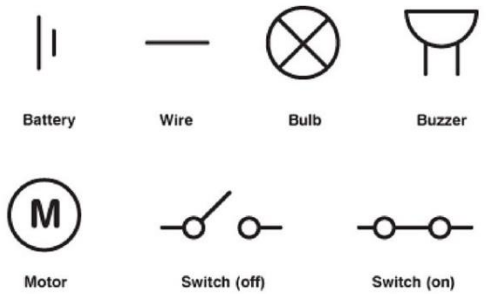
Harting C of E Primary School – Science		
Topic: Electricity	**Year 6**	**Spring 2**

Important Information

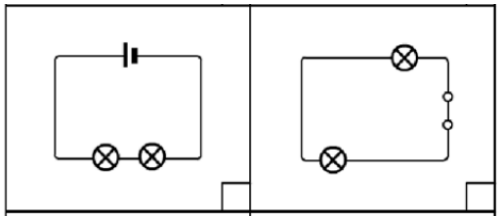
What are electrical circuit symbols?

Electrical **components** are represented as **symbols** (pictures that stand for something else). We use them when drawing electrical circuit **diagrams**.

Electrical Component Symbols



Circuit Diagrams



- Draw the circuit symbols first.
- Use a ruler to draw the wires as straight lines and do not let them cross.

Valuable Vocabulary

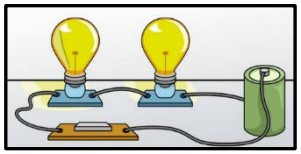
Bulb	Provides light by passing an electrical current through a filament.
Cell (battery)	A stored source of electricity.
Circuit	A closed loop through which electricity can flow.
Components	Parts of an electric circuit e.g. battery, buzzer and bulb.
Conductor	An object that allows electricity to flow through it easily (metal is a good conductor).
Insulator	An object that does not allow electricity to flow through it easily e.g. plastic.
Motor	A machine that turns electrical energy into movement.
Parallel circuit	A circuit where the current is divided into separate paths.
Resistance	The difficulty electricity has when flowing around a circuit.
Series circuit	A circuit where all of the current flows through each part of the circuit.
Switch	A component that makes or breaks the connections in a circuit.
Voltage	A force that makes electricity flow through a wire.

What is the effect of changing one component at a time in a circuit?

- When switches are open or wires are removed (so it is **not a closed circuit**), bulbs, buzzers and motors will turn off.
- If you kept the number of batteries the same but added more bulbs and motors to a series circuit, they will be dimmer and slower. This is because the electricity is being shared between more components. More voltage would be needed to make them brighter.

Voltage

- More batteries (or a higher voltage) creates more power (or current) to flow through a circuit.



Top Takeaways

- Recall parts of a circuit and their functions.
- Explain the impact of adding to, or removing components.
- Explore the effect of voltage on electrical circuit components.
- Build and create circuit models.
- Draw and annotate circuit diagrams.

Working scientifically (Science Skills)

i) Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary

ii) Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate

iii) Recording results using scientific diagrams and labels

iv) Using test results to make predictions to set up further comparative and fair tests

v) Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results