



Year 6 – Autumn 1 – Electricity

I should already know:

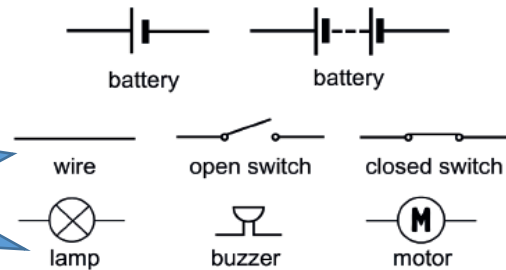
- Identify common appliances that run on electricity
- Construct a simple series electrical circuit, identifying and naming its basic parts, including batteries, wires, bulbs, switches and buzzers
- Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- Recognise common conductors and insulators, and associate metals with being good conductors.

Skills I will develop:

- writing a conclusion using sentence stems
- using a data logger to take measurements
- taking repeat measurements and using these to explain the degree of trust I have in my results

By the end of this unit I will:

- build a circuit starting from a circuit diagram
- draw a circuit diagram from a circuit
- troubleshoot problems in circuits and be able to explain why a particular circuit doesn't work
- describe what happens when the number of batteries in a circuit is increased
- describe what happens when the number of bulbs in a circuit is increased



Rules for drawing electric circuits

- Use a sharp pencil
- Use a ruler
- Use squared paper to ensure wires are parallel and perpendicular
- Components and wires are only ever vertical or horizontal
- Use correct circuit symbols
- Never label the symbols

	something that does let electricity flow e.g. metals, graphite		when there is a tiny gap between two parts of a circuit so electricity cannot flow
	something that does not allow electricity to flow e.g. plastic, wood		when the filament of a bulb is broken so electricity can't flow through it and the bulb does not light
	when a circuit is connected in a complete loop with no gaps, electricity can flow around		when the two ends of a battery are directly connected together without a bulb or buzzer in between. Dangerous!
	electrical components connected together, often drawn using circuit symbols		when a battery doesn't work any more and can't push electricity around a circuit (it's voltage is too low)
	the amount of "push" given to the electricity flowing around the circuit		the thin wire inside a bulb that glows when electricity flows through it