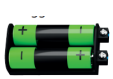
Year 4– Electricity (Physics)

Factual Knowledge

- I know many appliances use electricity and must be plugged into a socket for the electricity to pass through the circuit. Other appliances may need batteries to power the energy around a circuit.
- I know some appliances use electricity to heat things up (cooker hobs) and cool things down (fridges and freezers).
- I know electricity can be extremely harmful and I know liquids and wet hands should be kept away from electrical appliances and circuits.
- I know a circuit must have a closed path so that electrical energy can pass through.
- I know circuits can include bulbs, wires, switches, buzzers and cells connected in one loop.
- I know if a circuit does not have a source of energy, such as a cell or battery, then electricity cannot flow around it.
- I know a bulb will not light in a circuit if it is not in a complete loop with the cell and bulb will not light in a circuit if a switch is open.
- I know a conductor is a material which allows energy to flow through it.
- I know an insulator does not allow energy to pass through it. Materials which are insulators are rubber, plastic and wood.
- I know some materials can be used to connect a gap in a circuit, others cannot.

Important vocabulary I will know



circuit		a closed path that energy can flow through
switch		a device that opens and closes an electrical circuit
cell		a portable store of energy
battery		two or more cells joined together to store more energy
buzzer		a device that makes a sound
conductor		a material that allows energy to flow through it
insulator		a material that does not allow energy to flow through it
metal		a material which can be hard, shiny and a conductor of electricity
material		what an object is made from
appliances		electrical devices used for a particular purpose, e.g. fridge, oven

Scientific Enquiry– Pattern Seeking

Enquiry question: What materials are conductors or insulators of electricity and is there a pattern?

Working Scientifically

- Gather, record and classify data
- Answer questions and make conclusions
- Ask questions

