



**What I should already know:**

Identify common appliances that run on electricity

Construct simple series electrical circuits, identifying and naming its basic parts, including cells, wires, 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 circuit

Recognise some common conductors and insulators and associate metals with being good conductors

**By the end of this unit:**

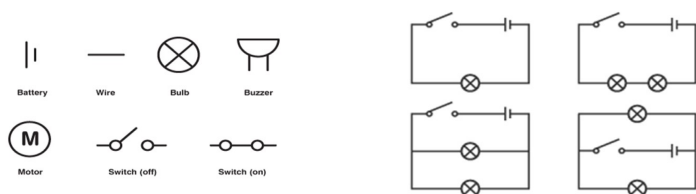
Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in a circuit

Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches

Use recognised symbols when representing a simple circuit diagram

Research how electricity is generated both traditionally using coal and gas, and by renewable resources.

Investigate how electricity is transmitted across the country, and what sort of electricity generating plant they might site in their locality.



**YEAR 6: Electricity: Danger! Low Voltage**  
**Science: Strand– Physics**

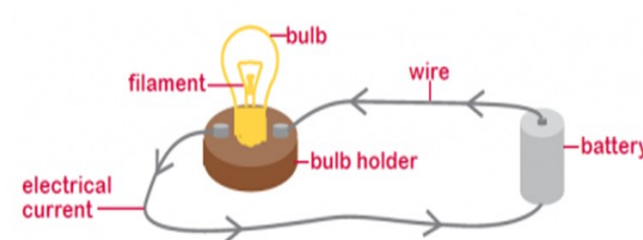
**Working Scientifically**

Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, and bar and line graphs.



Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.

Identifying scientific evidence that has been used to support or refute ideas or arguments.



**Investigate**

How does the brightness of a bulb or speed of a motor change?

| <b>Vocabulary</b> |   |
|-------------------|---|
| Battery           | A container consisting of one or more cells where chemical energy is converted into electricity and used as a source of power |
| Bulb              | A glass bulb which provides light by passing an electrical current through a filament   |
| Buzzer            | An electrical device that makes a buzzing noise and is used for signalling  |
| Cell              | A device containing electrodes that is used for generating current  |
| Circuit           | A complete and closed path around which a circulating electric current can flow   |
| Component         | A part of the whole electrical circuit  |
| Conductor         | A material or device which allows heat or electricity to carry through  |
| Current           | A flow of electricity which results from the ordered directional movement of electrically charged particles                   |
| Electricity       | A form of energy resulting from the existence of charged particles  |
| Filament          | A conducting wire or thread with a high melting point that forms part of an electric bulb                                     |
| Generator         | A dynamo for converting mechanical energy into electricity  |
| Insulator         | A material that does not allow electricity to flow through it   |
| Motor             | A machine powered by electricity that supplies motive power for a vehicle or other moveable device                            |
| Nuclear power     | Electric power generated by a nuclear reactor   |
| Resistor          | A device used to control current in an electric circuit by providing resistance   |
| Switch            | A device for making and breaking the connection in an electric circuit  |
| Voltage           | An electrical force that makes electricity move through a wire, measured in volts   |