

## Year 6 – Autumn 1

### Electricity

#### Research more:

<https://www.bbc.co.uk/bitesize/topics/zj44jxs>

#### Circuit symbols

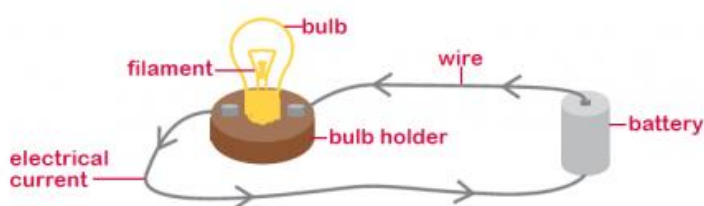
|  |               |  |             |
|--|---------------|--|-------------|
|  | Switch Closed |  | Cell        |
|  | Ammeter       |  | Motor       |
|  | Battery       |  | Resistor    |
|  | Bulb          |  | Switch Open |
|  | Buzzer        |  |             |

#### Faults in a Circuit

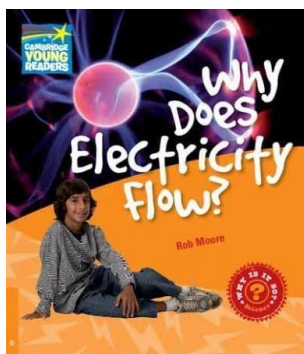
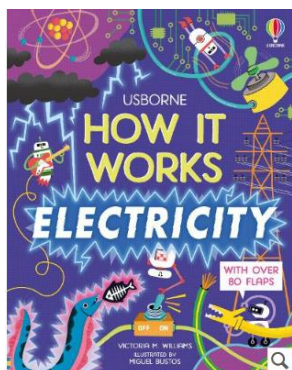
1. Circuits need power (usually battery or batteries)
2. Circuit must not have any breaks
3. Switch must be on and creating a complete circuit to work
4. For bulbs to light brightly, they must have enough power.



| vocabulary      | definition                                                                                                                |
|-----------------|---------------------------------------------------------------------------------------------------------------------------|
| Circuit         | A complete path that an electric current can flow around                                                                  |
| Symbol          | A visual picture that stands for something                                                                                |
| Circuit diagram | A visual representation of an electrical circuit using symbols to represent the electrical components.                    |
| Cell/battery    | A device that stores energy as a chemical until it is needed. A cell is a single unit. A battery is a collection of cells |
| Switch          | An electrical component that can make or break an electrical circuit.                                                     |
| Voltage         | The force that makes electricity move through a wire                                                                      |
| 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 (for example, in a burglar alarm)              |
| Current         | A flow of electricity, measured in amps                                                                                   |
| Motor           | A machine that produces motion or power for doing work                                                                    |



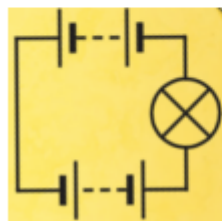
#### Read more:



#### Knowledge - What Effects a Circuit

##### What will make a bulb brighter or a buzzer louder?

1. More batteries or a higher voltage create more power to flow through the circuit.
2. Shortening the wires means the electrons have less resistance to flow through.



##### What will make a bulb dimmer or a buzzer quieter?

1. Fewer batteries or a lower voltage give less power to the circuit.
2. More buzzers or bulbs mean the power is shared by more components.
3. Lengthening the wires means the electrons have to travel through more resistance.

