



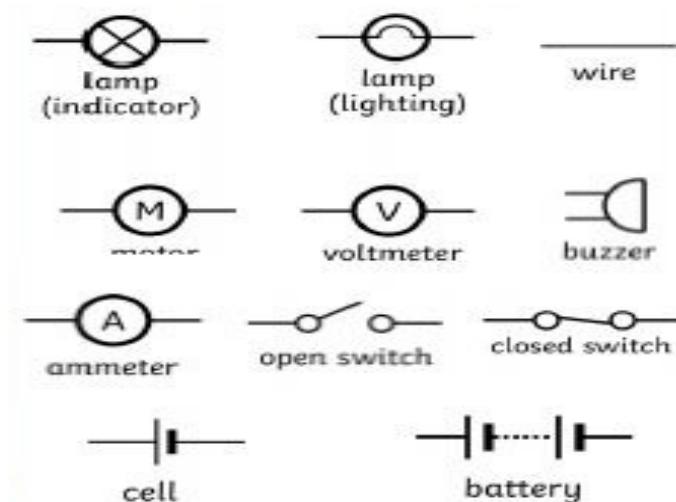
Year 6 - Electricity

What I should already know

- Sticky knowledge from Year 4 electricity.
- Knowledge of properties and materials.

Working Scientifically

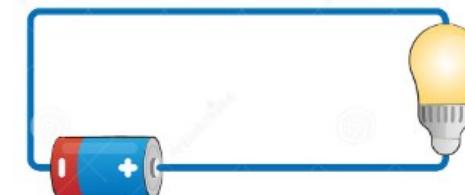
- systematically identify the effect of changing one component at a time in a circuit; designing and making a set of traffic lights, a burglar alarm or some other useful circuit.



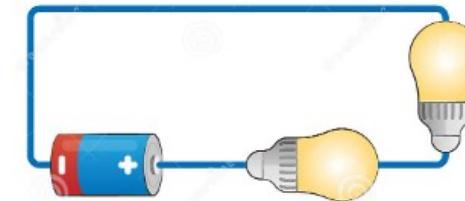
Sticky Knowledge

- ◆ The brightness of a lamp or the volume of a buzzer changes with the number and voltage of cells used in the circuit.
- ◆ More batteries or a higher voltage create more power to flow through the circuit.
- ◆ Shortening the wires means the electrons have less resistance to flow through.
- ◆ Fewer batteries or a lower voltage give less power to the circuit.
- ◆ More buzzers or bulbs mean the power is shared by more components.
- ◆ Lengthening the wires means the electrons have to travel through more resistance.
- ◆ Know and use the components and symbols of a circuit.

A series circuit is a circuit that has only one route for the current to take. If more bulbs or buzzers are added, the power has to be shared and so they will be dimmer or quieter. If just one part of this series circuit breaks, the circuit is broken and the flow of current stops.



SIMPLE CIRCUIT



SERIES CIRCUIT

Vocabulary

amps	How electric current is measured.
battery/ cell	Stores energy as a chemical until it is needed. A cell is a single unit, a battery is a collection of cells.
circuit	A complete and closed path around which a circulating current can flow.
conductor	A material or device which allows heat or electricity to carry through
current	A flow of electrons, measured in amps.
energy	Power from sources such as electricity that makes machines work or provides heat
insulator	Any material that electricity cannot pass through or along
voltage	An electrical force that makes electricity move through a wire, measured in volts (V). The greater the voltage, the more current will flow.