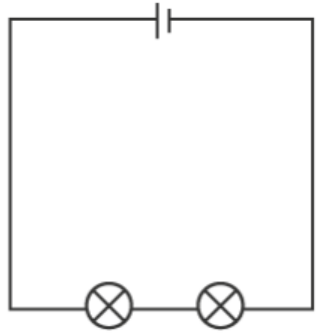
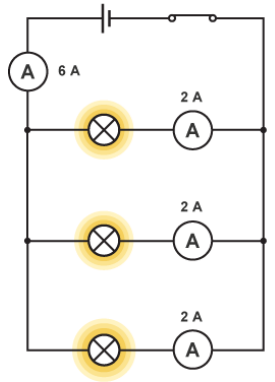
Keywords/ Definitions	
Keyword	Meaning
ammeter	A device used to measure electric current.
Current	Current is a measure of how much electric charge flows through a circuit.
in parallel	A circuit where current divides into two or more paths before recombining to complete the circuit.
in series	Connected to a circuit in such a way that the same current flows through each component in turn.
potential difference	The potential difference of a supply is a measure of the energy given to the charge carriers in a circuit
circuit	A closed loop through which current moves - from a power source, through a series of components, and back into the power source.
electric current	The movement of electrically charged particles, for example, electrons moving through a wire or ions moving through a solution.
resistance	The opposition in an electrical component to the movement of electrical charge through it.
voltmeter	A device used to measure potential difference or voltage.
electric charge	The electrical state of an object, which can be positively charged or negatively charged.

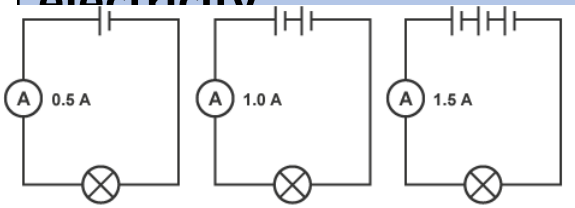
Key Facts

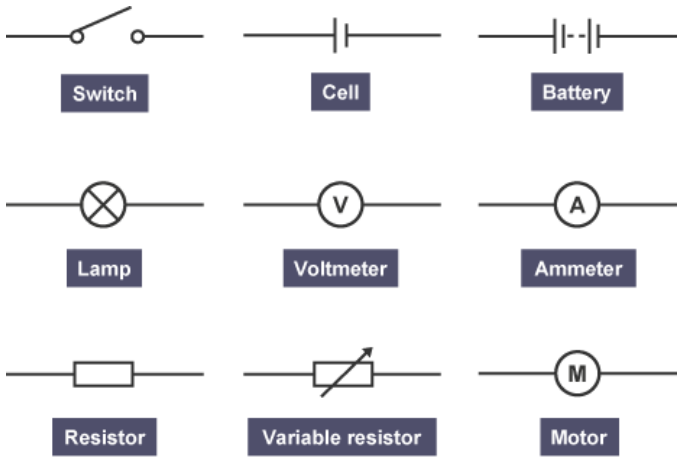
- Potential difference is measured in volts (V). The symbol for potential difference is V.
- Current is measured in amperes (A). The symbol for current is I.
- Resistance is measured in ohms (Ω). The symbol for resistance is R.
- In a series circuit, if one component is disconnected, all components will stop working.
- In a parallel circuit if one component is disconnected, the other components still work.
- In a series circuit, the current is the same everywhere in the circuit.
- Ammeters must be connected in series.
- Voltmeters must be connected in parallel.
- In parallel circuits, the current is shared between components.
- In series, the total resistance increases when you add more components.
- An electrical conductor has a low resistance.
- An electrical insulator has a high resistance.

KS3 Physics: Current electricity









Numeracy – calculating resistance

To find the resistance of a component, you need to measure:

- the potential difference across it
- the current flowing through it

We use this equation to calculate resistance:

Resistance = potential difference ÷ current

$R = V \div I$