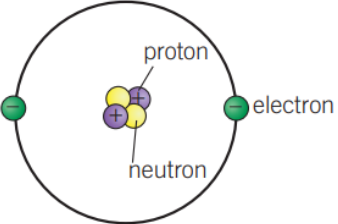


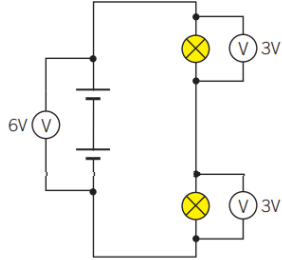
Charge and Static electricity

1	Structure of the atom	
2	Atoms	are normally neutral (no charge) because they have the same number of protons as electrons
3	Static electricity	Caused by the rubbing together of two insulators. Friction causes electrons to transfer from one material to the other, leaving negative charge on one and positive charge on the other.
4	Forces	Objects with the same charge will repel . Objects with opposite charges will attract .

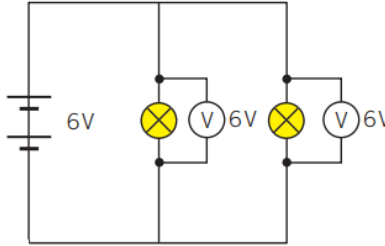
Current, Potential Difference and Resistance

1	Current	The amount of charge flowing per second. Measured with an ammeter (always in series). Units are Amps (A) .
2	Potential difference	The amount of energy given to the charges by the cell or battery. Measured with a voltmeter (in parallel). Units are Volts (V) .
3	Resistance	Measured in Ohms (Ω) . Calculated using: $\text{resistance } (\Omega) = \frac{\text{potential difference (V)}}{\text{current (A)}}$

Series Circuits

1	Current	Is the same everywhere in a series circuit
2	Potential difference	Is shared between the components in the circuit.
3	More bulbs = less bright	
4	One bulb breaking = all bulbs go out	

Parallel Circuits

1	Current	Is shared between the different loops
2	Potential difference	Is the same on each loop
3	More bulbs = no change in brightness	
4	One bulb breaking = only that bulb goes out	

Key Vocabulary

1	Electron	A negatively charged particle that orbits the nucleus. Also carries charge in a circuit
2	Proton	A positively charged particle found in the nucleus
3	Neutron	A neutral particle found in the nucleus
4	Current	The amount of charge flowing per second
5	Potential Difference	The energy supplied to each charge in the circuit
6	Resistance	A measure of how difficult it is for the current to flow
7	Series Circuit	A circuit with only one loop
8	Parallel Circuit	A circuit with more than one loop