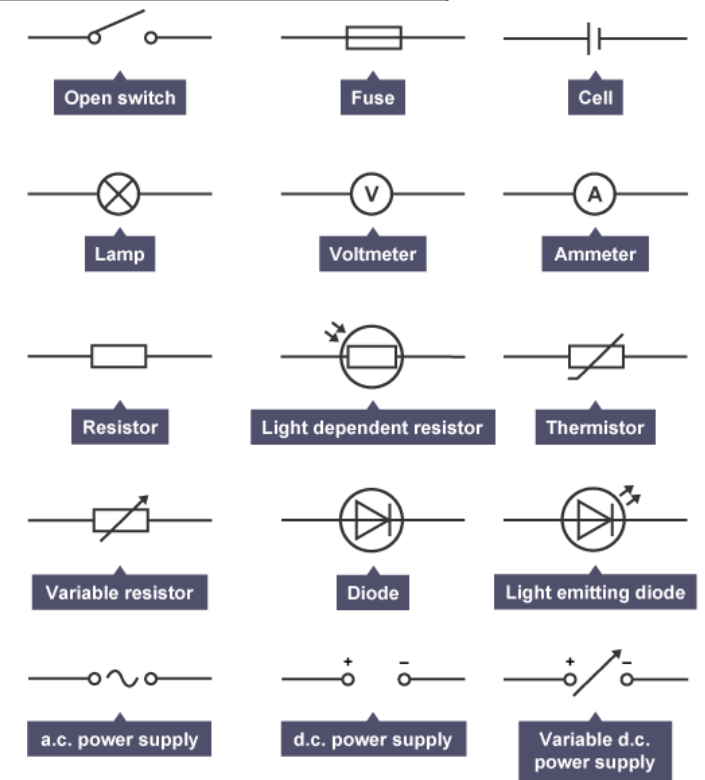


# Key Terms

# Knowledge Organiser – Electricity

# Diagrams

Potential difference (p.d.)	A measure of the electrical work done by a cell (or other power supply) as charge flows round the circuit. Potential difference is measured in volts (V).
Electric current	A flow of electrical charge. The size of the electric current is the rate at which electrical charge flows round the circuit.
Resistor	A component that acts to limit the current in a circuit. When a resistor has a high resistance, the current is low.
Directly proportional	When two quantities are directly proportional, doubling one quantity will cause the other quantity to double. When a graph is plotted, the graph line will be straight and pass through the origin.
Inversely proportional	When two quantities are inversely proportional, doubling one quantity will cause the other quantity to halve
Ohmic	The current flowing through an ohmic conductor is proportional to the potential difference across it. If the p.d. doubles, the current doubles. The resistance stays the same.
Non-ohmic	The current flowing through a non-ohmic resistor is not proportional to the potential difference across it. The resistance changes as the current flowing through it changes.



$P = V \times I$       power = voltage x current.  
 $V = I \times R$       voltage = current x resistance.  
 $Q = I \times t$       charge = current x time.  
 $E = V \times Q$       energy = voltage x charge.  
 $E = V \times I \times t$       energy = voltage x current x time.

$\frac{V_p}{V_s} = \frac{N_p}{N_s}$       transformer equation

Total cost = number of units x cost per unit.

