

	The unit for current is ampere (A)
Electromagnet	Consists of a coil made from insulated copper wire wound on a core of soft magnetic material like iron. When a current flows through the coil, the core becomes a magnet.
Electromagnetic waves	Produced by the simultaneous vibration of electric and magnetic fields. They are transverse waves that travel with the speed of light (3×10^8 m/s) in vacuo. The electromagnetic spectrum consists of radio waves, microwaves, infra-red radiation, light ultra-violet radiation, x-rays and gamma rays. They obey the equation $v = f\lambda$
Electromotive force	The work done by any electrical source driving a unit charge around a complete circuit. The SI unit for e.m.f. is volt (V). An electromotive force is induced whenever there is a changing magnetic field in a circuit. (Faraday's law)
Energy	Defined as the capacity to do work
Evaporation	The process whereby a substance changes from liquid state to gaseous state below boiling point. Evaporation takes place at the exposed surface of a liquid and at all temperatures.
Faradays' law of electromagnetic induction	States that the magnitude of the induced e.m.f. is proportional to the rate of change of the magnetic flux linked with the circuit or the rate at which the magnetic flux are cut.
Fleming's left hand rule	Position the thumb, first and second fingers of your left hand such that they are at right angles to one another. Point the first finger in the direction of the magnetic field and the second finger in the direction of the current. The thumb will then show the direction of the force.
Fleming's right hand rule	Hold the thumb and first two fingers at right angles to one another. If the first finger points in the direction of the magnetic field and the thumb in the direction of the movement (or force) of the conductor, then the second finger shows the direction of the induced current.
Focal length	The distance between the optical centre and the principal focus of a lens
Focal plane	Flat surface perpendicular to the principal axis which passes through the principal focus
Free fall	An object is in 'free fall' if the only force acting on it is the weight or the force due to gravity
Free-body force diagram	Shows all forces acting on a single body only without including its surrounding or environment
Freezing	A process whereby a substance changes from liquid to solid without a change in temperature
Frequency of a wave	The number of crests and troughs that passes a point per second. It is also the number of waves generated per second. The unit of frequency is the hertz (Hz).
Friction	A force that opposes sliding motion between two surfaces in contact. It does not depend on the area of contact between two surfaces.
Gravitational field	A region in space where a mass experiences a force due to gravitational attraction
Gravitational field strength (g) (10N/kg)	Defined as gravitational force per unit mass or $g = \frac{W}{m}$
Gravitational potential energy	The energy which a body possesses because of its position relative to the ground. The change in potential energy which an object is raised by a distance h is given by $E_p = mgh$ where E_p = potential energy, m = mass, g = gravitational field strength
Heat capacity	The amount of thermal energy required to raise the temperature of a body by 1 K or 1 °C $C = \frac{Q}{\Delta\theta}$ where C = heat capacity, Q = energy and $\Delta\theta$ = change in temperature
Ice point	The temperature of equilibrium of ice and water at standard pressure. It is the lower fixed point on the Celsius scale of temperature
Induction	The production of electric charge on the surface of a conductor under the influence of an electric field
Internal energy	Combination of total kinetic energy (due to motion) and potential energy (due to intermolecular forces) of the molecules of a body
Joule (J)	The SI unit of work and energy