

AS 90940

Mechanics Glossary

acceleration	change in speed over time, whether speeding up or slowing down
air resistance	friction acting on an object moving through air
average speed	the total distance travelled divided by the time required to travel that distance
balanced forces	when two forces combine to cancel each other out
conservation	(energy) cannot be created or destroyed
constant speed	speed is not increasing or decreasing but remain consistent over time
constant	unchanging
contact area	amount of area shared by two objects e.g. ice skates have sharp edges, and thus a small area in contact with the ice
deceleration	decrease in the speed over time of an object
distance	how far an object has travelled (usually horizontal)
drag	for an object moving through air, friction is called "air resistance" or "drag"
E_K	kinetic energy; the kind of energy possessed by moving objects
E_P	gravitational potential energy; energy possessed by objects that have been lifted up
force	a push or pull that can change an object's movement
free fall	falling motion caused by gravity alone
friction	friction is an opposing force; it acts in the opposite direction to a force which is applied to an object
g	acceleration caused by the earth's mass (approx. 10 ms^{-2})
gradient	slope of a graph (rise/run)
gravity	the force of attraction between any two objects; the Earth is very big and so has a large gravity pulling everything down towards it
height	distance (vertical)
instantaneous	at an instant of time
mass	amount of matter in an object or substance
mechanical energy	kinetic or potential (or heat) energy
net force	the single force that represents all the forces acting on a body; overall force
power	the rate that energy is changed from one type to another; power is the energy changed divided by the time it takes for the energy to change
pressure	a measure of the force exerted on a certain area of surface; force per unit area
reaction	An equal and opposite force exerted by a body against a force acting upon it
relationship	information that can be used to link two things together e.g. force and acceleration

resultant force	a stationary object remains stationary if the sum of the forces acting upon it - resultant force - is zero. A moving object with a zero resultant force keeps moving at the same speed and in the same direction. If the resultant force acting on an object is not zero, a stationary object begins to accelerate in the same direction as the resultant force.
speed	how fast an object is travelling; units are distance time ⁻¹ , e.g. ms ⁻¹
stationary	stopped, not moving or "at rest"
thrust	to push or drive with force
unbalanced forces	forces that are NOT balanced; situation leading to acceleration or deceleration of an object
velocity	speed (Note: velocity is really the measurement of the rate <u>and</u> direction of motion but at Level 1 Science we treat speed and velocity as the same thing)
weight (force)	the force on an object caused by gravity
work	energy required to make an object move

Extra notes: