



## Glossary - Physics

**acceleration** - the rate at which an object's velocity changes with time.

**aerodynamic force** - a resistive force exerted on an object by the gas in which it is immersed whenever the object moves relative to the gas. The aerodynamic force is usually separated into drag and lift.

**drag** - the component of the aerodynamic force that runs parallel to the direction of relative motion.

**field force** - a force that can be exerted on an object even when the object is not in contact with the source of the force.

**force** - an influence that causes an object to change its rate of motion.

**free fall** - motion of an object under the influence of gravity only.

**friction** - the resistance to motion on a surface.

**gravitational force** - the force of attraction between all masses in the universe. In everyday life, this is what gives weight to objects which have a mass, causing them to fall to the ground when dropped.

**kinetic energy** - energy possessed by an object due to its motion.

**lift** - the component of the aerodynamic force that runs perpendicular to the direction of relative motion.

**mechanical energy** - the sum of the kinetic energy and the potential energy present in a system.

**momentum** - the product of the mass of an object and its velocity.

**mechanical force** - a force that can only be exerted on an object if the object is in physical contact with the origin of the force.

**potential energy** - the stored energy that an object possesses because of its position with respect to other objects.

**pressure** - the force exerted per unit area.

**scalar** - a quantity that possesses magnitude, without regard for direction.

**speed** - the time rate at which distance is covered by a moving object.

**thrust** - a force exerted on an object by its propulsion system. It is derived from Newton's Third Law of Motion.

**vector** - a quantity that has both magnitude and direction.

**velocity** - distance travelled per unit time.