

Acceleration Key Terms

On-level Physics

The following are the terms you should be familiar with in order to properly complete this chunk. You are expected to be able to define each as well as apply these terms in any situation during this and subsequent chunks of study.

direction – The distance-independent relationship between two points in space that specifies the location of either with respect to the other. May be indicated by terms such as: north, south, positive, negative, up, or down.

time - the duration of an action or an event.

instantaneous speed - The speed of an object at specific moment.

average speed - The total distance traveled divided by the total time of travel; the average of two instantaneous speeds.

constant speed - A speed that does not change, such as a steady speed; no acceleration.

acceleration - The rate at which an object changes its velocity, meaning there is a change in speed, direction, or both.

freefall - The condition of a falling object which experiences no friction and gravity is the only force acting on the object. A freefalling object always accelerates at the same rate and all objects in freefall accelerate at the same rate as each other. The rate of acceleration is 9.8 m/s^2 downward near the surface of the earth.

gravity - a force field produced by an object's mass, which attracts other masses. Used to define down here on earth.

precision - The degree of exactness with which an operation is performed or a measurement stated.

accuracy - Freedom from mistake or error; degree of conformity of a measure to a standard or a true value

independent variable - The factor in an experiment that the researcher chooses to vary at specific intervals; is plotted on the x-axis.

dependent variable - The factor whose value changes as the result of a change in the independent variable and is plotted on the y-axis.

slope - Refers to the degree of inclination or steepness of a line on a graph. Determined by dividing the rise by the run of the line.

model - A simplified description of a physical system intended to capture the essential aspects of the system in a sufficiently simple form. A description or analogy used to help visualize something (as an atom) that cannot be directly observed

hypothesis - An assumption to be tested; a statement of a problem to be solved, expressed as a question.

theory - A plausible or scientifically acceptable general principle or body of principles offered to explain phenomena

unit - A specific measure of quantity (length, time, heat, etc.) used as a standard of measurement.

observation - An act of recognizing and noting a fact or occurrence; often involving measurement with instruments.

experiment - An operation carried out under controlled conditions in order to discover an unknown effect or law, to test or establish a hypothesis, or to illustrate a known law.

law - A statement of an order or relation of phenomena that so far as is known is invariable under the given conditions.

standard - Set up and established by authority as a rule for the measure of quantity, weight, extent, value, or quality.