

Velocity Key Terms

On-level Physics

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

frame of reference - A point or set of points, assumed to be stationary, used as the “background” to describe motion.

magnitude - Refers to size and is expressed as a numerical value.

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.

position - Refers to where an object is relative to a frame of reference.

time - The duration of an action or an event.

scalar – A measurable quantity, such as mass, volume, and speed which are fully described by a magnitude alone.

distance - A scalar quantity which refers to “how much ground an object has covered” during its motion.

speed - A scalar quantity which refers to “how fast an object is moving.” The ratio of distance to time.

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

average speed - The total distance traveled divided by the total time of travel.

constant speed - A speed that does not change, such as a steady speed.

vector - A quantity that is defined by both a magnitude and a direction together.

displacement - A vector quantity which refers to how far out of place an object is, or the object’s change in position.

velocity - A vector quantity which describes the rate at which an object changes its position. Also referred to as “speed with direction.”

rate – A measure of how a quantity changes with respect to time; a magnitude or frequency relative to a time unit.