

## TERMINAL VELOCITY -- Expedition 2 Vocabulary

acceleration	the rate at which an object's velocity changes ( $a = \Delta v / \Delta t$ ); measured in $m/s^2$ or $km/h^2$
accuracy	degree of closeness of a measured quantity to its true value
Aristotle	a Greek philosopher who had ideas about motion similar to Einstein
average speed	the total distance traveled by the elapsed time (average speed = total distance / total time)
base unit	SI standard units for length (m); time (s); mass (g); temperature (K)
calibrate	the adjusting, or tuning, of an instrument so it takes correct measurements
centimeter	standard SI unit of measurement equal to one hundredth of a meter (cm)
circular motion	movement of an object along a circular path or orbit
constant speed	occurs when there is no change in an object's speed
constant velocity	occurs when there is no change in an object's velocity
deceleration	negative value of acceleration; slowing down
displacement	both the direction and the numerical difference between the final position and the initial position of an object, as well as the direction that the object traveled
distance	how far apart two objects are
dynamics	study of causes and changes of motion
engineering	branch of science that applies mathematical, technical, and scientific knowledge to invent new technology
estimate	an approximate measurement of an object or event
force	anything, such as a push or pull, that causes a change in the motion of a freely moveable object, or that causes stress in a fixed object; SI unit is newton
Galilei Galileo	scientist who studied motion of objects; invented the telescope
gram	metric system base unit of mass (g)
graph	visual representation of data
instantaneous speed	the speed of an object at any moment in time
law of conservation of momentum	states that momentum is neither lost nor gained, it is transferred between objects; one of Newton's laws of forces and motion
length	distance between two points; SI base unit of measurement
linear motion	motion in one dimension; motion in which velocity, acceleration, and displacement all occur along the same line.
magnitude	a vector quantity that describes amount
mass	the amount of matter in an object; the measure of a body's inertia; SI base unit of mass is the gram (g)
measurement	using numbers to describe objects and events; i.e. length, mass, volume, etc.
measurement error	random or systematic errors that reduce the accuracy and/or precision of a measurement
measurement standard	a benchmark used to compare other measures
measurement unit	a standardized quantity used in a specific type of measurement
meter	SI base unit for length
metric system	base 10 system of weights and measures
momentum	the relationship between an object's mass and its velocity ( $p = m \times v$ )
motion	a change in an object's position relative to a reference point
Isaac Newton	scientist who experimented and authored the three Laws of Motion and worked with optics and light
non-linear motion	motion in which velocity, acceleration, and displacement do not all occur in a straight line; circular or projectile motion
precision	how close measurements are to each other
projectile	any object thrown on the surface of Earth
projectile motion	the path of an object that is thrown or launched horizontally and is then affected only by gravity.
rate	amount of change in a measurement over a specific amount of time
reference point	a fixed point or object against which motion is measured
SI unit	International System of Units; includes seven base units
slope	steepness of the line on a graph, indicating changes in one variable in relation to another; calculated by dividing the rise by the run
speed	how fast an object is moving; measured by dividing the distance traveled by the time
standard	a benchmark used to compare other measures
terminal velocity	state in which a falling object no longer accelerates
time	a measurement of the interval between two events; SI base unit of measurement
trajectory	a projectile's characteristic, arc-shaped path
vector arrow	an arrow used to represent the magnitude and direction of a force
vector quantity	quantity that describes describes magnitude and direction of an object
velocity	a vector quantity which represents both the speed and direction an object is moving