# PHYSICS IN MOTION
gpb.org/physics-motion

# Vocabulary List

## Unit 1: Introduction to Physics

### ❯ 1B: Scientific Notation and Unit Conversions

**conversion factor -** multipliers that allow us to convert a quantity expressed in one kind of unit into an equivalent value expressed in another.

**base unit -** a fundamental unit of measurement that is defined arbitrarily and not based on other combinations of units. Examples from the SI system include the meter, kilogram, liter, second, and kelvin.

**derived units -** a unit created by combining base units.

**Imperial system -** a system of units of measurement that is primarily used in the United States and consists of units like the pound, ounce, mile, and inch.

**International System of Units (SI) -** a complete metric system of units of measurement used by scientists that is based on multiples of ten.

**scientific notation -** a mathematical expression used to represent a decimal number between 1 and 10, multiplied by ten to a power of 10, so you can write large or small numbers using less digits.

### ❯ 1C: Significant Figures

**significant figures -** the important digits in a number that express its precision.

### ❯ 1D: Vectors and Scalars

**magnitude -** the amount or quantity.

**Pythagorean Theorem -** a theorem that states that the square of the length of the hypotenuse of a right triangle equals the sum of the squares of the lengths of the other two sides.

**scalars -** quantities that are described by magnitude alone. Examples include time, speed, mass, and distance.

**vectors -** quantities that express magnitude and direction.

# PHYSICS IN MOTION

gpb.org/physics-motion

# Vocabulary List

## Unit 1: Introduction to Physics

### ❯ 1E: Graphical Resolution of Vectors

**magnitude** - the amount or quantity.

**Pythagorean Theorem** - a theorem that states that the square of the length of the hypotenuse of a right triangle equals the sum of the squares of the lengths of the other two sides.

**resultant** - a vector quantity that is equal to the addition of two or more vector components acting at the same point.

**scalars** - quantities that are described by magnitude alone. Examples include time, speed, mass, and distance.

**tip-to-tail method** - a method of vector addition where one can add any two vectors by placing the tail of one so that it meets the tip of the other one.

**vectors** - quantities that express magnitude and direction.

### ❯ 1F: Mathematical Resolution of Vectors

**magnitude** - the amount or quantity.

**Pythagorean Theorem** - a theorem that states that the square of the length of the hypotenuse of a right triangle equals the sum of the squares of the lengths of the other two sides.

**resultant** - a vector quantity that is equal to the addition of two or more vector components acting  at the same point.

**scalars** - quantities that are described by magnitude alone. Examples include time, speed, mass, and distance.

**tip-to-tail method** - a method of vector addition where one can add any two vectors by placing the tail of one so that it meets the tip of the other one.

**vectors** - quantities that express magnitude and direction.

### ❯ 1G: Graphing Relationships

**extrapolation** - estimating a value beyond a set of data points on a graph.

**hypothesis** - an educated guess.

**independent variable** - a variable that is directly changed in an experiment.

**dependent variable** - a variable that changes in response to the changing independent variable.

**interpolation** - estimating a value within a set of data points on a graph.

**scientific method** - a methodical way to test a hypothesis, based on data collection and having controlled variables.