

Physics Terms

Acceleration - Acceleration is the measurement of the change in an object's velocity. It is equal to the change in velocity over the change in time. Acceleration is a vector.

Collision - A collision in physics occurs when any two objects bump into each other.

Displacement - In physics, displacement refers to an object's overall change in position. It is a vector quantity.

Energy - Energy is the ability to do work. The standard unit of measure for energy is the joule.

First law of motion - The first law of motion states that any object in motion will continue to move in the same direction and speed unless external forces act on it.

Force - Force is the measurement of a push or pull on an object. Force is a vector measured in newtons.

Friction - Friction is the resistance of motion when one object rubs against another. It is a force and is measured in newtons.

Gravity - Gravity is a force caused when the mass of physical bodies attract each other. On Earth gravity pulls at objects with an acceleration of 9.8 m/s^2 .

Impulse - An impulse is a change in momentum.

Joule - The joule is the standard unit of measure for energy and work.

Kinetic energy - Kinetic energy is the energy an object has due to its motion. It is a scalar quantity calculated using the formula $KE = \frac{1}{2} * m * v^2$, where m = mass and v = velocity.

Mass - Mass is a measurement of how much matter is in an object. It is usually measured in kilograms.

Momentum - Momentum is a measurement of mass in motion. Momentum is equal to the mass times the velocity of an object. It is a vector measured in newton-seconds.

Newton - The newton is the standard unit of measure for force.

Pascal - The pascal is the standard unit of measure for pressure.

Potential energy - Potential energy is the energy stored by an object due to its state or position. It is measured in joules.

Power - Power is a measurement of the rate at which energy is used. Power is calculated by dividing work over time. The standard unit for power is the watt.

Pressure - Pressure is the force over a given area. Pressure is measured in pascals.

Scalar - A scalar is a measurement that only measures the magnitude. Unlike a vector, a scalar does not have direction.

Second law of motion - The second law of motion states that the greater the mass of an object, the more force it will take to accelerate the object.

Simple machine - A simple machine is a basic mechanical device for applying a force and doing work. Some examples of simple machines include the lever, pulley, inclined plane, wedge, and screw.

Speed - Speed is the measurement of how fast an object moves relative to a reference point. It is a scalar quantity measured by distance over time.

Third law of motion - The third law of motion states that for every action there is an equal and opposite reaction.

Vector - A vector is a quantity that has both a magnitude and a direction.

Velocity - Velocity is the rate of change in an object's position. Velocity is a vector quantity. The magnitude of velocity is the object's speed.

Watt - The watt is the standard unit of measure for power.

Weight - Weight is the force of gravity on an object. In physics, weight is measured in newtons.

Work - Work occurs in physics when a force acts on an object to move it some distance. Work is equal to the force times the distance and is measured in joules.