

Vocabulary List for Energy Terms

Acceleration: Rate of change in velocity

Center of Mass: Balance point

Conduction, Convection, Radiation: Conduction is the energy transfer through matter from particle to particle. Convection is energy transfer where particles move from place to place (in a fluid), carrying the energy with them. Radiation is the transfer of energy by waves without matter.

Density: Mass per Unit volume, e.g. grams per cubic centimeter

Potential and Kinetic Energy: A capacity for change either stored or moving. Energy is conserved!

Force: A push or pull

Friction: The force that resists motion between two solid surfaces. However, friction is also a factor in fluid flow cases e.g. Air resistance

Vibration, Oscillation: Periodic motion

Inertia: Resistance to change see Newton's First Law

Momentum: Property of a moving object that is related to its mass and velocity

Newton's Laws

1st Law or the Principal of Inertia: If an object is left alone, not disturbed, it continues to move with constant velocity in a straight line if it was originally moving or it continues to stand still if it was just standing still.

2nd Law: The more the force on an object, the more it accelerates. But the more massive it is, the more it resists acceleration.

3rd Law: For every action there is an equal and opposite reaction

Reflection: Bounce back of a wave

Rotation: Spin on an axis

Simple Machine: A device that makes work easier by changing the size or direction of the force. E.g. Lever, pulley, wheel and axle, inclined plane, screw and wedge

Speed, Velocity: Speed is distance traveled in a time unit, e.g miles per hour. Velocity is speed in a particular direction

Torque: Angular Force

Wave, Wavelength, Frequency: A periodic disturbance that carries energy. The wavelength is the distance between identical points on the wave. The frequency is the number of wave crest passing a point in a unit time. Usually cycles per second or Hertz.

Work: Transfer of energy through motion.