

Balanced Force
 A force that is equally opposed by another force resulting in no change in position, motion, or acceleration of an object. Example: a tug-of-war where the rope does not move.

Unbalanced Force
 Forces that cause a change in an object's motion because the opposing forces don't cancel each other out. Examples: lifting a box, accelerating a car; dropping a ball.

Motion
 A change in an object's position, direction, or location. Examples: running, lifting, falling, rotating.

Inertia
 The tendency of an object in motion to remain in motion or an object at rest to remain at rest. Example: A car will resist stopping even if you slam on the breaks.

Gravity
 A force created by all objects with mass that pulls other objects to it. Examples: Earth's gravity pulls objects to its surface; the Sun's gravity holds the planets in their orbits.

Newton
 A unit of force measured on a spring scale.

Friction
 The force that resists motion between two objects that are touching. Examples: surface friction; air friction; water friction.

Mechanical Energy
 The potential and kinetic energy in a machine system; it is used to generate motion, such as a car engine or drill.

Vibration
 The rapid back and forth motion of an object that produces sound.

Path
 The route electrons take in a circuit. A circuit's path always starts and ends at the same place.

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