PHYSICS TERMS

Review the definitions for each Physics term.

ACCELERATION: A change in velocity over a given time period.

ENERGY: The ability of an object (or in some cases a non-object, such as a magnetic force field) to accomplish work.

FRICTION: Any force that resists the motion of body in relation to another with which it is in contact.

INERTIA: The tendency of an object in motion to remain in motion, and of an object at rest to remain at rest.

JOULE: The measure of work. One joule (1 J) is equal to the work required to accelerate 1 kilogram of mass by 1 meter per second squared (1 m/s ^{2}) over a distance of 1 meter. Due to the small size of the joule, however, it is often replaced by the kilowatt-hour, equal to 3.6 million (3.6 · 106) J.

KINETIC ENERGY: The energy that an object possesses by virtue of its motion.

MATTER: Physical substance that occupies space, has mass, is composed of atoms (or in the case of subatomic particles, is part of an atom), and is convertible into energy.

MASS: A measure of inertia, indicating the resistance of an object to a change in its motion—including a change in velocity. A kilogram is a unit of mass, whereas a pound is a unit of weight. The mass of an object remains the same throughout the universe, whereas its weight is a function of gravity on any given planet.

MOMENTUM: The product of mass multiplied by velocity.

MOTION: a continuous change in the position of a body relative to a reference point

POTENTIAL ENERGY: The energy that an object possesses by virtue of its position.

SPEED: The rate at which the position of an object changes over a given period of time.

VELOCITY: The speed of an object in a particular direction.

WEIGHT: A measure of the gravitational force on an object. A pound is a unit of weight, whereas a kilogram is a unit of mass. Weight thus would change from planet to planet, whereas mass remains constant throughout the universe.

WORK: The exertion of force over a given distance. Work is the product of force and distance, where force and distance are exerted in the same direction.