**Energy**

**Law of Conservation of Energy:**

Energy cannot be created or destroyed but can it can be transferred from one object to another, but it can change for and be transferred from one object to another.

**Energy**- ability to cause movement.

**Potential Energy**- Energy stored in an object due to its position or configuration.

**Forms of Potential Energy:**

**Gravitation Energy**- Energy stored in an object due to its mass and position above the ground

**Chemical Energy**- Energy stored in chemical bonds

**Elastic Energy**- Energy stored in a deformed elastic object

**Nuclear Energy**- Energy stored in radioactive material due to its unstable nucleus.

**Kinetic Energy-** Energy of motion

**Forms of Kinetic Energy:**

**Thermal Energy**- Energy related to how fast the particles in a substance are moving

**Radiant Energy** - Energy of light/electromagnetic waves

**Motion Energy** - Energy stored in the movement of objects

**Sound**- Movement of energy through a substance in compression waves/sound waves

**Electric Energy/Electricity**- Movement of tiny charged particles called electrons, t typically through a wire.

**Thermal Energy Transfer**:

**Conduction:** Energy transfer between two substances in direct contact. Material is not exchanged.

**Convection:** Energy transfer within a fluid (liquid or gas). Occurs when hotter less dense material rises and colder more dense material sinks. Material circulates throughout system.

**Radiation:** Energy transfer that occurs without contact, only energy transfer that can occur across a vacuum. Material is not exchanged.