**Chapter 3: Forces and Energy (Grade VII)**

**Vocabulary Words**

1. **Balanced Forces:**

Forces that are equal in magnitude but opposite in direction. The resultant force of balanced forces is zero. Objects acted upon by balanced forces stay at rest or move at a constant speed.

1. **Un-balanced Forces:**

Forces that are not equal in magnitude and may or may not act in the same direction. The resultant force of unbalanced forces is not equal to zero, causing the object to accelerate and change its state of motion.

1. **Applied Force**:

Force that is applied to an object by a person or another object.

1. **Constant:**

The factors that do not change during the experiment.

1. **Variable:**

Factors that can change and be measured.

1. **Speed:**

Speed is the distance traveled by an object in a given time.

Speed= Distance/Time

1. **Average Speed:**

Average speed is the total distance traveled divided by the total time taken.

1. **Distance/Time Graph:**

A distance-time graph is a graphical representation of distance travelled by an object in unit time. X-axis in graph represent Time and Y-axis represents distance.

1. **Sketch Graph:**

A sketch graph is a simple drawing of a graph that shows the general pattern or trend of a relationship between two variables without exact measurements or precise plotting.

1. **Stationary Object:**

A stationary object is an object that is not moving or does not change its position over time.

1. **Moment:**

Moment is the turning effect of a force.

Moment= Force  Distance

**12)Lever:**

A simple machine that consists of a bar that rotates around a fulcrum, which is a fixed point.

1. **Pivot:**

The point around which the lever turns is called Pivot.

1. **Pressure:**

The force acting on a surface area is called pressure.

Pressure= Force/Area

1. **Diffusion:**

The random movement of particles from higher concentration area to lower concentration area is called Diffusion.

1. **Atmospheric Pressure:**

Atmospheric pressure is the force exerted by the weight of air in the Earth's atmosphere on everything around us