SUMMARY

Force

1) **Force** is a kind of **push** or a **pull** on an object. The **interaction** of one object with another results in a force between the two objects. If a force acts on an object in the **direction of its motion,** then the object **moves faster.** If a force acts on an object **opposite to the direction of its motion,** then the objects **slows down**.

2) Force may also change the **direction of motion** of an object. The effect of force changes with the direction of its application. Forces acting on an object in the **same direction add** to each other, while forces **acting opposite** to each other results in the **difference of the forces**.

3) The **strength** of force is called its **magnitude**. The **international unit** used to measure force is **newton.**

4) A force can change the **shape and size** of an object. There are many types of forces.

5) The force resulting from the action of **muscles** is called **muscular force**. We make use of muscular force of animals like bullocks, horses and camels get our activities done.

6) The point where force is applied on an object is called the **point of contact**.

7) **Friction** is another type of contact force that always acts opposite to the direction of motion of the objects. **Magnetic force** and**electro-static force** are **non-contact forces** as they act on an object from a distance. The **force of gravity** is also a non-contact and an attractive force exerted by the earth on objects, due to which objects fall to the ground. **Gravitational force** is an attractive force between any two objects in the universe, and is a non-contact force.

Pressure

The thrust acting per unit surface area is pressure. The force acting on an object perpendicular to its surface is thrust. Pressure is measured in newton/metre2, which is equal to 1 pascal (Pa). Liquids and gases exert pressure on the walls of the vessel in which they are carried.

Air exerts pressure on all objects. The pressure exerted by air is called atmospheric pressure. A rubber sucker sticks to the surface of an object as atmospheric pressure acts on it. In order to fix nails to walls, sharp nails are used, as the area of contact of the nail with the wall is small and more pressure acts on it for a given force.

A suction pump sucks out all the air from a closed container, creating a vacuum in it.