CLASS : 8

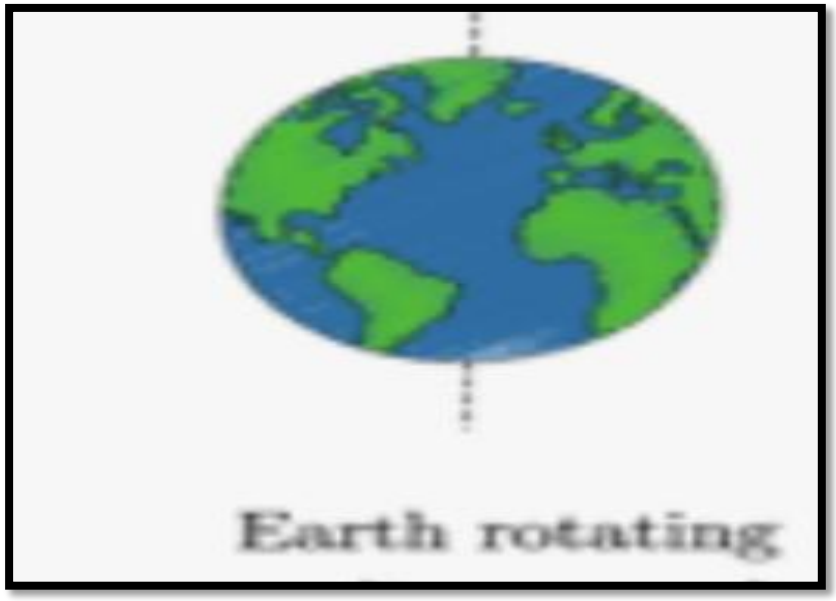
SUBJECT : PHYSICS

TOPIC. : FORCE AND PRESSURE

Types of motion

- Translational motion - the motion of a body takes place along a straight line when a force acts on it.
  Example : a coin moving over a carom board , a stone is dropped from a tower.

- Rotational motion : the motion is one which takes place about an axis of rotation.
  Example : rotation of fan blades , revolution of earth.



- **<u>Torque / Moment of a force</u>**

  It is the tendency of the force to rotate a body about an axis and is called the Turning effect of a force

  Moment of a force =
  Force × perpendicular distance from line of action of force to pivot.

  SI unit : Torque = Newton-metre

- Factors on which TORQUE depends
  1) The magnitude / size of Force .
  2) The length of the moment arm .

Examples :. The opening and closing of door , the steering wheel of a car , a wrench

PRESSURE

Force acting normally on a surface is called Thrust.

- Pressure is defined as the trust acting per unit area of a body.

$$pressure = \frac{thrust}{area}$$

- Pressure acting on a surface is less when the surface area is more and is more when surface area is less.

SI UNIT: pressure = N m^{-2}

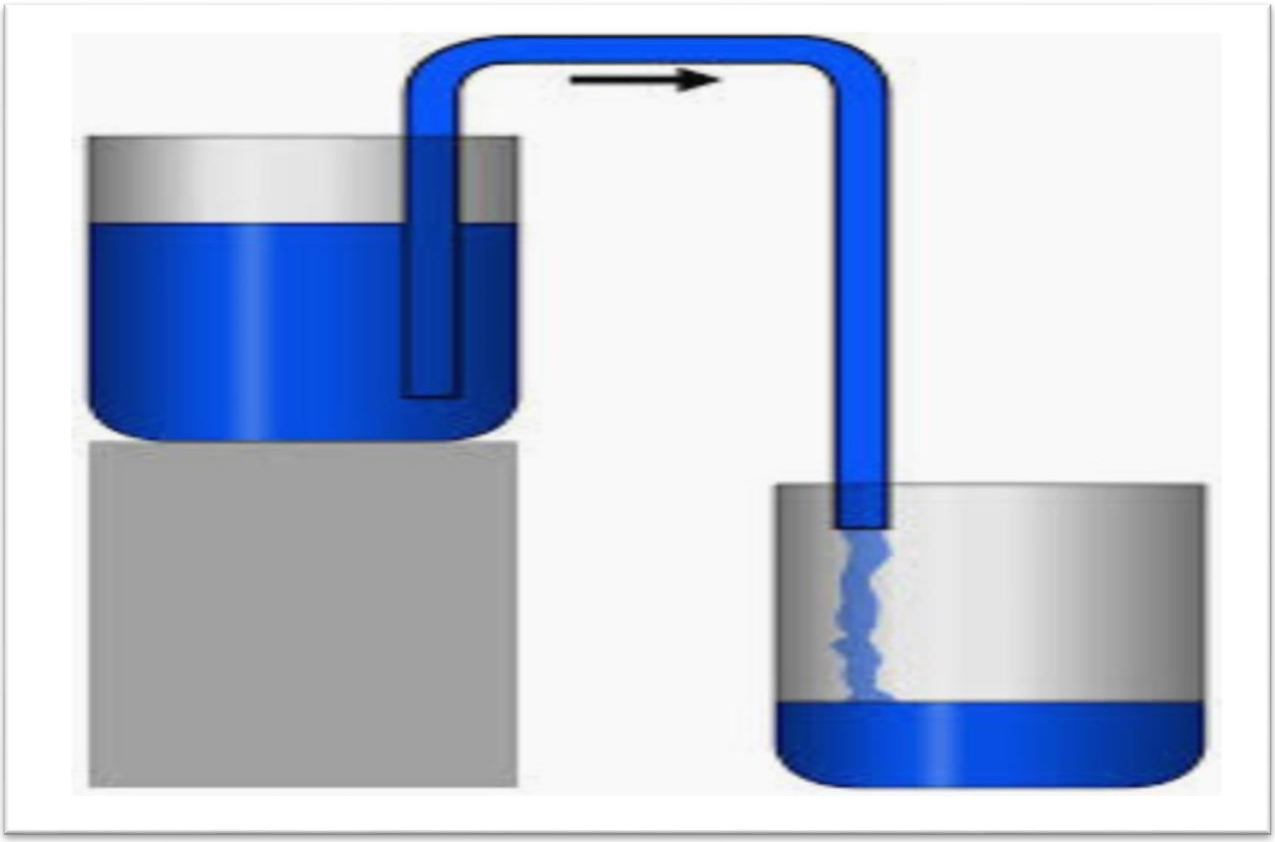
= Pa (Pascal)

Unit Pa is defined as the pressure exerted on a surface area of one metre square by a thrust of one Newton.

Atmospheric Pressure

The force exerted by the earth's atmosphere per unit area of the earth's surface is called atmospheric pressure.

Applications. : siphon



Worksheet

1. Why does our nose bleed when we go to the mountains?

2. Why does our school bag have a wide straps ?
3. How does a siphon work?
4. Complete (A)short answer type questions.
5. Complete C, D,E,F ,G,H,I
