Class-IX(Cancept Map)

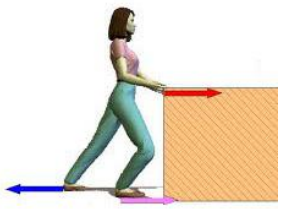
Force

Force is push or pull acting on an object

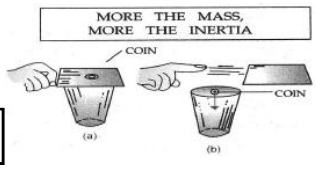
- Formula → F=m×a
  Where m= mass
  a=acceleration

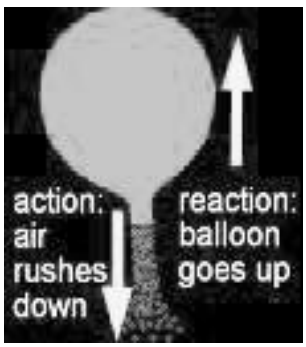
- Effect of force
  - Force is applied to change the shape of an object
  - Force is applied to move an object from the position of rest
  - Force is applied to change the speed of motion
  - To change the direction of motion

- Units of force
  - CGS:-$gcms^{-2}$
  - SI:-$kgms^{-2}$ or newton



- Newton's laws of motion
  - Law of Inertia
    - Inertia of rest
    - Inertia of motion
    - Inertia of direction





  - Rate of change of momentum is force
  - Every action has equal and opposite reaction

- Momentum : Momentum is product of mass and velocity

- Units of momentum
  - CGS:-$gcms^{-1}$
  - SI:-$kgms^{-1}$

- Impulse : Impulse is product of time and force

- Units of Impulse → kg metre per second