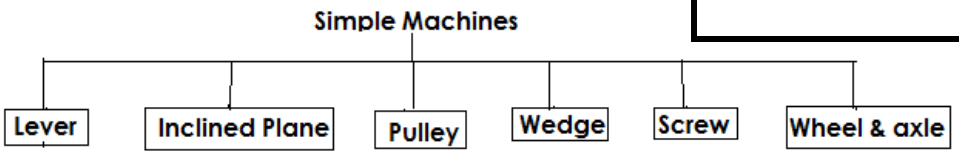
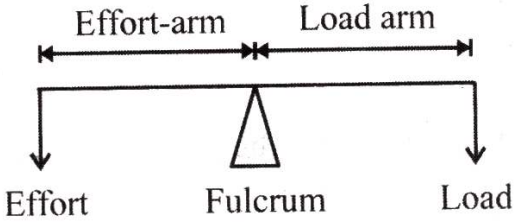
SIMPLE MACHINES



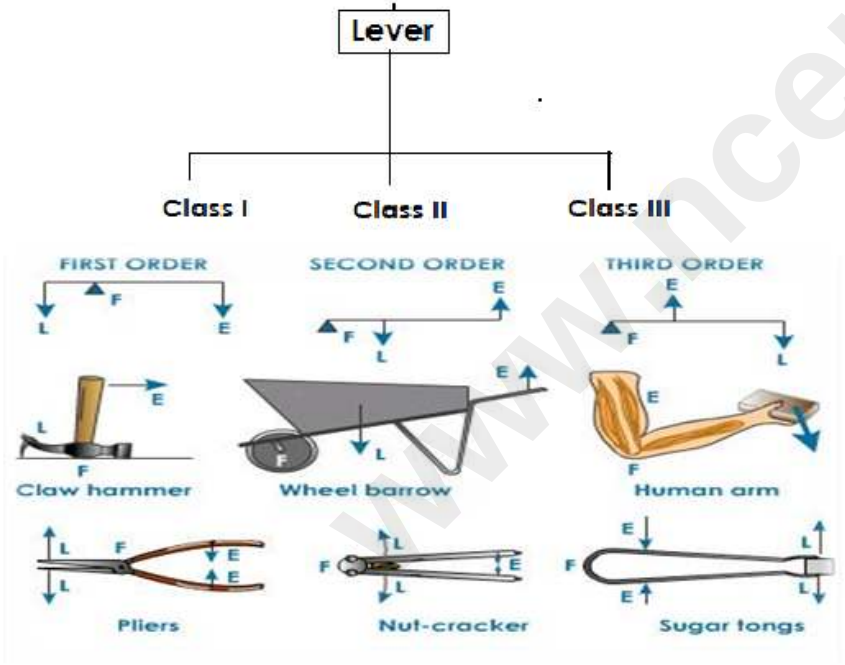
Lever : - is a simple rigid rod , which is free to rotate about a fixed point called fulcrum.

Principle of Lever :



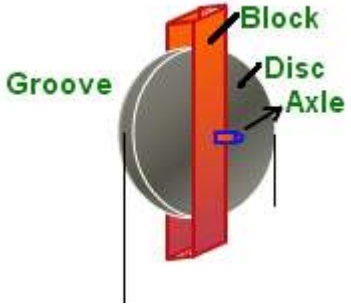
Load x Load arm = Effort x Effort arm

Law of Levers : ***Mechanical Advantage =***



Inclined Plane : is a gentle slope that helps us to move a heavy load with less effort.

Pulley :



Wheel & Axle :

Effort applied to wheel and load applied to axle .

Screw : It is like an inclined plane wound around a rod.

Wedge : It is a simple machine with two inclined planes put together forming a sharpened edge.

Efficiency of a Machine:

Efficiency = =

Efficiency % =

Ideal Machine - 100 % efficiency

Practical machine – Efficiency < 100 % [Because of friction in internal parts]

Machine Care :

- To be protected from rust by painting or rust proof coating
- Regular oiling to reduce friction