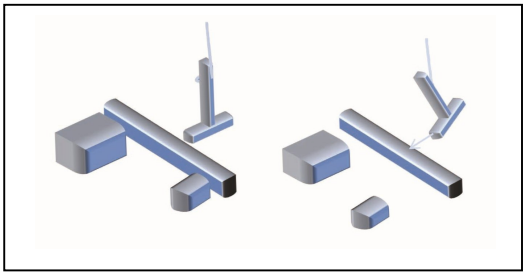
EXPERIMENT – 1

INERTIA OF AN OBJECT

Aim : To prove that the inertia of an object depends upon its mass.

Required : Long wooden scale (Min half meter), Big wooden block, Small wooden block, Hammer, Rope, Scale



Formula : The natural tendency of objects to resist a change in their state of rest or uniform motion is called inertia.

Procedure:(1) Tie the hammer to the rope and make it suspend from a fixed point.
(The hammer should be at very close to the level of the surface of the table.)
(2) Place the long wooden scale on the table such that the hammer touches it.
(3) Place the big and small wooden blocks at either side of the wooden scale.
(4) Now drag the hammer and leave it. Then it forcibly hits the wooden scale.
(5) In this way equal forces applied on the two blocks.
(6) Observe the distance travelled by the wooden blocks.

Observation :

- The distance travelled by the Big wooden block = …… cm
- The distance travelled by the small wooden block = …….... cm
- The small wooden block goes farther due to less inertia.

Precautions :

- Arrange the apparatus carefully such that the hammer should hit exactly at the center of the wooden scale.

Result :

- It was proved that the inertia of an object depends upon its mass.
(Object having more mass has more inertia.)

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