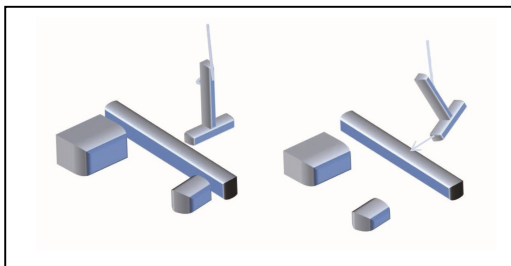


## EXPERIMENT - 1

### 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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