

CLASS: IX

SUBJECT: PHYSICS

CHAPTER: 10 GRAVITATION

(Demonstration- Activity to be done in class)

Experiential Content:

THRUST AND PRESSURE:

- The students are made into few groups and are given solid iron cuboid to find the pressure exerted by the cuboid on the sand by its three different faces.
- Measure the sides of the cuboid with scale and calculate its area.
- Find the mass of the solid iron cuboid. Calculate force. $\text{Force} = m \times g$.
- Calculate the pressure exerted by all the three faces of the cuboid on the sand, also observe the immersion of cuboid in the sand in each case.

$\text{Pressure} = \text{Force} / \text{Area}$
- From this experiment students learn that pressure depends on two factors: force applied and area over which force acts.

Suggested Questions:

1. Define pressure.
2. Which face of the cuboid exerts larger pressure on the sand?
3. Why does the cuboid with lower surface area exerts larger pressure?

Curiosity Questions:

A feather and stone dropped from a height in vacuum reach the ground at the same time. Why?

Answer Guide:

Think About:

- ❖ Does the acceleration produced in a freely falling body depend on the mass of the body?
- ❖ Does the value of 'g' differ from place to place?