

# PHYSICS (GRADE-7)

## Energy, work, power and pressure

### Lesson 16: Pressure and liquid pressure

27022020

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1. Define pressure and give its unit.

Ans. Pressure is the force acting on a unit area. It is calculated by

$$\text{Pressure} = \text{force} / \text{area} \quad P = \frac{F}{A}$$

The unit of pressure is pascal (Pa).

2. What are the factors affecting pressure?

Ans. There are 2 factors:

- 1) Force: The more the force, the more the pressure.
- 2) Area: The more the area, the less the pressure.

3. Define pressure in liquid.

Ans. Pressure in liquids is caused by the particles that make up the liquid. These particles have a disordered motion. So, the pressure acts equally in all directions.

4. Write the properties of pressure in liquids.

Ans.

- a) Pressure in a liquid increases with depth.
- b) Pressure at one depth acts equally in all directions.
- c) Pressure depends on the density of the liquid.
- d) Pressure does not depend on the shape of the container, and a liquid finds its own level.

5. Explain the expression for liquid Pressure.

Ans. Pressure in a liquid can be found using the equation  $P = h\rho g$ .

$P$  → pressure of the liquid.

$h$  → depth or height of the liquid

$\rho$  → density of the liquid

$g$  → gravitational field's strength

