

# Lesson Plan - Pressure

**Subject:** Science      **Class:** 8      **Chapter:** Force and Pressure Chapter: 3      **Topic:** Pressure

## **Pre- Requisite:**

Concept and units of the area in which it is measured

The concept of force and formulas used to calculate force and different types of forces

**Objective** - students will be able to

- Apply the concept of force to explore pressure on any object
- Analyze the relationship between force area and pressure
- Explore the applications of instruments/ devices/ machines in daily life that uses the concept of pressure.

**Create** - students will be able to create a device or machine that demonstrates the use of pressure and may be useful for human beings.

## **Students Activity -**

- Students will explore the concept of pressure and do hands-on activities to analyze the relationship between area and force and how it affects pressure. students will perform an experiment and simulation
- Students will also try to explore and relate the factors that affect the pressure at a depth in a liquid and pressure at a height in air or atmosphere
- Students will explore various units in which pressure is measured
- Try to relate
- Students will Create a prototype to demonstrate the use of pressure at different places and purposes. Students may use scratch, mBlock, Arduino and sensors etc.

## **Teachers Activity -**

- Ask students about their experience of pain when they were hurt by different kinds of objects such as pens, pencils, paper, stones, etc.
- Ask students to calculate the pressure exerted by them on the ground while them standing on both the feet and while standing on single feet.
- Ask students to explore the applications of pressure in daily life.
- Encourage students to go through the simulations and note their observations and create group discussion around the same. The questions of the discussion may pertain to conceptual clarity of variation of pressure at different places and the reason for the same.
- Also the questions should drive students towards the concept of density and buoyancy and how it is related to pressure.
- Provide students with a challenge to create their own prototype or game that demonstrates pressure at different places pressure at a depth, pressure at a height, and pressure every day in the life.