Lesson Plan

Class: VIII *Subject:* Science

Topic: Pressure, force and area *Curriculum or/& Book Name:* S.T.B.B Jamshoro

Date: 4-05-26 *Duration:* 40 min

Specific Learning Objectives:

Students will be able to:

- *Define Pressure*
- *State its formula* `P = F/A`
- *Give reason why pressure increases when area decreases*
- *Recognize different examples through which the relation of force area and pressure is demonstrated*
- *Demonstrate understanding through the activity*

Skills/Attitude:

reasoning skills, observing skills

Teaching Resources:

model, wooden piece, nail, hammer

Classroom Management Rules & Strategy:

Teacher will tell students that the student who will follow rules will be made monitor in the next session.

Teaching Method:

Demonstration, lecture

Procedure:

Initiation*:*

The teacher calls 2 students one pretends to wear heels and the other wearing sneakers. If both walk on sand on a beach for which student will it be difficult to walk. Students will respond according to their knowledge. After relating it with pressure teacher announces the topic.

Development:

Teacher tells that the student with the heel will get her feet stuck in sand because there is a less area and sneaker girl has more area. So there will be less pressure and her feet does not sink in sand. Teacher defines Pressure

"The force acting per unit area on a surface" The formula and unit of pressure will be written on board: *(Pascal, P = F/A)*

Now teacher shows model of two buildings. The building with smaller base has more pressure and building with large base has low pressure and is less risky. When area increases pressure decreases and vice versa.

Teacher now uses a hammer to hammer a nail upside down on a wooden piece. The nail won't go inside. Teacher asks students why is this happening? Students respond according to their knowledge. Because the area of nail is bigger that's why it's not going inside the wooden piece.

Teacher lists other real life examples like:

1. *Knife*: It has smaller area which increases pressure and cuts fruits and veggies
2. *School bag strap*: Is broad so it decreases pressure on our shoulder
3. *Camel's feet*: Are broad and easy to walk in sand without sinking

Teacher now solve a numerical to calculate pressure. *Force = 20N, Area = 10 cm², find Pressure.*

Recap:

Teacher gives a quick revision of the topic and examples related to pressure and area.

6. Board Summary

Topic: Pressure, Force and Area

"Pressure is the force acting per unit area on a surface"

Things	***area***	***pressure***
knife	*less*	*more*
School bag strap	*Broad strap*	*Less pressure*
Camel feet	*Broad /big*	*Less pressure*

P = F/A

P = 20 / 10 P = 2 pascal