MAHAJUBILEE
TRAINING COLLEGE
MULLOORKARA - THRISSUR (DT). 680 583

RECORD OF DISCUSSION LESSONS, DEMONSTRATION LESSONS & CRITICISM LESSONS

Year : 2020-2022

Name : ANNA VIJO

Reg.No. : MTAUTPN002

Subject : PHYSICAL SCIENCE-DISCUSSION, DEMONSTRATION & CRITICISM

Certified that this is the bonafide record of ANNA VIJO

Reg. No. MTAUTPN002 *For the year* 2020-2022

Reshma

FACULTY MEMBER

Date 5/10/2021

ASSL. PROFESSOR IN PHYSICAL SCIENCE
MAHAJUBILEE TRAINING COLLEGE
MULLOORKARA - 680 583

MAHAJUBILEE TRAINING COLLEGE ★ MULLOORKARA ★

Evaluated

PRINCIPAL

5/10/2021

Date

Dr. Cheeku Chiramel
PRINCIPAL
MAHAJUBILEE TRAINING COLLEGE
MULLOORKARA - THRISSUR

DISCUSSION LESSONS

DISCUSSION LESSON PLAN-1

I. General Information

Name of the teacher : Anna. Vijo

Name of the college: MJTC Mullurkara

Subject : Physics

Unit : Forces in fluids

Topic : Pascal's law

Standard : IX

Strength : 08

Duration : 45 min

Date : 26/6/2021

II. Curricular Objectives

To understand the concept of Pascal's law through observation, experimentation, discussion and its beneficiaries in daily life.

III Content Overview

Pascal's law and its applications.

IV. Content Analysis

a). Terms - Force, pressure, closed system, pascal's law, volume, equilibrium, weight, work, area.

b). Facts - • Volume of a liquid cannot be changed using pressure.
• Applied force results in change of shape of a body.

c). Concepts - • Pressure is directly proportional to force and inversely proportional to area of contact.

d). Law - Pascal's Law.

V. Process Analysis

a). Process skills : Observation, Experimenting, Discussion, Communicating, Tabulating

b). Process : • Observe experiment related to Pascal's law.
• Discuss and infer the results
• Finding examples related to daily life.

VI. Learning Outcomes

- Learner can explain Pascal's law and recognise the relation between the related variables.
- Learner must be able to find everyday examples related to Pascal's law.

VII. Learning Aids

- Pictures and demonstrations related to pascal's law
- Videos related to Pascal's law.

VIII. Pre-requisites

Students should have previous knowledge about force and pressure.

IX. Expected Products

- Science daisy consisting of observation and inference of the experiment.
- Science daisy with derivation of Pascal's law.
- Examples related to daily life.

X. Classroom Transactions

Activity	Response
Sensitization Teacher enters the classroom with a good smile and students greeted the teacher. Then she asked about previous classes and ready to take a new topic. **Activity 1** Teacher asks a student to push a desk. Due to the effect of his push, the position of the desk changed. So what is this effect of push called. **Points to be consolidated** The effect that displaces a body is called force. **Activity 2** Teacher fill an empty toothpaste tube completely with water and closed it tightly, two or more holes	Students greets back.

are put at random in the tube with a pin. Press with finger anywhere on the tube. Points to be consolidated Force applied to a closed surface, the pressure is equally distributed. Activity 3 Teacher fills two identical syringes with water and connected them with a plastic tube and setup in their inverted position. A small weight is kept at one syringe end and a push is given in other syringe end. Teacher asked the children to observe. Points to be consolidated Relation between applied forces and area of contact. Activity 4 Teacher shows the video presentation of hydraulic jack used to push vehicles upward and derives a relation of applied force and the effect of force.	Students observing the experiment. Students recording their observation Students watching video.

Points to be consolidated

According to Pascal's law,
Pressure applied at one end is equal to the effect of pressure at other end.

$$P_x = P_y$$

since, $P = \frac{F}{A}$

$$\frac{F_1}{A_1} = \frac{F_2}{A_2}$$

$$F_2 = \left[\frac{A_2}{A_1}\right] F_1$$

So the effect of force will be very greater when we reduce A_1 and increase A_2 where A_1 and A_2 are area of 1st and 2nd surface.

Points to be consolidated

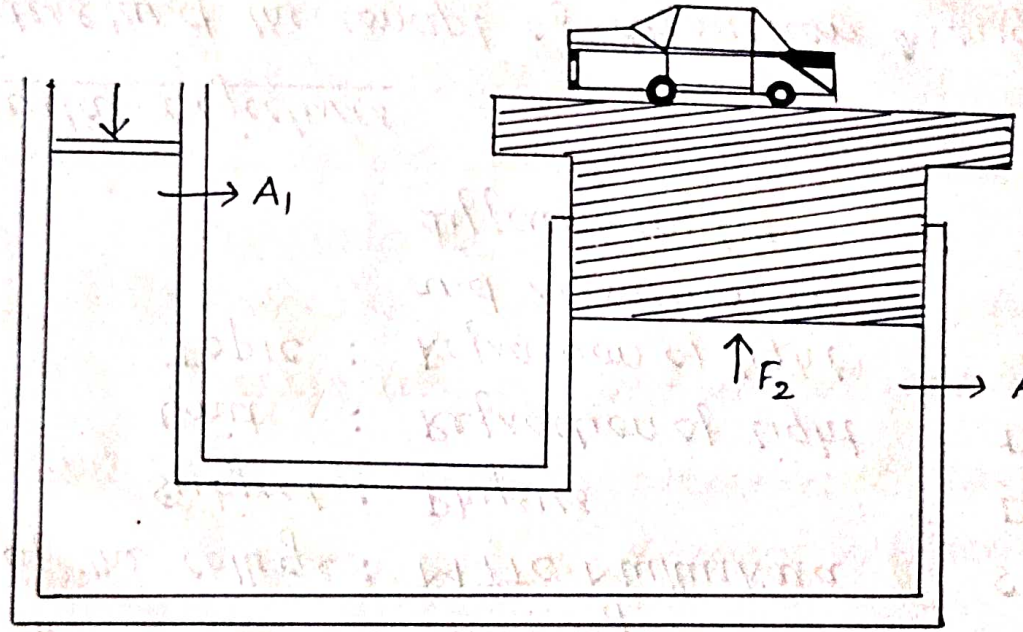
- Equation for pascal's law
- With 3 variables, the unknown 4th variable can be find out.

XI Follow Up Activities

- Find out more examples related to pascal's law in daily life.

XII Blackboard Summary.

Pascal's Law



$P_x = P_y$

$\because P = \frac{F}{A}$

$\frac{F_1}{A_1} = \frac{F_2}{A_2}$

$\therefore F_2 = \left[\frac{A_2}{A_1}\right] F_1$

XIII Reflection

Some learners cannot understand how area of contact play a crucial role in effect of force.