

FORCE AND PRESSURE

CHAPTER NO.3 SUB: PHYSICS

CHANGING YOUR TOMORROW

LEARNING OUTCOMES

- Students will be able to
- Define pressure.
- give examples of pressure from everyday experience
- To be able to use the basic formula to calculate pressure
- To be able to carry out a simple experiment to investigate the relationship between pressure and depth
- To recall that Pascal is the unit of pressure
- To rearrange the formula to correctly calculate force, area or pressure

CHANGING YOUR TOMORROW

POINTS TO BE COVERED

- Examples of pressure
- Liquid pressure
- Factors affecting liquid pressure.

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INTRODUCTION

- Define the term pressure and state its unit.
- How thrust is related to pressure?
- Name two factors on which the pressure on a surface depends

Examples of pressure

- <https://youtu.be/loi3zQuaTJQ>

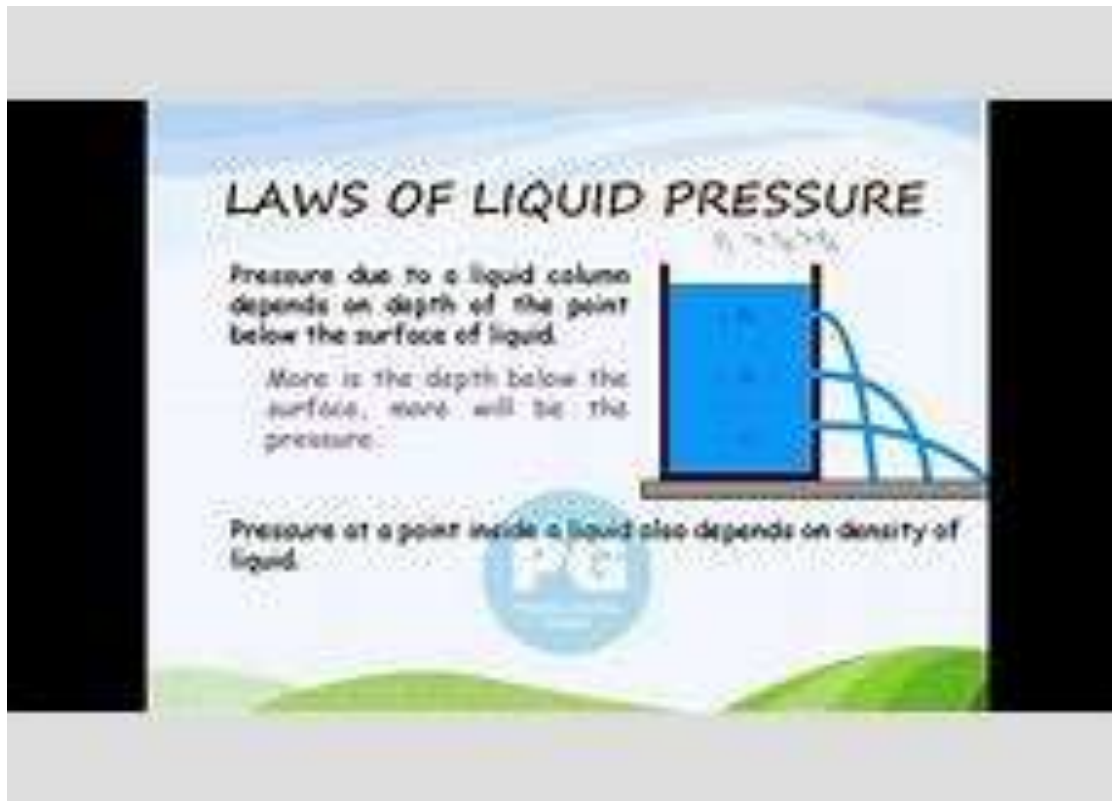
Liquid pressure

Factors affecting liquid pressure

- <https://youtu.be/Cvp6mLWbgaM>

Liquid Pressure

- The pressure exerted by liquid is called as liquid pressure.



Pressure

Thrust:

- The force acting normally on a surface is called thrust.
- SI unit of thrust: newton.

Effect of thrust:

- Smaller the area, larger is the effect.
- Examples:
- If you stand on loose sand, your feet will sink deeply into sand, but when you lie on sand; your body does not sink much into the sand.

Examples of Thrust

- <https://youtu.be/iwJUL3hUJmo>

Liquid Pressure

- A liquid exerts pressure in all directions.(downwards, upward, sideways.)
- The pressure is the same in all directions at the same depth.
- Pressure increases with depth.
- Factors affecting liquid pressure:
 - Height of the liquid column.
 - The density of the liquid.
- Consequences of liquid pressure:
 - Thickness of walls of a dam is increased towards the bottom.
- Pressure is measured by using an instrument called a manometer.

HOME ASSIGNMENT

- Exercise: B-20,21,22

THANKING YOU
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