



Department of Education, Sabaragamuwa Province – weekly school

Subject - science

Week - **March 4th week**

Grade 09

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Pressure exerted by solid (part 2)

01. What is the standard unit of measuring Force?

$$\begin{aligned}\text{Pressure} &= \frac{\text{Perpendicular force}}{\text{Surface area on which the force is acting}} \\ \text{Pressure} &= \frac{\text{N}}{\text{m}^2} \\ &= \text{Nm}^{-2} \text{ (Newtons per square meter)}\end{aligned}$$

❖ In honour of the French mathematician Blaise Pascal unit of pressure was named after him.

$$1 \text{ Nm}^{-2} = 1 \text{ Pa}$$

02. What is the pressure exerted on a surface of 3m^2 when a normal force of 300N is acting on it?

03. A perpendicular force of 40N was applied on an area of 2m^2 . What is the pressure exerted on the surface?

04. Weight of a cubic box is 800 N . It is kept on a horizontal plane surface. Pressure exerted by the box on the surface is 400pa . What is the contact area of the surface of the box?

05. In our day-to-day activities, we have to increase or decrease pressure. One way of doing this is the change of surface area. List such instances and explain them scientifically.

- Write down the answers for exercise in page 69, 70 and 71.