

p. 84

Volume amnt. of space matter fills
 $(\text{cm}^3) = (\text{ml})$

Typical Gas speed = $500 \frac{\text{m}}{\text{s}}$, sound $344 \frac{\text{m}}{\text{s}}$

Pressure = $\frac{\text{Force}}{\text{Area}} = \frac{\text{N}}{\text{m}^2} = \text{Pa}$ * Inverse Relationship

p. 86

Boyle's Law Pressure \uparrow Volume \downarrow
Pressure \downarrow Volume \uparrow temp. Same * Inverse Relationship

mercury $\boxed{\text{Hg}}$

Air pressure can hold up 10.3 m of water 76 cm

Why doesn't sound travel in a vacuum? No Medium!

p. 88

Charles's Law \uparrow temp. \uparrow vol. same
 \downarrow temp. \downarrow vol. press. Direct Relationship

another example of an inverse relationship

$$\text{Density} = \frac{M}{V} \quad \frac{\text{kg}}{\text{L}}, \frac{\text{g}}{\text{ml}}$$

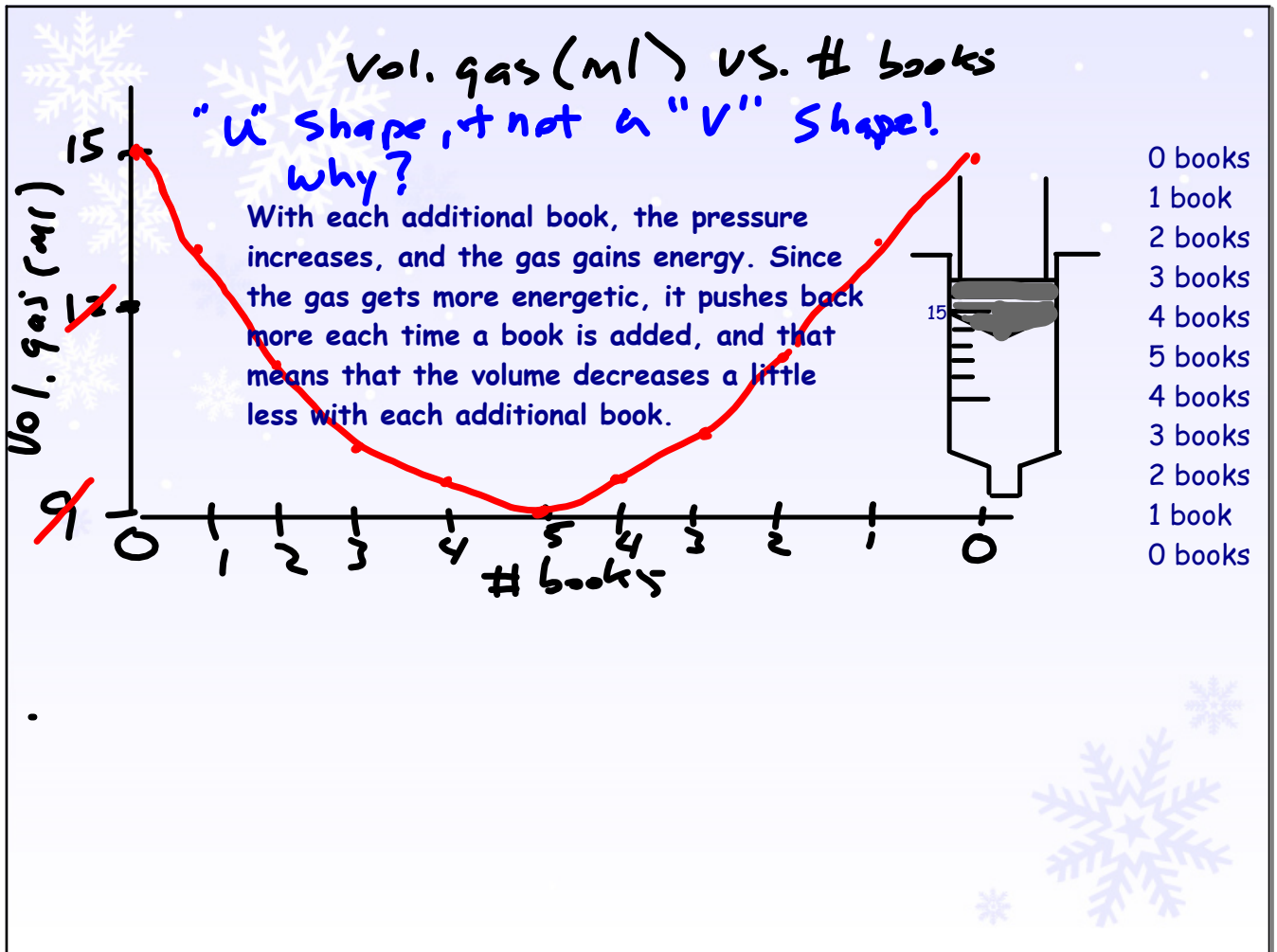
p. 85

A trash compactor exerts a force of 5,600 N over an area of .342 m².
What pressure does the compactor exert in Pa?

$$\frac{\text{force}}{\text{Area}} \quad \frac{5600}{.342} \quad 16374.27 \text{ pa}$$

A car lift exerts a force of 60,000 N over an area of 7.5 m². What pressure does the lift exert in Pa?
Show the pressure formula, insert the numbers, do the math, and include the units!

Explain - using Charles's law why a can implodes when cooled quickly.

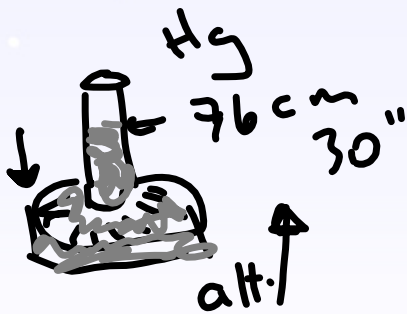


p. 374

Fluid Anything that flows - liquids
- gases
- solids

Pressure and elevation \uparrow alt. \downarrow press. *Inverse relationship*
 \downarrow alt. \uparrow press.

Barometer mercury Hg aneroid
 \rightarrow no liquid



p. 388

Pascal's Principle/law press. same in enclosed fluid

Pascal's Law: in an incompressible fluid, press. is equal in all areas.

$$\text{press} = \frac{F}{A} = \frac{5 \cdot 30}{1 \cdot 6}$$

