

CLASS 8

SCIENCE

REVISION NOTES

Revision Notes: Class 8 Science Chapter 6 Pressure Winds Storms and Cyclones

Contents

Class 8 Science Chapter 6: Pressure, Winds, Storms and Cyclones — Quick Revision Notes

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Pressure: Force $\div$ Area; SI unit pascal (Pa) = N/m^2 . The same force spread over a larger area produces lower pressure, and vice versa.

Liquid pressure: liquids exert pressure in all directions — on the base and the walls of a container, not just downward.

Liquid pressure and height: increases with the height/depth of the liquid column, independent of the container's shape or width — why overhead tanks are built tall and placed high.

Wind: the movement of air from a region of higher pressure to a region of lower pressure.

Sea breeze (daytime): land heats faster than the sea, air over land rises creating low pressure, and cooler high-pressure sea air flows in to replace it.

Land breeze (night): the reverse process — land cools faster than the sea after sunset.

Thunderstorm formation: warm moist air rises and cools $\rightarrow$ water vapour condenses into droplets/ice $\rightarrow$ charge separates (positive ice near the cloud top, negative water droplets lower down) $\rightarrow$ sudden discharge produces lightning, and the rapid heating/expansion of air produces thunder.

Cyclone: intensifies over warm ocean water as rising moist air creates a very low-pressure centre; surrounding air rushes in and, due to Earth's rotation, begins to spin.

Eye of a cyclone: the calm, low-pressure centre, surrounded by a ring of the storm's highest wind speeds.

Safety: during thunderstorms, avoid isolated tall trees and open fields, and a car's metal body offers protection; during cyclones, stay indoors and away from windows.

Why banners/hoardings have holes: holes let wind pass through, reducing the pressure difference (and hence the net force) between the two faces that would otherwise tear the structure loose.