

CLASS 8

SCIENCE

REVISION NOTES

Revision Notes: Class 8 Science Chapter 5 Exploring Forces

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Class 8 Science Chapter 5: Exploring Forces — Quick Revision Notes

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Force: a push or pull arising from an interaction between two objects; SI unit is the **newton (N)**.

Effects of force: can start motion, stop motion, change speed, change direction, or change shape — often a combination.

Contact forces (require touching): **muscular force** (from muscle contraction) and **friction** (opposes relative motion between surfaces; greater on rough surfaces).

Non-contact forces (act without touching): **magnetic force** (attract/repel between magnets), **electrostatic force** (from charge, like charges repel/unlike attract), and **gravitational force** (Earth's pull, always attractive).

Weight vs mass: mass is the fixed amount of matter (g/kg), constant everywhere; weight is the gravitational force pulling an object down (N), which varies by location — e.g. Moon's gravity is about 1/6th of Earth's.

Spring balance: measures weight — the stretch of a calibrated spring is proportional to the weight hung on it.

Buoyant force (upthrust): the upward force a liquid exerts on an object placed in it; per Archimedes' Principle, it equals the weight of liquid displaced.

Floating vs sinking: an object floats if buoyant force $\geq$ its weight, and sinks if its weight exceeds the buoyant force.