



TOPPERS HUB
ACADEMY

CBSE BOARD BOOSTER

Class 10 Science

Chapter-wise One-Liner Revision Notes

A free study resource by **Toppers Hub Academy**

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Chemistry

Chemical Reactions & Equations

- A chemical equation must always be balanced (law of conservation of mass).
- Oxidation = gain of oxygen / loss of hydrogen; reduction is the reverse.
- Rusting of iron needs both air and moisture.
- Rancidity is prevented by antioxidants, airtight packing and nitrogen flushing.

Acids, Bases & Salts

- $\text{pH} < 7$ acidic, > 7 basic, $= 7$ neutral.
- Tooth decay begins when mouth pH falls below 5.5.
- Baking soda = NaHCO_3 ; washing soda = $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$.
- Plaster of Paris = $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$, stored away from moisture.

Metals & Non-metals

- Reactive metals (K, Na) are stored under kerosene.
- Ionic compounds have high melting points; conduct when molten.
- Al and Zn oxides are amphoteric.
- Gold and platinum are the least reactive metals.

Biology

Life Processes

- Photosynthesis: $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{glucose} + \text{O}_2$ in chlorophyll with sunlight.
- Human heart is four-chambered with double circulation.
- Nephron is the functional unit of the kidney.
- Alveoli maximise surface area for gas exchange.

Control & Coordination

- Reflex arc allows quick, automatic responses.
- Plant hormones: auxin (growth), gibberellin, cytokinin, abscisic acid (inhibitor).
- Insulin from the pancreas regulates blood sugar.

Physics

Light — Reflection & Refraction

- Focal length of a spherical mirror = radius of curvature / 2.
- Power of a lens (diopetre) = $1 / \text{focal length in metres}$.
- Concave mirror gives a real, inverted image beyond focus.
- Light bends towards the normal entering a denser medium.

Electricity & Magnetism

- Ohm's law: $V = IR$ at constant temperature.
- Series: resistances add; Parallel: reciprocals add.

- Electric power $P = VI = I^2R = V^2/R$.
- 1 kWh (one unit) = 3.6×10^6 joules.
- Right-hand thumb rule gives the direction of the magnetic field.

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