

CLASS 10

SCIENCE

REVISION NOTES

Revision Notes: Class 10 Science Chapter 1 Chemical Reactions and Equations

A fast, one-glance recap of Class 10 Science Chapter 1 (Chemical Reactions and Equations) -- for the full worked explanations, see the Solutions. These Class 10 Science Chapter 1 notes are ideal for quick revision just before exams.

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A fast, one-glance recap of Class 10 Science Chapter 1 (Chemical Reactions and Equations) — for the full worked explanations, see the Solutions. These Class 10 Science Chapter 1 notes are ideal for quick revision just before exams.

Why This Chapter Matters

Chemical Reactions and Equations opens the Class 10 Science syllabus and is one of the most heavily-tested chapters in board exams — equation balancing, reaction-type identification, and everyday examples (corrosion, rancidity) appear across MCQ, short-answer and long-answer questions almost every year. It also lays the foundation for later chapters like Acids, Bases and Salts and Metals and Non-metals, which build directly on the reaction types introduced here.

Revision Notes: Chemical Reactions and Equations

Chemical reaction: a process where reactants are converted into new substances (products) with different properties — signs include colour change, gas evolution, precipitate formation, temperature change, or a change of state

Chemical equation: a short-hand representation of a chemical reaction using symbols/formulae of reactants and products, e.g. $\text{Mg} + \text{O}_2 \rightarrow \text{MgO}$

Balanced equation: has equal numbers of atoms of each element on both sides, in line with the Law of Conservation of Mass

Combination reaction: two or more reactants combine to form a single product, e.g. $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$ (usually exothermic)

Decomposition reaction: a single compound breaks down into two or more simpler products — thermal (heat, e.g. $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$), electrolytic (electricity, e.g. $2\text{H}_2\text{O} \rightarrow 2\text{H}_2 + \text{O}_2$), photolytic (light, e.g. $2\text{AgCl} \rightarrow 2\text{Ag} + \text{Cl}_2$)

Displacement reaction: a more reactive element displaces a less reactive one from its compound, e.g. $\text{Fe} + \text{CuSO}_4 \rightarrow \text{FeSO}_4 + \text{Cu}$

Double displacement reaction: two compounds exchange ions, often forming an insoluble precipitate, e.g. $\text{Na}_2\text{SO}_4 + \text{BaCl}_2 \rightarrow \text{BaSO}_4\downarrow + 2\text{NaCl}$

Oxidation: gain of oxygen or loss of hydrogen by a substance; **Reduction:** loss of oxygen or gain of hydrogen; a redox reaction involves both happening together

Exothermic reaction: releases heat to the surroundings (e.g. respiration, burning fuels); **Endothermic reaction:** absorbs heat from the surroundings (e.g. decomposition of calcium carbonate on strong heating)

Corrosion: a metal is gradually eaten away by reaction with substances in its environment (moisture, acids, gases) — e.g. rusting of iron (formation of hydrated iron(III) oxide); prevented by painting, oiling, galvanising, or alloying

Rancidity: oxidation of fats and oils in food over time, producing an unpleasant smell and taste; slowed by adding antioxidants, storing in airtight containers, or refrigeration

Key test: a burning splinter gives a pop sound in the presence of hydrogen gas; a glowing splinter re-lights in the presence of oxygen gas; carbon dioxide turns lime water milky

See also: [Extra Questions \(HOTS\)](#) / [Solutions](#)

How to Use These Notes

These revision notes are meant for quick recall in the last few days before an exam or unit test — they are not a substitute for first reading the full chapter and working through examples in the NCERT textbook. A good routine is: read the chapter once, solve the in-text and end-of-chapter questions using the linked Solutions, then come back to this page a day or two before the exam to refresh the key definitions and formulas without re-reading the whole chapter.

Class 10 Science Chapter 1 – Solutions and Important Questions

Need full answers or more practice? See the [Class 10 Science Chapter 1 Solutions](#) and [Class 10 Science Chapter 1 Extra Questions](#).