

PRACTICE WORKBOOK

CLASS 10

Science

Original explanations and focused tasks across six selected science topics. This supplementary resource develops reasoning and calculations without claiming complete syllabus or examination coverage.



6 practice units
36 tasks with answer guidance

Name / नाम: _____

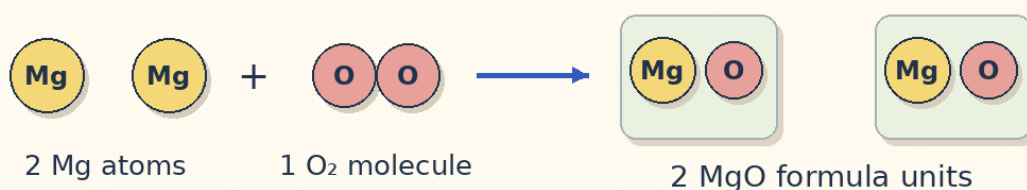
Original selected-topic practice. Use alongside school lessons and the prescribed textbook. The contents define this book's scope.

UNIT 01 · LOOK & EXPLAIN

Reaction detective: count, balance, explain

Every atom is accounted for

A countable model of the balanced reaction



MgO models show ionic formula units, not isolated molecules.

Use the labels and worked example to explain the idea. The diagram is schematic unless a scale is given.

Look, annotate and explain

Identify the parts or values that matter. Add a label or annotation to show a connection. Explain how the diagram supports the worked example, then use it with the practice on the next page.

UNIT 01 · APPLY & EXPLAIN

Reaction detective: count, balance, explain

4. Iron is placed in copper sulphate solution. Write the reaction and expected colour change. [3 marks]

5. In $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$, identify oxidation and reduction. [3 marks]

6. Predict the visible result of mixing aqueous sodium sulphate and barium chloride; give the equation. [3 marks]

Show your thinking with a drawing, diagram or explanation.

Pause & reflect

What can I explain now? What will I try again?

☐ I tried ☐ I explained ☐ I checked



UNIT 01 · ANSWER GUIDANCE

Reaction detective: count, balance, explain

1. $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$. Both sides have two magnesium and two oxygen atoms.
2. Combination: two reactants give one product. The reaction also releases heat, so it is exothermic.
3. It changes water into a different substance. Balancing preserves chemical identities and changes only coefficients.
4. $\text{Fe} + \text{CuSO}_4 \rightarrow \text{FeSO}_4 + \text{Cu}$. Blue solution becomes pale green as iron(II) sulphate forms; copper deposits on the iron.
5. CuO is reduced by oxygen loss; H_2 is oxidised by oxygen gain. Hydrogen is the reducing agent.
6. A white BaSO_4 precipitate forms: $\text{Na}_2\text{SO}_4(\text{aq}) + \text{BaCl}_2(\text{aq}) \rightarrow \text{BaSO}_4(\text{s}) + 2\text{NaCl}(\text{aq})$.

Teaching note

Count atoms of each element after every coefficient change.

Curriculum reference: https://cbseacademic.nic.in/web_material/CurriculumMain27/SecPart1/Science_SecP1_2026-27.pdf

Selected units; outcomes are publisher-defined. Practical, project and prescribed literature requirements must also be studied through school.