

Properties of Non-metals

Chapter 4: The World of Metals and Non-metals · Topic 2

Key Concept

Graphite, a form of carbon, is a notable exception — unlike most non-metals, it conducts electricity well and has a somewhat lustrous appearance, which is why it is used in pencil leads and as an electrode material in batteries. Non-metals play essential biological roles too: oxygen is needed for respiration, nitrogen makes up most of the air we breathe, and carbon forms the basis of all living organisms' molecules.

Quick Revision Notes

- Non-metals are generally non-lustrous, brittle, and poor conductors of heat/electricity.
- Common non-metals: sulphur, carbon, oxygen, nitrogen.
- Graphite (a form of carbon) is an exception — it conducts electricity and has some lustre.
- Non-metals play key biological roles: oxygen for respiration, nitrogen in air, carbon in living molecules.

Practice Questions

- 1 Name one non-metal that conducts electricity and explain why it is an exception.
- 2 List two ways non-metals are essential to living organisms.
- 3 Compare the general properties of metals and non-metals in a short table.