

Properties of Materials

Chapter 6: Materials Around Us · Topic 1

Key Concept

For example, diamond is one of the hardest natural materials, while cotton is soft; metals like gold and silver have high lustre, while wood does not. Salt and sugar dissolve easily in water (soluble), while sand does not (insoluble). A material's density determines whether it floats or sinks — wood generally floats because it is less dense than water, while iron sinks because it is denser. These properties are tested through simple experiments in the classroom, like the scratch test for hardness or dropping objects in water to test floating.

Quick Revision Notes

- Key material properties: hardness, lustre, solubility, and floating/sinking (buoyancy).
- Diamond is very hard; metals like gold have high lustre.
- Salt and sugar are soluble in water; sand is insoluble.
- Density determines floating/sinking — wood floats, iron sinks, since iron is denser than water.

Practice Questions

- 1 Test whether a stone and a piece of wood float or sink in water, and explain the result.
- 2 Compare the hardness of a diamond and a piece of chalk.
- 3 Name one material that is soluble and one that is insoluble in water.