

CLASS 8

SCIENCE

REVISION NOTES

Revision Notes: Class 8 Science Chapter 2 The Invisible Living World

Contents

Class 8 Science Chapter 2: The Invisible Living World — Quick Revision Notes

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Cell: the basic unit of life. Every cell has a **cell membrane** (controls entry/exit of substances), **cytoplasm** (site of most life processes), and a **nucleus** (controls cell activities and growth).

Extra structures: plant, fungal and bacterial cells also have a **cell wall**; bacteria lack a true nucleus and instead have a **nucleoid** (unbound genetic material).

Unicellular vs multicellular: bacteria and protozoa are unicellular; fungi and algae can be either; plants and animals are multicellular. Organisation: Cell → Tissue → Organ → Organ system → Organism.

Discovery history: Robert Hooke (1665) first observed and named ‘cells’ in cork using a compound microscope; Antonie van Leeuwenhoek (1670s) built stronger single-lens microscopes and first observed bacteria — called the ‘Father of Microbiology’.

Microorganisms (microbes): living things too small to see unaided — bacteria, protozoa, fungi, algae, and viruses (viruses are acellular, multiplying only inside a host cell).

Beneficial roles: **yeast** ferments dough (releases CO₂ + alcohol) for bread and cakes; **Lactobacillus** ferments milk into curd (produces lactic acid); **Rhizobium** in legume root nodules fixes atmospheric nitrogen, naturally fertilising soil; various microbes decompose waste into manure and recycle nutrients; some produce biogas from waste, or help clean oil spills.

Food preservation: pickles/murabbas use high salt or sugar concentration, which draws water out of microbial cells by osmosis, preventing spoilage.

Important note: this chapter covers only **beneficial** microorganisms; disease-causing microbes are covered in the next chapter.