

Plant Tissues

Chapter 6: Tissues · Topic 1

Key Concept

Xylem, a complex tissue, transports water and minerals from roots to leaves and also provides mechanical support to the plant, while phloem transports food (glucose) produced during photosynthesis to all parts of the plant. Parenchyma, the most common simple tissue, often stores food and water and can sometimes contain chlorophyll for photosynthesis (called chlorenchyma).

Understanding these tissue types explains how plants grow, transport nutrients, and maintain structural support without a skeleton.

Quick Revision Notes

- Meristematic tissue: actively dividing cells for growth, at root/shoot tips.
- Permanent tissue: cells with a specific function, no longer dividing.
- Simple tissues: parenchyma (storage), collenchyma (flexible support), sclerenchyma (rigid support).
- Complex tissues: xylem (water/mineral transport, support) and phloem (food transport).

Practice Questions

- 1 Name the tissue responsible for growth in plants.
- 2 Explain the difference between meristematic and permanent tissue.
- 3 Compare the functions of xylem and phloem.