

Transport in Plants

Chapter 10: Life Processes in Plants · Topic 1

Key Concept

Water moves up through xylem due to a combination of root pressure (pushing water up from below) and transpiration pull (water evaporating from leaf surfaces creates a pulling force that draws more water upward, similar to sucking through a straw). Unlike xylem, which generally moves substances in one direction (upward), phloem can transport food both upward and downward, depending on where the food is needed, such as growing shoots or storage roots.

Quick Revision Notes

- Xylem transports water and minerals upward from roots to leaves.
- Phloem transports food (glucose) from leaves to other parts of the plant.
- Water movement in xylem is driven by root pressure and transpiration pull.
- Phloem can move food both upward and downward, depending on need.

Practice Questions

- 1 Name the tissue that transports food in plants.
- 2 Explain the role of transpiration in helping water move up a plant.
- 3 Why can phloem transport food in both directions, unlike xylem?