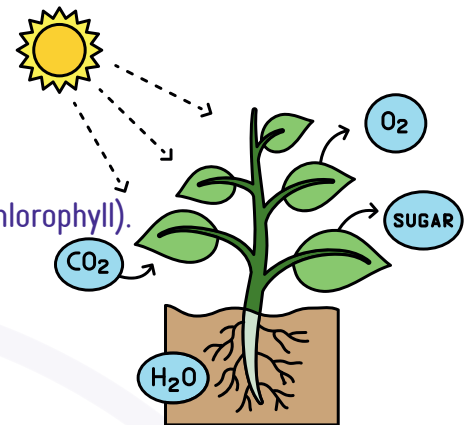


# PLANT STRUCTURE & PHOTOSYNTHESIS

## Key Concepts

- Plants have roots, stems, leaves, flowers, and seeds.
- Photosynthesis happens in the chloroplasts of leaf cells.
- The equation for photosynthesis
- carbon dioxide + water → glucose + oxygen (using sunlight and chlorophyll).



## Key Facts to Remember

- Roots anchor the plant in the soil, absorb water and minerals through tiny root hairs, and store nutrients for later use. Roots also interact with fungi in the soil to increase nutrient uptake.
- The stem provides structural support, transports water and minerals from roots to leaves via the xylem, and moves sugars made in photosynthesis through the phloem to other parts of the plant.
- Leaves are the main site of photosynthesis. They are broad and flat to capture sunlight and have stomata to allow gas exchange.
- Photosynthesis occurs in chloroplasts within leaf cells and requires sunlight, water, and carbon dioxide to produce glucose (a sugar) and oxygen. This process is vital for providing energy to the plant and oxygen for other organisms.
- Flowers are reproductive structures that produce seeds, and their colors and scents attract pollinators.
- Seeds are produced after fertilization and can grow into new plants under suitable conditions.

## Quick Questions

1. Where does photosynthesis take place?
2. What gas do plants take in for photosynthesis?
3. Name one function of roots.
4. What part of the plant transports water and minerals to the leaves?
5. Why do leaves have a large surface area?
6. What is the role of chlorophyll in photosynthesis?
7. Which part of the plant anchors it to the ground?
8. How do flowers help in plant reproduction?

## Fun Fact

**Some plants can survive without soil, like those in rainforests that grow on tree branches!**