

Class XI
Chapter 13
Photosynthesis - Case Study

The green plants make or rather synthesise the food they need through photosynthesis and are therefore called autotrophs. You have already learnt that the autotrophic nutrition is found only in plants and all other organisms that depend on the green plants for food are heterotrophs. Green plants carry out 'photosynthesis', a physico-chemical process by which they use light energy to drive the synthesis of organic compounds. Ultimately, all living forms on earth depend on sunlight for energy. The use of energy from sunlight by plants doing photosynthesis is the basis of life on earth. Photosynthesis is important due to two reasons: it is the primary source of all food on earth.

1. Chlorophyll 'a' is the primary pigment for a light reaction. What are accessory pigments? What is their role in photosynthesis?
2. Which products formed during the light reaction of photosynthesis are used to drive the dark reaction?
3. Why does the rate of photosynthesis decrease at higher temperatures?
4. Why do we believe chloroplast and mitochondria to be semi-autonomous organelle?