

Chapter 4

Photosynthesis

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- ❖ nutrition in plants
- ❖ process of photosynthesis and its significance
- ❖ factors affecting photosynthesis
- ❖ experiments to demonstrate process of photosynthesis

Teaching Aids

Pictures/charts/models/animation on the process of photosynthesis in the leaf of green plant, adaptations in leaf for photosynthesis, opening and closing of stomata, factors affecting photosynthesis; experiments showing various conditions necessary for photosynthesis.

Teaching Strategy

- ❖ Teacher will start the chapter by discussing the need of energy by living beings and the source from where they get energy.
- ❖ Teacher will discuss type of nutrition in plants introducing the term photosynthesis.
- ❖ Teacher will explain the basic process of photosynthesis.
- ❖ Teacher will discuss the role of leaf and stomata in photosynthesis and will help students to carry out Activity 1.
- ❖ Teacher will demonstrate Activity 2.
- ❖ Now, teacher will discuss the factors affecting photosynthesis and significance of photosynthesis.
- ❖ Teacher will discuss the conditions necessary for photosynthesis and verify them by demonstrating Activities 4, 5 and 6.
- ❖ Now, teacher will ask students to solve 'Check Point'.
- ❖ At last, teacher will sum up the lesson by going through the points given under the head 'Wrapping It Up'.

- ❖ Teacher will finally help students to answer the questions given under the head 'Test Yourself'.

Boost Up

- ❖ Teacher can make students revise new terms given under the head 'Know These Terms'.
- ❖ Teacher can encourage students to learn the facts given under the head 'Something More'.
- ❖ Teacher can show animations related to the topics taught, if possible.

Expected Learning Outcomes

The students understand and know:

- ❖ need of energy and its source is food
- ❖ autotrophic nutrition in plants
- ❖ process of photosynthesis and its significance
- ❖ factors affecting photosynthesis
- ❖ conditions necessary for photosynthesis

Evaluative Questions

The teacher should ask the following questions to evaluate the students:

1. Why is food required by living beings?
2. Why are plants called autotrophs?
3. What is photosynthesis?
4. Which gas is necessary for photosynthesis?
5. Which gas is evolved during photosynthesis?
6. What is the role of chlorophyll in photosynthesis?