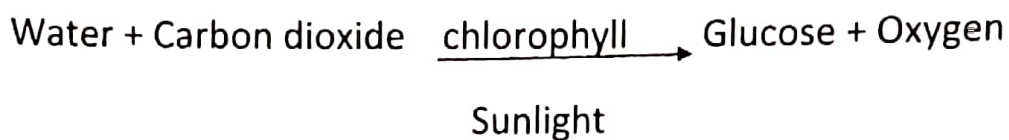


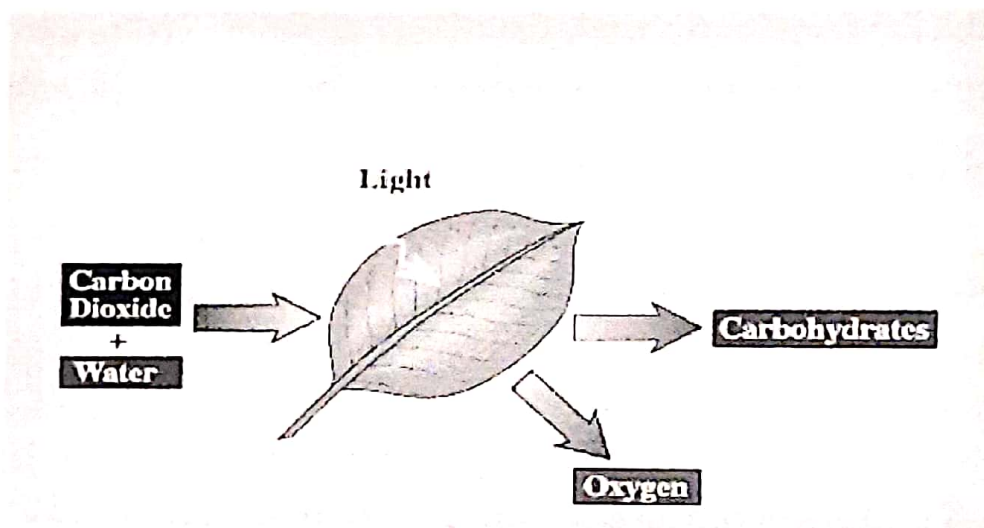
Lesson 1 Making Food from Sunlight

Q1. What is photosynthesis, how does it take place?

Ans. The process of making food for the plants by using water, carbon dioxide, light and chlorophyll. The first product of photosynthesis is glucose and waste material is oxygen.



Q2. Draw a leaf and show the process of photosynthesis.



Q3. Write the functions of the plant roots.

Ans. Following are the functions of roots

1. Roots absorb water, minerals, salts and organic substances from the soil.
2. It fixes the plants to the soil.
3. Some roots store food for the plants.
4. Some roots may carry out photosynthesis and help in respiration also.

Q4. Where is chlorophyll found in the leaf?

Ans. Chlorophyll is found in the chloroplast of the palisade cells in the leaf.

Q5. What is the role of light energy in the process of photosynthesis?

Ans. Light shines onto the large upper surface of each leaf and travels through the transparent upper layers until it is trapped by the chlorophyll in the chloroplasts of the palisade cells. The chloroplast uses the light energy from the sun to split water molecules into oxygen and hydrogen. The chloroplast then combines the hydrogen with carbon dioxide to form sugars.

Q6. How do glucose be used by the plants after photosynthesis?

Ans. Glucose is used by plants as a supply of energy. The glucose is converted into sucrose to be carried away from the leaf. It can be stored in the form of starch for later use or it may be converted into other chemicals like cellulose for cell walls.

Some of the glucose is combined with minerals to make protein needed for growth. Even the chlorophyll is made from glucose and minerals. Fats and oils found in seeds are also made from glucose.

Q7. Write about the factors which affect the rate of photosynthesis.

Ans. Following are the factors which affect the rate of photosynthesis

1. Sunlight: in dark, a plant can't photosynthesize at all. In dim light it can do photosynthesis slowly. As the light intensity increases, the rate of photosynthesis also increases.
2. Carbon dioxide concentration: the more Carbon dioxide a plant is given, the faster it can be photosynthesized up to a certain limit.
3. Temperature: a plant can do photosynthesis faster on a warm day than on a cold one.

Q8. Fill in the blanks:

1. The chloroplasts uses the light energy from sun to split water molecule into oxygen and hydrogen.
2. Blue green bacteria first used chlorophyll and released oxygen from water.
3. Stomata are found on the lower part of the leaf.
4. Xylem cells carry water into the leaf .
5. Phloem carries sugar away from the leaf to the rest of the plant.

Q9. Draw and label the internal structure of leaf.

