

St. Andrews Scots Sr. Sec. School

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Session: 2024-25

Class: IV Subject: Science Topic: Green Plants- The Producers Lesson No: 7

- Reading of the chapter
- Explanation (will be done in class)

(Textbook exercise)

- A. Tick (✓) the right answer.
 1. (b) veins
 2. (a) Leaf
 3. (b) chlorophyll
 4. (c) oxygen
- B. Fill in the blanks.
 1. midrib
 2. stomata
 3. chlorophyll
 4. food , oxygen
- C. Write whether the following statements are (T) for True or (F) for false.
 1. True
 2. True
 3. False

4. True

• **D. Match the following.**

1. - (d)
2. - (c)
3. - (e)
4. - (a)
5. - (b)

• **E. Complete the following crossword puzzle using the clues.**

Across

2. Stalk of a leaf
3. Extra food material stored in plant
5. The process of loss of extra water through aerial parts of the plant

Down

1. Pores which help in gaseous exchange
4. Flat broad surface of the leaf
6. The gas given out during photosynthesis

(Notebook Work)

• New Words

1. Chlorophyll
2. Lamina
3. Petiole
4. Stomata
5. Transpiration
6. Photosynthesis
7. Oxygen
8. Carbon dioxide
9. Interdependence
10. Pigment

• Defines

1. **Starch** - A form of sugar.
2. **Chlorophyll**- Green pigment present in leaves.
3. **Stomata**- The minute pores or openings in the leaf.
4. **Transpiration** - Loss of extra water in the form of water vapour through leaves and other aerial parts, producing a cooling effect in the plant.
5. **Pigment** - A substance occurring in plant or animal tissue and producing a characteristic colour.

• Fill in the blanks.

1. The line in the middle of the leaf is called midrib.
2. Exchange of gases in a leaf takes place through stomata.

3. **Chlorophyll** helps to absorb sunlight.
4. Plants provide **food** and **oxygen** to animals.

- **Short Question Answers**

Q.1 Why are leaves green in colour?

Ans. Due to presence of green pigment called chlorophyll.

Q.2 Name the chemical substance used to test the presence of starch.

Ans. Iodine.

Q.3 What happens to the food prepared by leaves?

Ans. Food is supplied to stem and all parts of plant. Extra food get stored in the form of starch.

Q.4 Define a food chain.

Ans. The food chain is defined as the flow of energy in the form of food from one living organism to another.

Q.5 List the raw materials needed for the process of photosynthesis.

Ans. Sunlight, carbon dioxide and water.

- **Long Question Answers**

Q.1 Write the functions of a leaf.

Ans. The functions of leaves are:-

- (i) They make food for the plants and are known as the kitchen or food factories of a plant.
- (ii) They help in gaseous exchange through stomata.
- (iii) Some leaves store prepared food.
- (iv) They help in the loss of extra water. This process is known as Transpiration.

Q.2 Define photosynthesis. How is food prepared by plants?

Ans. Green leaves make food with the help of sunlight, water and carbon dioxide in the presence of green pigment chlorophyll. This process is called photosynthesis.

The process of photosynthesis takes place in following steps:-

- (i) Plants absorb water and mineral from soil and carbon dioxide from air.
- (ii) Green leaves trap sunlight with the help of chlorophyll.
- (iii) Sun's energy helps in production of food in the form of sugar and oxygen is given out.

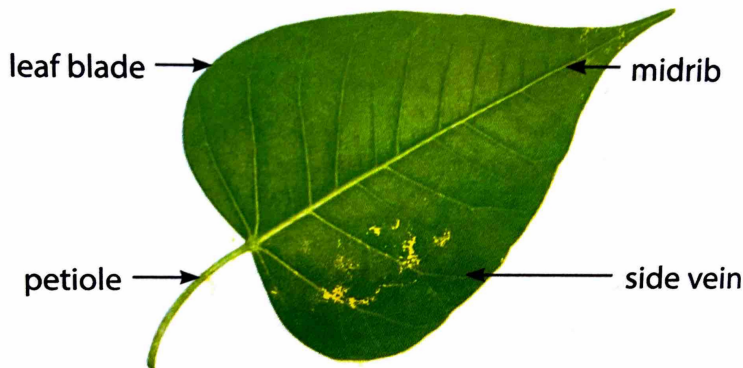
Q.3 Do plants and animals depend on each other? Explain how.

Ans. Animals need food and oxygen. They eat plants as their food and use oxygen given out by plants by the process of photosynthesis.

Plants need carbon dioxide to prepare their food. Animals breathe out carbon dioxide which is used by plants. Animals also help in spreading the seeds of plants.

Q.4 Explain the structure of a leaf with the help of a well-labelled diagram.

Ans. Leaf has flat broad surface called Leaf blade. There is a mid vein in the centre of leaf and side veins arise from mid veins. Small pores present on surface of leaf are called stomata. Petiole is the point at which leaf is attached to stem.



Parts of a leaf

Give Reasons

Q.1 During which time of the day does photosynthesis not occur? Why?

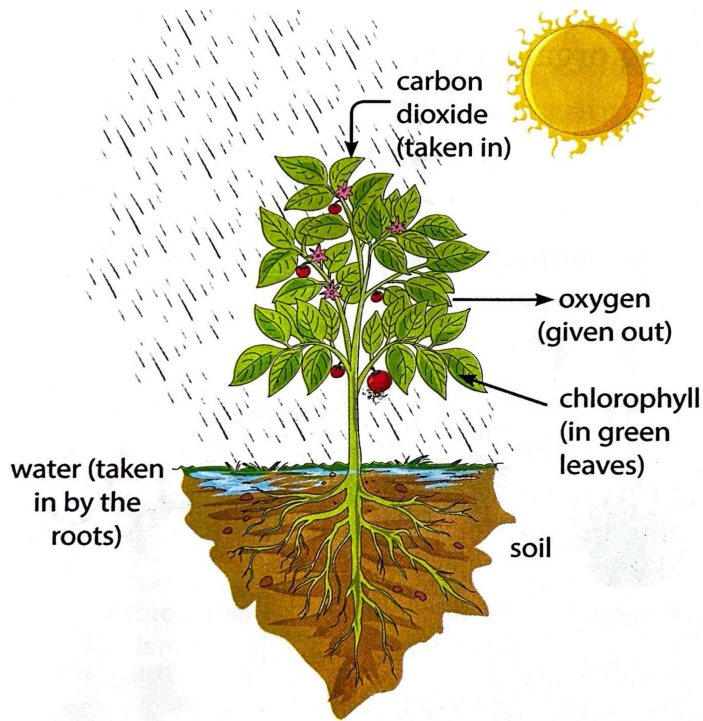
Ans. During night time photosynthesis not occur, as there is no sunlight.

Q.2 What would happen in the food chain if there were no carnivores?

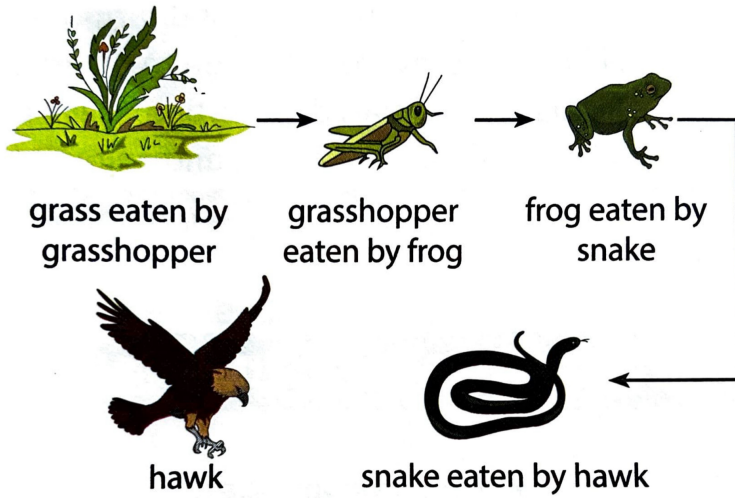
Ans. Herbivores get increased in very large number and compete for food and water.

Diagrams

Draw the following diagrams:



Photosynthesis



Food chain

• **Dictation**

Any 10 words

• **Activity**

Collect any 5 leaves and trace their veins in your notebook. Find whether veins in all the five leaves are of same type.