

ST. MICHAEL'S SCHOOL, MURI

Study Material for Class - VII

Sub : Science

Nutrition in Plants

Terms to Remember:-

Autotrophs : Organisms that can make their own food from simple raw materials.

Producers : Autotrophs are the producer of food,so they are called producers.

Heterotrophs : Organisms that cannot make their own food and depends on autotrophs directly or indirectly.

Host : Organisms from which a parasite obtains nutrition.

Nutrients : Components of food essential for the growth of body.

Nutrition : Process of taking in food and it's utilization by the body.

Parasites : Organisms that live in or on the body of other organisms and derive their food from them.

Saprotrophs : Organisms that derive their food from dead and decaying matter.

Insectivorous : Green plants which make their own food but depends on insects for nitrogenous food.

Photosynthesis : The process by which green plants make their food from carbon dioxide and water in the presence of chlorophyll and sunlight.

Carbon dioxide + Water → Carbohydrates + Oxygen

Factors affecting Photosynthesis

The external factors that affect photosynthesis are intensity of light, concentration of Carbon dioxide in the air, temperature and water. Internal factors include chlorophyll content and the accumulation of the photosynthesis products. Sunlight is necessary for photosynthesis. Green plants during photosynthesis takes in carbon dioxide through stomata in their leaves. Stomata are the tiny pores present on the surface of leaves. These are surrounded by bean - shaped guard cells. Exchange of gases takes place through stomata.

Replenishment of nutrients in soil

Farmers continue cultivating their crops years after years. Because of this continuous farming nutrients keep declining in the soil. Hence to replenish those nutrients fertilizers are added to the soil.

Symbiosis : Mode of nutrition in which two different organisms depend on each other for their nutritional needs and survival.

Symbiotic : The mode of nutrition in such organisms is called symbiotic.

- * Food is the source of energy for all organisms.
- * Plants take up water from the soil through their root system.
- * Non green plants undergo heterotrophic mode of nutrition.
- * Plants which derive their food from the dead and decaying organic matter are called saprophytes.

Home Assignment:

Write the answers of the following:

- 1) Define the following terms:
a) saprophytes b) parasites c) insectivorous
- 2) Write chemical reaction that takes place during photosynthesis?
- 3) What do you understand by host?
- 4) Why do farmers use fertilisers?
- 5) Describe symbiosis. How do nutrients get replenished in the soil.
- 6) Explain the food factory of plants.
- 7) Differentiate between nutrients and nutrition.
- 8) How water and minerals are transported to leaves from roots?

Fill in the blanks :

1. Green plants are called since they synthesise their own food.
2. The food synthesised by the plants is stored as
3. During photosynthesis plants take in and release

Match the items given in Column I with those in Column II

Column I	Column II
a) Chlorophyll	i) Bacteria
b) Nitrogen	ii) Heterotrophs
c) Cuscuta	iii) Pitcher plant
d) Animals	iv) Leaf
e) Insects	v) Parasite

Mark T or F of the following:

- 1) Carbon dioxide is released during photosynthesis.
- 2) Plants which synthesise their food are called saprotrophs.
- 3) The product of photosynthesis is not a protein.
- 4) Solar energy is converted into chemical energy during photosynthesis.
