

Photosynthesis - Food Making Process in Plants

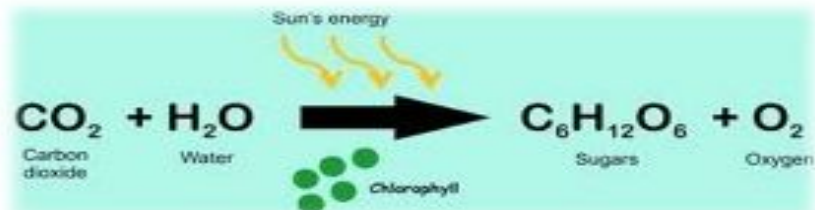
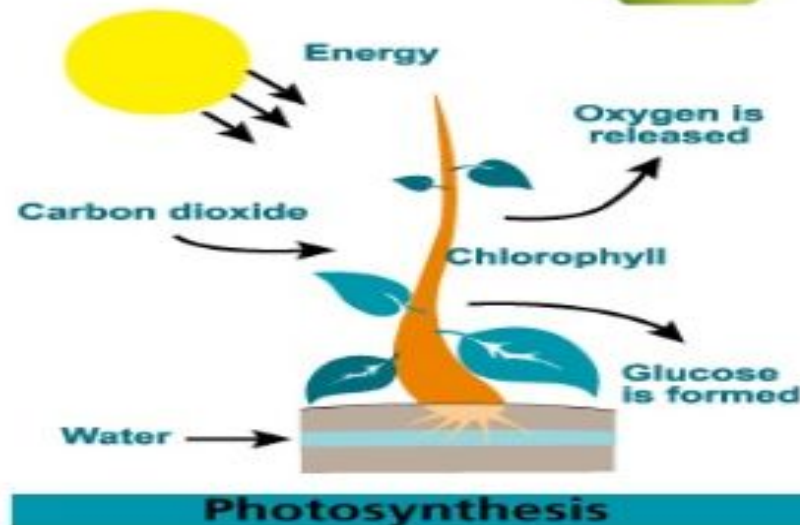


The process of making of food by green plants in the presence of sunlight and chlorophyll is known as photosynthesis.

Photosynthesis is the combination of two words- Photo + Synthesis. 'Photo' means light and 'Synthesis' means to make.

Process of food making in green plants:
Green plants make their food themselves. Green leaves make food from Carbon dioxide and water in the presence of sunlight and chlorophyll.

Hence, for taking place of photosynthesis carbon dioxide, water and sunlight must be reached at the green leaves in addition to presence of chlorophyll.



The process of photosynthesis can be represented as:



Equation-

Photosynthesis



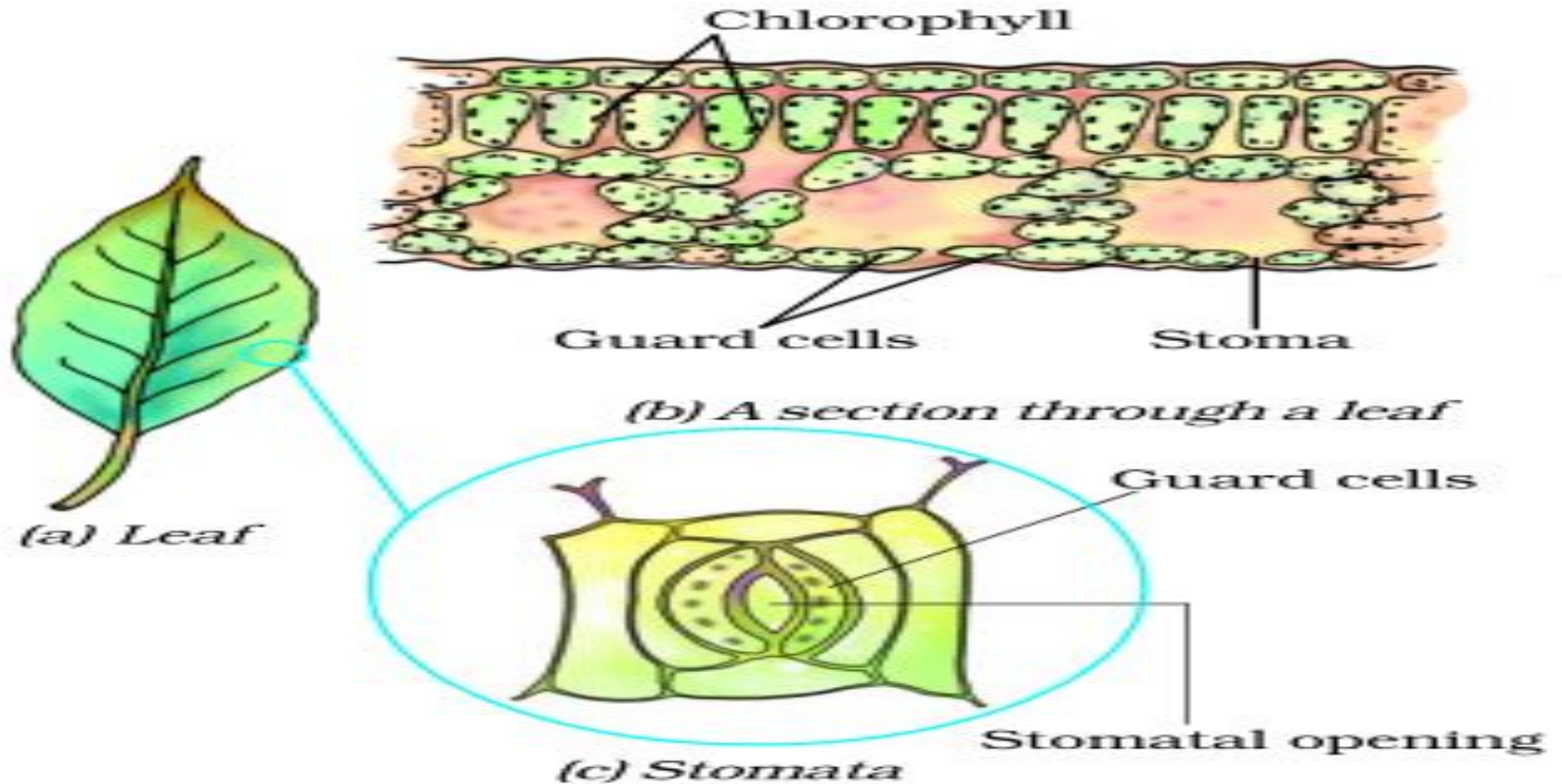
GLUCOSE



STARCH

(STORAGE)INSOLUBLE FORM

How do the plants obtain carbon dioxide?



- **There are a large number of tiny pores called stomata on the surface of the leaves of plants.**
- **The carbon dioxide gas enters the leaves of the plant through the stomata present on their surface.**
- **Each stomatal pore is surrounded by a pair of guard cells. The opening and closing of stomatal pores is controlled by the guard cells.**

How the plants obtain water for photosynthesis:

- **The water required by the plants for photosynthesis is absorbed by the root of the plants from the soil through the process of osmosis.**
- **The water absorbed by the roots of the plants is transported upward through the xylem vessels to the leaves where it reaches the cells.**

PLENARY

Application Based Questions -

Q. Why do **ONLY** green leaves photosynthesize?

ASSESSMENT & EVALUATION

Questions- 1 - What is photosynthesis?

Answer- The process of making food in green plants in the presence of sunlight is known as photosynthesis.

Questions- 2 - What are the essentials factors for the photosynthesis?

Answer - Carbon dioxide, water, chlorophyll and sunlight are essentials factors for the photosynthesis to take place.

Question – 3 - What is chlorophyll?

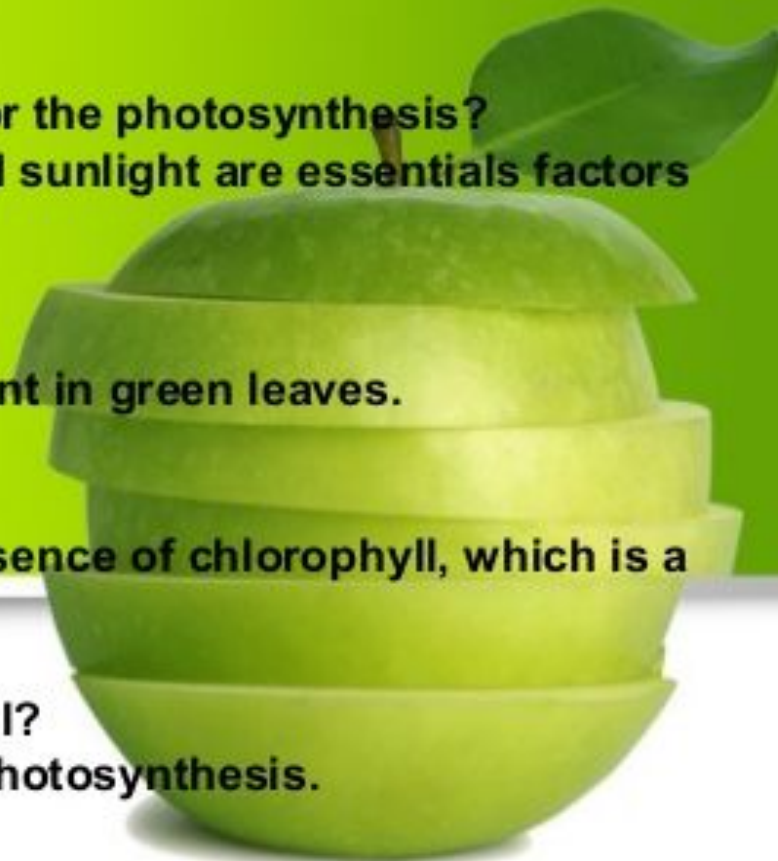
Answer- Chlorophyll is the green pigment present in green leaves.

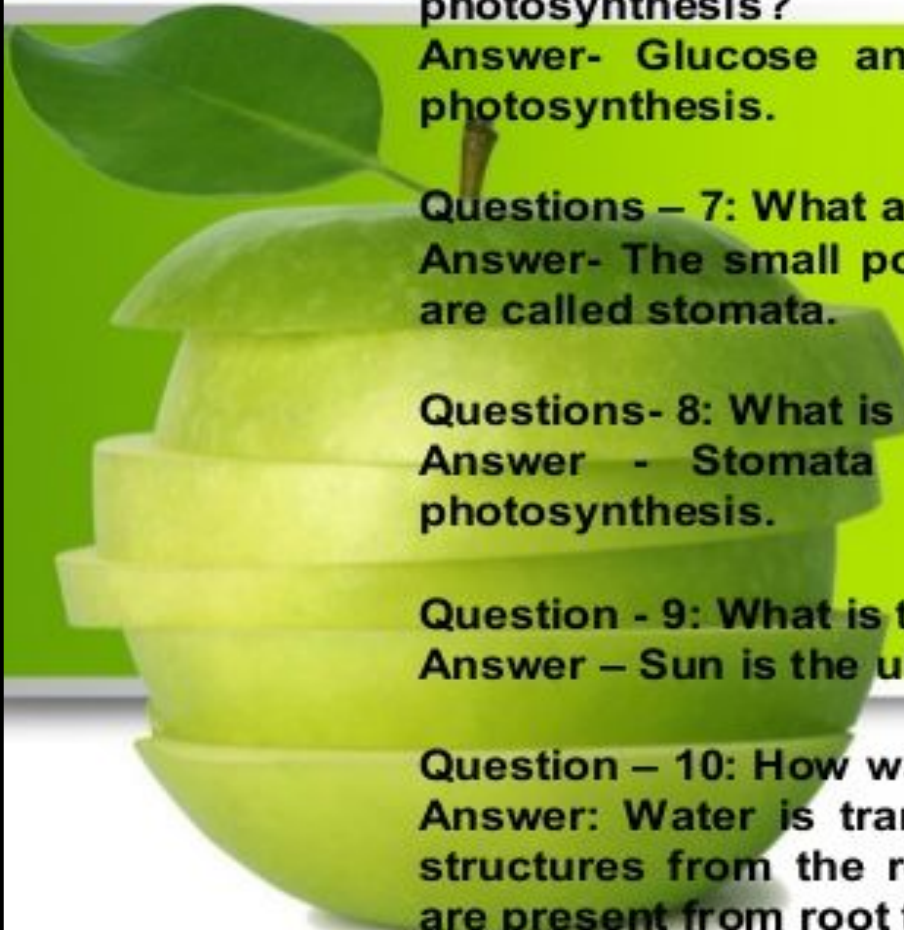
Question – 4 – Why do leaves look green?

Answer – Leaves look green because of the presence of chlorophyll, which is a green pigment.

Questions- 5: What is the function of chlorophyll?

Answer - Chlorophyll absorbs the sunlight for photosynthesis.





Question – 6: What are the final products made after photosynthesis?

Answer- Glucose and oxygen are the final products after photosynthesis.

Questions – 7: What are stomata?

Answer- The small pores present on the lower surface of leaf, are called stomata.

Questions- 8: What is function of stomata?

Answer - Stomata absorb carbon dioxide from air for photosynthesis.

Question - 9: What is the ultimate source of energy?

Answer – Sun is the ultimate source of energy.

Question – 10: How water is transported to the leaves?

Answer: Water is transported to the leaves through pipe like structures from the roots of plant. These pipe-like structures are present from root to leaves through branches throughout.