

What Is Photosynthesis?

Photosynthesis is the process by which plants produce their own food by using sunlight, water, and carbon dioxide.

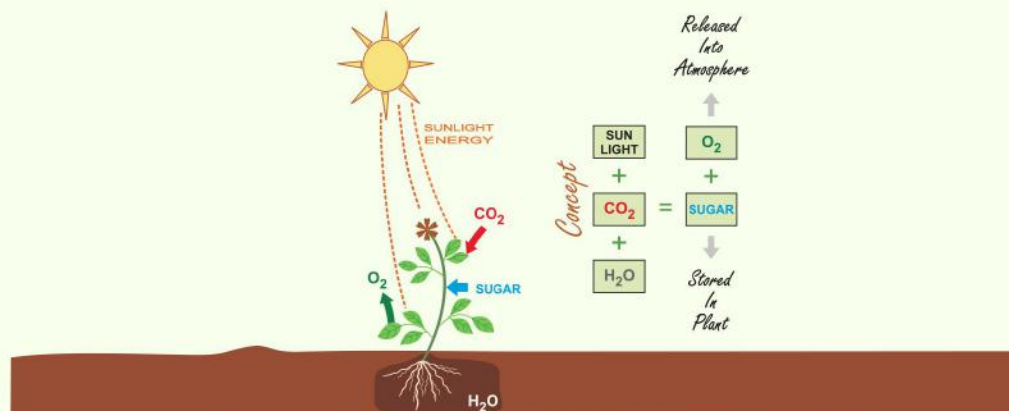
Plants use sunlight, water, and carbon dioxide to produce glucose and oxygen. Plants have a green substance called **chlorophyll**, which helps in absorbing sunlight. They absorb carbon dioxide through small pores, known as **stomata**, which are present in the leaves of the plants.

Water is transported from the roots of the plants to the stems and leaves by a transport system in plants known as **xylem**. The glucose produced by the leaves is transported to the rest of the plant via the **phloem**.

These stomata are surrounded by **guard cells**. The required amount of water is absorbed by the plant, and the excess is released into the air through the stomata via evaporation. This process is known as **transpiration**. The guard cells contract and relax the stomata, thereby helping the plant control the rate of transpiration.

The water (H₂O) absorbed by the plant splits into hydrogen and oxygen during the process of photosynthesis. The oxygen is released into the atmosphere. The hydrogen combines with carbon dioxide and helps in the formation of glucose.

The process can be explained with the help of a simple equation:



Based on your understanding of the process of photosynthesis, answer the following questions:

1. What is photosynthesis?

2. Which green substance in plants helps in photosynthesis?

3. Where are the stomata present?

4. What does xylem help in transporting?

5. What does phloem help in transporting?

6. What helps in controlling the amount of transpiration?



7. What happens to the absorbed water during the process of photosynthesis?

8. How is glucose formed?

9. Which is the most important byproduct of the process of photosynthesis?

10. Describe the process of photosynthesis using a simple equation.

