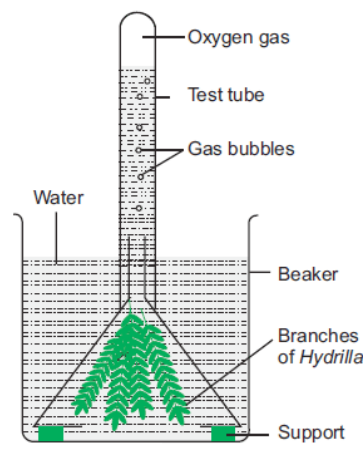


Chemistry**Class-VI****Chapter-6****Photosynthesis****Subject teacher- Syeeda Sultana****Lecture sheet with worksheet-2****Date-08.10.2020****Unit-1:EXPERIMENT TO SHOW THAT OXYGEN IS PRODUCED DURING PHOTOSYNTHESIS**

This experiment demonstrates that oxygen is evolved during photosynthesis.

**Procedure:** Steps need to do:

- Place hydrilla plant in a beaker filling with water
- Cover the plant with an inverted funnel so that the cut ends are in the tube of the funnel
- Invert the test tube full of water and cover the stem of the funnel.
- While placing the test tube, ensure that the level of the water in beaker is above the level of stem of funnel.
- Expose the apparatus to the sunlight.
- After few hours, gas bubbles will form and collect in the test tube.
- Test the gas in the test tube.
- A glowing splinter bursts into the flame shows the presence of oxygen.

Observation: Gas bubbles in a test tube.

Result: Presence of oxygen.

Conclusion: Formation of gas bubbles prove that oxygen is produced by the green plants during photosynthesis.

- Hydrilla is a small plant and hence easy to handle and also it is an aquatic plant so it is able to breathe in water whereas land plants are not.

Exercise-1:

1. Oxygen is produced by the green plants during photosynthesis. Prove it experimentally.
2. Why is hydrilla used in photosynthesis experiment?

Unit-2:Photosynthesis

Photosynthesis stops at night due to the lack of sunlight. A plant's photosynthesis requires sunlight and CO_2 which gets processed into energy for itself. At night it in fact does the opposite process and takes in O_2 and emits CO_2 because storing CO_2 at night harms the plant, so the plant releases it. At night plants cannot use CO_2 .

The equilibrium or balance of carbon dioxide and oxygen in environment are maintained through this gaseous exchange that happens during photosynthesis and respiration.

Photosynthesis, process by which green plants and certain other organisms use the energy of light to convert carbon dioxide and water into the simple sugar glucose. In so doing, photosynthesis provides the basic energy source for virtually all organisms. An extremely important by-product of photosynthesis is oxygen, on which most organisms depend.

Photosynthesis occurs in green plants, seaweeds, algae, and certain bacteria within specialized cell structures called chloroplasts. These organisms are veritable sugar factories. Plants use much of this glucose, a carbohydrate, as an energy source to build leaves, flowers, fruits, and seeds. They also convert glucose to cellulose, the structural material used in their cell walls. Most plants produce more glucose than they use, however, and they store it in the form of starch and other carbohydrates in roots, stems, and leaves.

Like plants, humans and other animals depend on glucose as an energy source, but they are unable to produce it on their own and must rely ultimately on the glucose produced by plants. Moreover, the oxygen humans and other animals breathe is the oxygen released during photosynthesis. Thus, virtually all life on earth, directly or indirectly, depends on photosynthesis as a source of food, energy, and oxygen, making it one of the most important biochemical processes known.

Exercise-2:

1. Why does photosynthesis stop at night?
2. How does photosynthesis impact plant and animal life?
3. How does photosynthesis impact our environment?