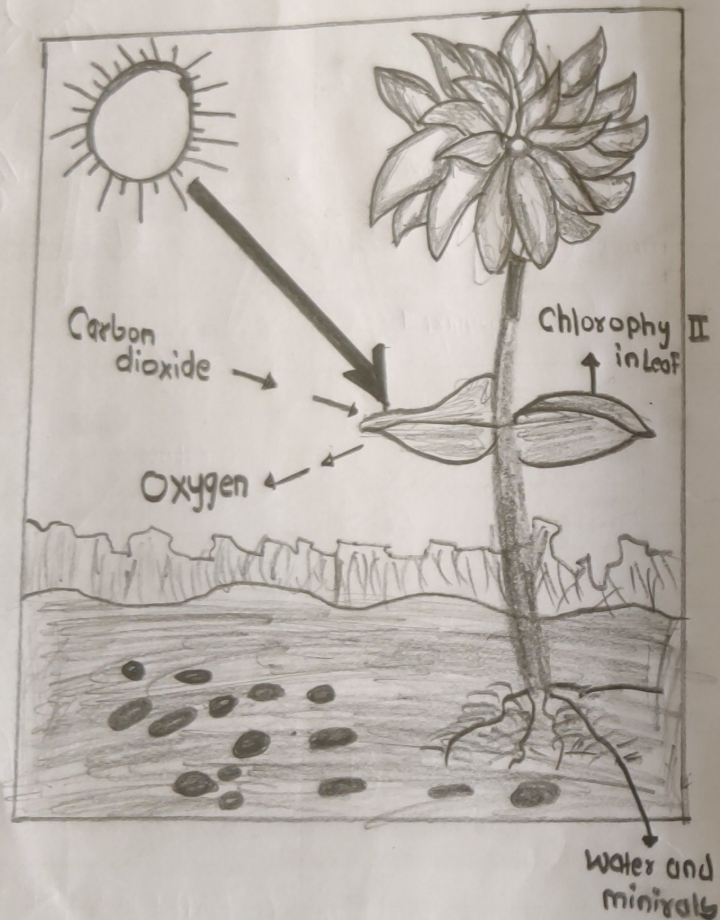




EXPT.
NO. 1

NAME :- Sunlight is necessary for photosynthesis

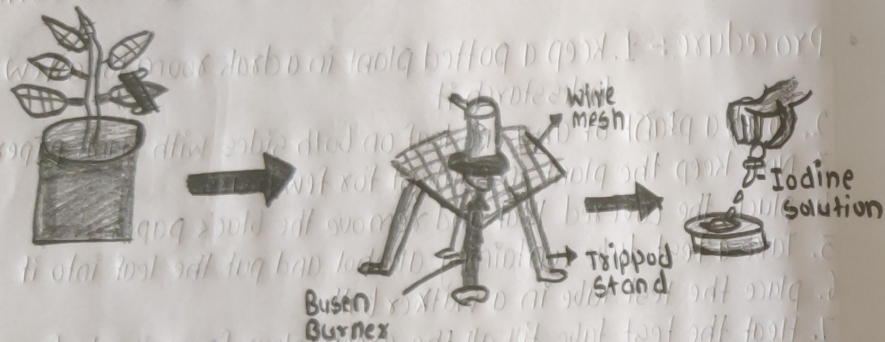
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Date: 11/06/24
YOUVA

- Aim : To show that sunlight is necessary for photosynthesis
- Material Required :- A potted plant, blank paper, alcohol, a test tube, a beaker, a petri dish, wire mesh, tripod stand and Bunsen burner
- Procedure :-
 1. keep a potted plant in a dark room for a few days to destarch it
 2. cover a part of any one leaf on both sides with blank paper
 3. Now keep the plant in sunlight for few hours
 4. pluck the covered leaf and remove the black paper
 5. Take a test tube containing alcohol and put the leaf into it
 6. place the test tube in a water bath
 7. Heat the test tube till all the green colour from the leaf comes out into the alcohol
 8. Take out the leaf and wash it gently using hot water
 9. keep the leaf in a petri dish and put few drops of iodine solution to it
- Observation :- Starch turns blue black in the presence of iodine solution.
 - The uncovered part of the leaf turns blue black whereas the covered part of the leaf turns brownish yellow. Since the uncovered part received sunlight, starch was produced in this part by photosynthesis
 - The covered part did not receive sunlight and hence photosynthesis did not take place in this part
 - Due to this starch was not produced and so it did not turn blue-black in the presence of iodine solution

Teacher's Signature: _____

Aim: To show that sunlight is necessary for photosynthesis

Materials Required: A potted plant, black paper, a test tube, a beaker, a wire mesh, a burner, a tripod stand, a Bunsen burner, iodine solution.



Procedure: 1. Keep a potted plant in a dark room for 48 hours to de-starch the plant. 2. Cover a part of the leaf with black paper. 3. Place the plant in a Bunsen burner flame for 10 minutes. 4. Take out the leaf and wash it with alcohol. 5. Dip the leaf in iodine solution.

Observation: The part of the leaf which was covered with black paper remained yellow, while the rest of the leaf turned blue-black.

Conclusion: The experiment proves that sunlight is necessary for photosynthesis.

Precautions: 1. The plant should be kept in a dark room for 48 hours before the experiment. 2. The leaf should be washed with alcohol before dipping it in iodine solution.

Ques: Why did the uncovered part of the leaf turn blue-black? Ans: Because it received sunlight and produced starch.

Ques: Why did the covered part of the leaf remain yellow? Ans: Because it did not receive sunlight and did not produce starch.

- This experiment proves that leaves produce food (starch) by photosynthesis only in the presence of sunlight

Caution: Never boil alcohol directly as it may catch fire

Procedure:

1. Take a potted plant and keep it in a dark room for 48 hours.
2. Cover a part of the leaf with black paper.
3. Now keep the plant in a Bunsen burner flame for 10 minutes.
4. Take out the leaf and wash it with alcohol.
5. Dip the leaf in iodine solution.
6. Observe the color change.
7. The uncovered part of the leaf turns blue-black.
8. The covered part remains yellow.
9. This proves that sunlight is necessary for photosynthesis.

Observation:

- The uncovered part of the leaf turned blue-black.
- The covered part remained yellow.
- This proves that sunlight is necessary for photosynthesis.
- The uncovered part did not receive sunlight and did not produce starch.
- Due to this, the uncovered part of the leaf turned blue-black.