

SCIENCE EXPERIMENT LAB SHEET

Name: _____

Date: _____

Parent/Teacher: _____



Observing the Effect of Light Intensity on Photosynthesis Rate

QUESTION: How does light intensity affect the rate of photosynthesis?

BACKGROUND INFORMATION

Plants use light energy to make food in a process called photosynthesis. Light intensity is one factor that can affect how fast photosynthesis happens. In this experiment, we will observe how different light intensities affect the rate of photosynthesis in an aquatic plant.

HYPOTHESIS

If light intensity increases, then the rate of photosynthesis will _____

because _____

MATERIALS

- Aquatic plant (e.g., Elodea)
- Clear beaker or tall jar
- Water
- Ruler or measuring tape
- Lamp (adjustable desk lamp works well)
- Timer or stopwatch
- Thermometer (optional)

PROCEDURE

1. Place the aquatic plant in the beaker and fill with water.
2. Position the lamp at a set distance from the plant.
3. Allow the plant a few minutes to adjust to the light.
4. Start the timer and count the number of oxygen bubbles released in 1 minute. Record your data.
5. Move the lamp to a different distance to change the light intensity.
6. Allow the plant to adjust, then repeat Step 4.
7. Test at least 4 different distances.
8. Keep all other variables the same (same plant, same water volume, same temperature as much as possible).

DATA TABLE

Test #	Distance from Lamp (cm)	Light Intensity (High/Medium/Low)	Number of Oxygen Bubbles in 1 Minute	Notes (e.g., temperature)
1				
2				
3				
4				

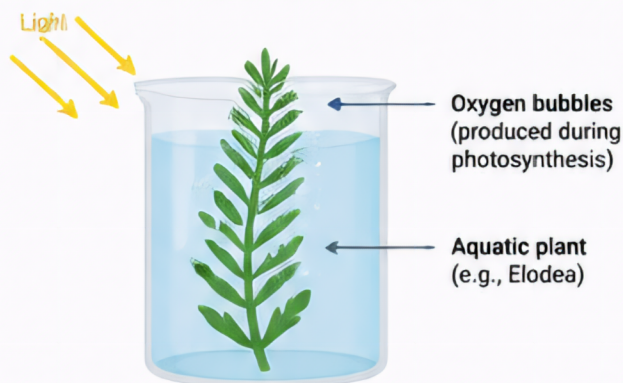
ANALYSIS

1. What pattern do you notice in your data?

2. How does light intensity affect the rate of photosynthesis?

3. Why do you think this happens?

PHOTOSYNTHESIS IN PLANTS



CONCLUSION

Write a conclusion that answers the question using evidence from your data.



TIP: Closer distance = higher light intensity. Farther distance = lower light intensity.

