Biology Experimental Protocol

Name: Date:

Research Question: How does light intensity affect the rate of photosynthesis in aquatic plants?
Materials: Aquatic plant (e.g., Elodea), beaker, water, sodium bicarbonate, light source (lamp), ruler, stopwatch, measuring cylinder, scissors
Procedure:

1. Fill a beaker with water and add a small amount of sodium bicarbonate to provide a source of carbon dioxide.
2. Cut a piece of the aquatic plant (about 10 cm) and place it in the beaker with the cut end facing upwards.
3. Position the light source at a fixed distance (e.g., 10 cm) from the beaker.
4. Allow the plant to acclimate to the light for 5 minutes.
5. Start the stopwatch and count the number of oxygen bubbles produced by the plant in 1 minute.
6. Record the number of bubbles.
7. Repeat steps 3-6 at different distances (e.g., 20 cm, 30 cm, 40 cm) to vary the light intensity.
8. Compare the rate of photosynthesis (number of bubbles) at different light intensities.

Draw the experimental setup and label it.

Conduct the experiment and record your observations.

Biology Experimental Protocol

Name: Date:

Draw the experimental result.

Conclusion: Explain the experimental result.