



# Practice Worksheet on Photosynthesis

Generated for Yash Bhatnagar - Based on resource uploaded by user.

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Subject: Biology

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## Long Answer Questions

1. Explain the process of photosynthesis in plants.
2. Why is photosynthesis important for life on Earth?
3. What is the primary function of photosynthesis?
4. Describe the role of photosynthesis in the carbon cycle.
5. What is the role of chlorophyll in photosynthesis?
6. What environmental factors influence the rate of photosynthesis?
7. How does cellular respiration relate to photosynthesis?

8. Discuss the importance of photosynthesis in maintaining ecosystem health.

## Multiple Choice Questions

1. Where does photosynthesis take place in plant cells?

- a) Chloroplasts
- b) Mitochondria
- c) Vacuoles
- d) Ribosomes

2. What is the primary product of photosynthesis that provides energy for the plant?

- a) Water
- b) Glucose
- c) Carbon dioxide
- d) Oxygen

3. Which wavelengths of light are most effectively absorbed by chlorophyll?

- a) Red
- b) Green
- c) Blue and red
- d) Yellow

4. What gas is released as a byproduct of photosynthesis?

- a) Oxygen
- b) Carbon dioxide
- c) Water
- d) Glucose

5. How would the rate of photosynthesis typically change with an increase in light

intensity?

- a) Decrease
- b) Increase
- c) Remain the same
- d) Fluctuate randomly

6. Generally, how does the rate of photosynthesis change with higher carbon dioxide concentrations?

- a) Lower
- b) Higher
- c) Similar
- d) Unpredictable

7. Which process uses light energy to synthesize organic molecules from inorganic ones?

- a) Cellular respiration
- b) Photosynthesis
- c) Transpiration
- d) Fermentation

8. What is the primary energy source for photosynthesis?

- a) Heat
- b) Wind
- c) Light
- d) Sound

# Answer Key

## Long Answer Questions - Expected Responses

1. Explain the process of photosynthesis in plants.

Expected Answer: The process involves converting light energy into chemical energy within chloroplasts, using chlorophyll to absorb light.

2. Why is photosynthesis important for life on Earth?

Expected Answer: Photosynthesis is essential because it produces oxygen, which is crucial for most life forms.

3. What is the primary function of photosynthesis?

Expected Answer: It converts solar energy into chemical energy, stored in glucose molecules.

4. Describe the role of photosynthesis in the carbon cycle.

Expected Answer: Plants absorb carbon dioxide during photosynthesis and release it during respiration, playing a key role in the carbon cycle.

5. What is the role of chlorophyll in photosynthesis?

Expected Answer: Chlorophyll, located in chloroplasts, absorbs light energy, which is then used to drive photosynthesis.

6. What environmental factors influence the rate of photosynthesis?

Expected Answer: Factors influencing photosynthesis include light intensity, carbon dioxide concentration, and temperature.

7. How does cellular respiration relate to photosynthesis?

Expected Answer: Cellular respiration is the opposite of photosynthesis; it releases energy stored in glucose through oxidation.

8. Discuss the importance of photosynthesis in maintaining ecosystem health.

Expected Answer: Photosynthesis is a critical process to support most food chains and ecosystem stability.

## Multiple Choice Questions - Correct Answers

1. Where does photosynthesis take place in plant cells?

Correct Answer: Chloroplasts

2. What is the primary product of photosynthesis that provides energy for the plant?

Correct Answer: Glucose

3. Which wavelengths of light are most effectively absorbed by chlorophyll?

Correct Answer: Blue and red

4. What gas is released as a byproduct of photosynthesis?

Correct Answer: Oxygen

5. How would the rate of photosynthesis typically change with an increase in light intensity?

Correct Answer: Increase

6. Generally, how does the rate of photosynthesis change with higher carbon dioxide concentrations?

Correct Answer: Higher

7. Which process uses light energy to synthesize organic molecules from inorganic ones?

Correct Answer: Photosynthesis

8. What is the primary energy source for photosynthesis?

Correct Answer: Light