

Photosynthesis Essentials Quiz

Biology · Answer Key · 14 Questions

1. What is the primary purpose of photosynthesis?

- A) To produce water
- B) To release carbon dioxide
- C) To create food (sugar) for plants**
- D) To absorb oxygen

2. Which organelle in plant cells is the primary site of photosynthesis?

- A) Mitochondria
- B) Nucleus
- C) Chloroplast**
- D) Vacuole

3. What three main ingredients do plants need for photosynthesis?

- A) Oxygen, sugar, and light
- B) Carbon dioxide, water, and light**
- C) Nitrogen, soil, and water
- D) Glucose, oxygen, and carbon dioxide

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

- A) Carbon dioxide
- B) Nitrogen
- C) Oxygen**
- D) Methane

5. What type of energy is converted into chemical energy during photosynthesis?

- A) Heat energy
- B) Sound energy
- C) Light energy**
- D) Mechanical energy

6. What is the main pigment responsible for capturing light energy in plants?

- A) Carotene
- B) Anthocyanin
- C) Chlorophyll**
- D) Xanthophyll

7. The sugar produced during photosynthesis is primarily used by the plant for what?

- A) To release into the soil
- B) To attract pollinators
- C) As food and energy**
- D) To store water

8. In which part of a plant does most photosynthesis occur?

- A) Roots
- B) Stems
- C) Flowers
- D) Leaves**

9. Photosynthesis can be divided into two main stages: light-dependent reactions and what other reactions?

- A) Dark reactions (Calvin cycle)**
- B) Water-dependent reactions
- C) Oxygen-dependent reactions
- D) Sugar-making reactions

10. Why is photosynthesis crucial for animal life on Earth?

- A) It provides shelter
- B) It produces carbon dioxide
- C) It creates water
- D) It produces oxygen and food (indirectly)**

11. What is the chemical formula for glucose, the sugar produced during photosynthesis?

- A) H₂O
- B) CO₂
- C) O₂
- D) C₆H₁₂O₆**

12. What role does water play in photosynthesis?

- A) It absorbs light energy
- B) It reacts with carbon dioxide
- C) It provides electrons and hydrogen ions**
- D) It helps transport sugar

13. Which of these organisms performs photosynthesis?

- A) Fungi
- B) Animals
- C) Bacteria (some types)**
- D) Viruses

14. What is the term for the tiny pores on the underside of leaves through which gases like CO₂ enter?

- A) Xylem
- B) Phloem
- C) Stomata**
- D) Chloroplasts