

Respiration and Photosynthesis

Answer Key

[New Exam]

1. 2

2. 4

3. 2

4. 4

5. 3

6. 1

7. 3

8. 3

9. 3

10. 2

11. 2

12. 2

13. 2

14. 4

15. 1

16. 3

17. 4

18. 2

19. 1

20. 1

21. 3

22. 4

23. 3

24. 3

25. 4

26. 2

27. 4

28. 2

29. 1

30. 4

31. 3

32. 1

33. 3

34. 1

35. 3

36. 2

37. 1

38. 3

39. Examples:

- inorganic carbon compound that is obtained by plants from the environment - carbon dioxide (CO₂).
- process plants use to form more complex organic molecules from this carbon compound - photosynthesis.
- describing how herbivores use these complex organic molecules.
 - as a source of energy — as a source of nutrients — as a source of materials to synthesize other molecules
- identifying the process herbivores use to return carbon to the environment.
 - respiration — breathing — excretion

40. *Examples:* — photosynthesis — respiration — combustion

41. 1

42. oxygen *or* water vapor *or* carbon dioxide

43. Mitochondrion

44. Chloroplast

Respiration and Photosynthesis

Answer Key

[New Exam]

45. Photosynthesis:

- carbon dioxide + water \rightarrow glucose + oxygen
- $\text{CO}_2 + \text{H}_2\text{O} + \text{sunlight} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2$
- $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2$
- $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 + \text{H}_2\text{O}$
- Radiant energy is converted into chemical bond energy.

Cellular respiration:

- glucose + oxygen \rightarrow carbon dioxide + water + ATP
 - $\text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{energy}$
 - $\text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
 - Energy is released from food.
-