

10. List three environmental factors that affect the rate of photosynthesis.

11. Explain figure 6 on page 98.

12. Explain how photosynthetic organisms capture the energy in sunlight.

13. Compare the roles of water molecules and hydrogen ions in electron transport chains.

14. Make a table in which you identify the role of each of the following in photosynthesis: light, water, pigments, ATP, NADPH, and carbon dioxide.

15. What combination of environmental factors affects the rate of photosynthesis?

16. Describe how ATP is made in the second stage of cellular respiration.

17. Identify the role of fermentation in the second stage of cellular respiration.

18. Explain the importance of oxygen in aerobic respiration.

19. Explain the Krebs cycle.

20. Compare and contrast the fermentation methods of lactic acid and alcoholic fermentation.

21. List the products of glycolysis. What is the role of each of these products in cellular respiration?

22. Summarize the roles of the Krebs cycle and the electron transport chain during aerobic respiration.

23. Describe the role of fermentation in the second stage of cellular respiration.

24. Explain why cellular respiration is more efficient when oxygen is present in cells.

25. Excess glucose in your blood is stored in you're your liver as glycogen. How might your body sense when to convert glucose to glycogen and glycogen back to glucose?

26. The relationship between photosynthesis and cellular respiration is usually described as a cycle. Briefly explain.

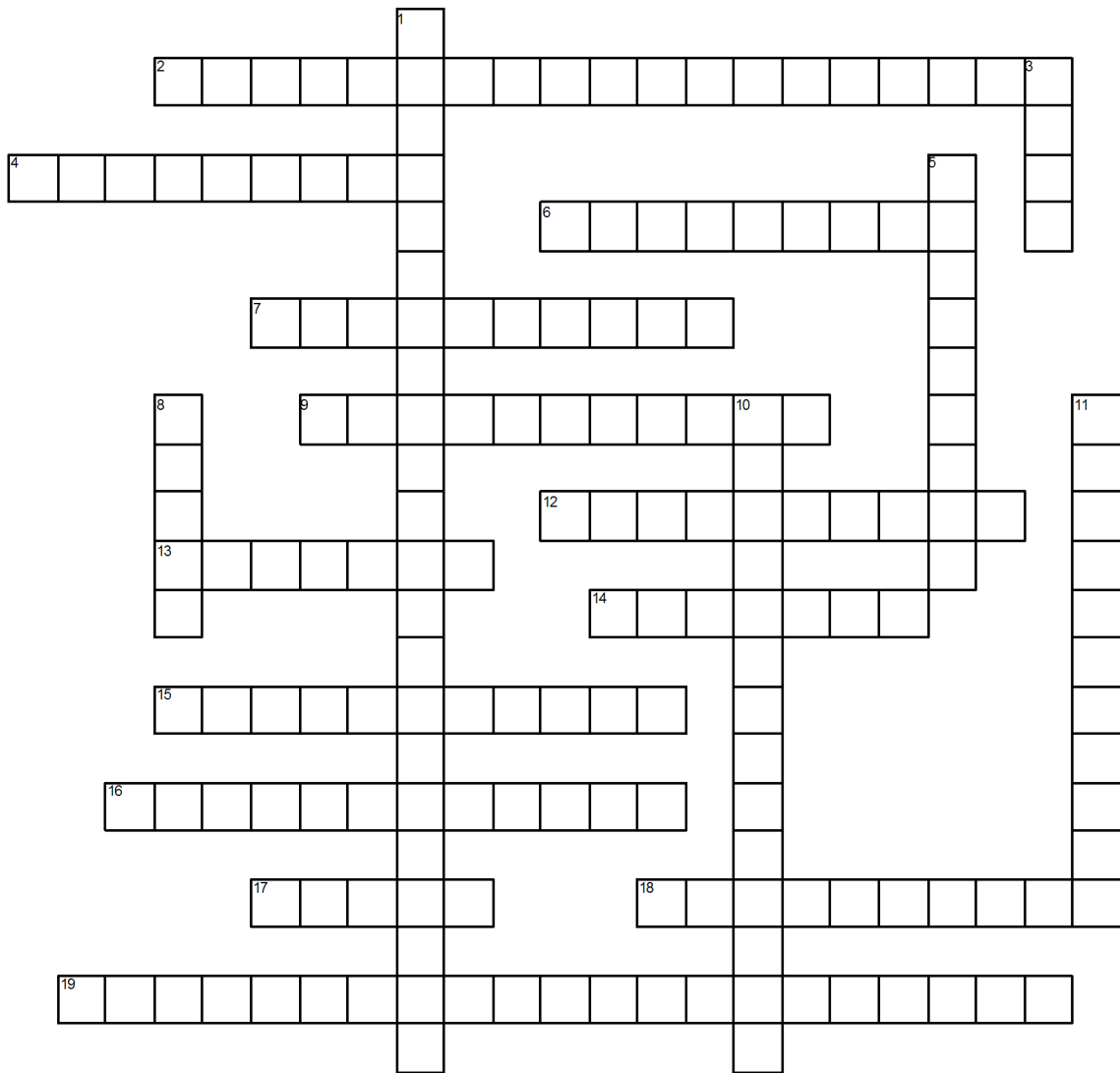
27. Distinguish between autotrophs and heterotrophs.

28. Why do the cells of plant roots generally lack chloroplasts?

29. Briefly explain how plants obtain energy from their environment and store it for later use.

30. Explain why the leaves of plants appear green to the human eye.

31. Crossword Puzzle of terms:



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-Clues are on next page -

ACROSS

- 2 this is a metabolic process that releases much of the energy in food to make ATP
- 4 this is a metabolic process that does not require oxygen
- 6 these are organisms that use energy from sunlight
- 7 the pigment that produces the yellow and orange fall leaf colors
- 9 these organisms get their energy from food by cellular respiration
- 12 this is an enzyme assisted anaerobic process that breaks down glucose to pyruvate
- 13 these are light absorbing substances
- 14 this is a metabolic process that requires oxygen
- 15 it is the primary pigment involved with photosynthesis
- 16 this process involves the recycling of NAD⁺ using an organic hydrogen acceptor
- 17 this is a type of electron carrier associated with the Krebs cycle
- 18 this process produces electron carriers that temporarily store chemical energy
- 19 this is the transfer of carbon dioxide to organic compounds

DOWN

- 1 this is the series of molecules through which excited electrons are passed
- 3 this is an electron carrier
- 5 this is a disk shaped structure found in leaf membranes that contains clusters of pigments
- 8 this is an electron carrier used to make carbon-hydrogen bonds
- 10 is the process by which light energy is converted to chemical energy
- 11 this is a series of enzyme-assisted chemical reactions that produces a three-carbon sugar