

Skills Worksheet

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Photosynthesis and Cellular Respiration

Work-Alikes

In the space provided, write the letter of the term or phrase that best describes how each numbered item functions.

- | | |
|-----------------------------------|--|
| _____ 1. glycolysis | a. an energy relay race |
| _____ 2. Calvin cycle | b. an electron trampoline |
| _____ 3. thylakoid | c. a sugar-producing merry-go-round |
| _____ 4. electron transport chain | d. a knife cutting a candy bar in half |
| _____ 5. lactic acid fermentation | e. an emergency energy system |

Cause and Effect

In the space provided, write the letter of the term or phrase that best matches each cause or effect given below.

- | Cause | Effect |
|--|--|
| 6. electron moves through _____ | a. complete oxidation of electron t
transport chain glucose |
| 7. coenzyme is joined to a _____
Two carbon group | b. carotenoids
c. acetyl-CoA formed |
| 8. _____ | d. oxygen is given off |
| 9. _____ | e. lactic acid production |
| 10. muscle cells lack _____
adequate oxygen | f. energy released pump organic
H ⁺ to make ATP |
| 11. _____ | g. light reactions make
ATP and NADP |
| 12. water molecules in _____
plants split up | |

Photosynthesis and Cellular Respiration *continued*

Linkages

In the spaces provided, write the letters of the two terms or phrases that are linked together by the term or phrase in the middle. The choices can be placed in any order.

- | | |
|--------------------------------------|-----------------------------|
| 13. _____ photosynthesis _____ | a. electron transport chain |
| 14. _____ Stage 2 _____ | b. Stage 3 |
| 15. _____ ATP and NADPH formed | c. Krebs cycle |
| 16. _____ acetyl-CoA formation _____ | d. acetyl-CoA formation |
| 17. _____ radiant energy _____ | e. radiant energy |
| | f. Stage 1 |
| | g. glycolysis |
| | h. cellular respiration |
| | i. Calvin cycle |
| | j. light reactions |

Analogies

An analogy is a relationship between two pairs of terms or phrases written as a : b :: c : d. The symbol : is read as "is to," and the symbol :: is read as "as." In the space provided, write the letter of the pair of terms or phrases that best completes the analogy shown.

- _____ 18. chlorophyll pigments : green ::
 a. light : pigments
 b. pigments : light
 c. carotenoids : yellow and orange
 d. chlorophylls : blue
- _____ 19. CO₂ fixation : Calvin cycle ::
 a. O₂ production : Calvin cycle
 b. O₂ production : Krebs cycle
 c. NADH and FADH₂ production : Krebs cycle
 d. O₂ production : cellular respiration
- _____ 20. lactic acid : human muscles ::
 a. human muscles : lactic acid
 b. pyruvic acid : CO₂
 c. oxygen : lactic acid
 d. ethyl alcohol : yeasts
- _____ 21. ATP : cellular respiration ::
 a. water : photosynthesis
 b. sugar : photosynthesis
 c. CO₂ : photosynthesis
 d. O₂ : cellular respiration