

CP Biology Study Guide Test – Chapter 4: Energy in the Cell

1. How can you determine the amount of carbon dioxide used by plants in the day compared to at night?
2. What organisms use cellular respiration in the mitochondria to produce energy?
3. How is photosynthesis a part of the cycles of oxygen and carbon dioxide in an ecosystem?
4. What are the products and reactants of photosynthesis and respiration?
5. What are the chemical equations for photosynthesis and respiration?
6. What energy molecules are used in the Calvin Cycle?
7. How is ADP converted to ATP?
8. Where in the cell does the Krebs's cycle occur?
9. Where in the cell does the Calvin cycle occur?
10. How is fermentation different from respiration?
11. What pigment is used by plants to capture energy from the sun? Where are they located?
12. What is the process in which glucose is broken down?
13. Where does the oxygen produced in photosynthesis come from?
14. What processes are directly involved in the aerobic part of respiration?
15. How is BTB used to determine if photosynthesis or respiration is occurring?
16. What molecule provides the direct energy needed for cell functions in all cells?
17. How does the electron transport chain work and what is the main purpose in both respiration and photosynthesis?
18. What is the purpose of oxygen in respiration?
19. Describe the following parts of photosynthesis: photosystem II, photosystem I, electron transport chain, Calvin cycle, ATP Synthase.
20. Describe the following parts of respiration: glycolysis, Krebs's cycle, electron transport chain, ATP synthase.
21. Which molecule will move into the Krebs cycle at the end of glycolysis?
22. What happens to the sugars that are produced in photosynthesis?
23. The part of cellular respiration that requires oxygen takes place inside the
24. The purpose of the light dependent reactions in photosynthesis is to
25. During which process is water split in hydrogen, oxygen and electrons?
26. What are the end products of glycolysis?
27. Where do the hydrogen ions for the photosystems of the light-dependent reactions come from?
28. What is the relationship between the photosystems and the Calvin cycle?
29. Which is the end product of fermentation that causes burning and soreness in muscles when working hard?
30. Describe the process of fermentation?
31. What are the high energy molecules in photosynthesis and respiration?

