

Bozeman Biology

Photosynthesis and Respiration video

<http://bit.ly/W3oAKW>

1. What is an autotroph?. What are the two strategies they use to utilize energy?

2. What is a heterotroph?. What are the two strategies they use to utilize energy?

3. Do plants respire?

4. Where and how does chemosynthesis occur? What are the raw materials and the products?

5. What are two types of fermentation and how do they differ from respiration?

6. Write out the equation for photosynthesis

7. What is the ΔG of this reaction?

8. Where does photosynthesis occur?

9. What are the two parts of photosynthesis?

10. Where does the light dependant part of the process occur?

11. What happens in the light reaction?

12. What are the raw materials and the products of this process?

13. Where does the Calvin cycle occur?

14. What are the raw materials and the products of this process?

15. Draw and label the chloroplast and indicate where each part of the process occurs

16. List the role of the following in the steps of the light reaction.
- a. light : _____
 - b. Chlorophyll: _____
 - c. Electron: _____
 - d. Water: _____
 - e. Hydrogen ions (aka: _____)
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17. Where does the oxygen come from in photosynthesis?

18. Into which space are the protons being pumped?

19. What is the charge on the inside of the membrane?

20. The name of the molecule through which the protons escape is _____

21. What happens in the Calvin cycle? What are the raw materials and the products?

22. What is different in cellular respiration from photosynthesis?

23. What is ΔG in respiration?

24. Draw and label the mitochondrion and indicate where the different parts of respiration occurs.

25. How is glucose broken down in glycolysis?

26. What is the Krebs' cycle and where does it occur?

27. What does NADH and FADH₂ do with the electrons they harvest?

28. What is the role of the electrons in the ETC?

29. Where are the protons pumped into?

30. Where do the protons escape through?

31. How are the electrons “pulled” down the ETC?

32. What is the final Electron acceptor?
