

<http://www.wiley.com/legacy/college/boyer/0470003790/animations/animations.htm>

1. Energy for all living things ultimately comes from the _____.
2. What are the reactants in photosynthesis?
3. What is the by-product?
4. From the photosynthetic reaction, what are the uses of the following?
Oxygen –
Carbon –
NADPH –
ATP –
5. What part of the water molecule is used during photosynthesis?
6. Is carbon dioxide reduced or oxidized during photosynthesis?
7. Is water reduced or oxidized during photosynthesis?
8. What compounds are affected by photons of light?
9. What type of waves are the shortest? _____ The longest? _____
10. At what wavelength would you find yellow light?
11. What happens to the electrons of the pigments?
12. What three things could happen to an excited pigment molecule?
a.
b.
c.
13. There are two stages of photosynthesis: _____ & _____.
14. In the light reaction, what is oxidized?
15. What are the two products of the light reactions?
16. How does electron flow compare between photosynthesis and cellular respiration?
17. Can the dark reactions occur during the daytime?
18. What substances need to be present in order for the dark reactions to occur?
19. The dark reaction is also called the "_____".
20. How do the mitochondria and chloroplast compare? Complete the table below.

	Mitochondria	Chloroplast
Number per cell		
Size		
function		

21. Move your cursor over the chloroplast. What is the function of the thylakoid?
22. What is the function of the stroma?
23. How is chlorophyll b different from chlorophyll a?
24. Magnesium is in the center of the chlorophyll molecule. What is the area called where the Mg is found?
25. What happens in this area?
26. What is the opposite end of the chlorophyll molecule made up of?
27. What does it do?
28. What are the other accessory pigments and their colors?
29. Why are they not visible most of the time?
30. Which compound is the oxidized form of water as a result of photosynthesis?