Internet Assignment: Photosynthesis

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_ Class:\_\_\_\_\_\_\_\_

<http://wps.prenhall.com/wps/media/objects/1109/1135896/8_3.html>

1. Which scientist discovered the Calvin cycle?
2. Which radioactive isotope did he use
3. What organism was used fo the photosynthesis experiment?
4. What process was used to find the C14?
5. Explain how this process was used.





1. What was the purpose of setting the xray film on the chromatography paper?
2. How long did it take Calvin to interpret the spots?

<http://wps.prenhall.com/wps/media/objects/1109/1135896/8_2.html>

1. What are the 2 parts of a leaf
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Describe a cross-sectional view of a leaf
3. Where are stomata located?
4. What is the purpose of stomata?
5. Which layer contains chloroplasts?
6. What is the stroma?
7. What is inside the thylakoid membrane?
8. What is a photosystem composed of
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. What are 2 types of antennae pigments?
10. What is the job of antennae pigments?
11. What type of reaction transfers electrons from the reaction center to the primary electron acceptor?
12. How many electrons can be transferred to the primary electron acceptor at a time, and how does this compare to the number of electrons required to produce NADPH?
13. What fills the electron ;hole” created when the reaction =center loses an electron?
14. What passes the electron from PSII to PS1?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
15. Where do light dependant reactions occur? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
16. Where are hydrogen ions concentrated?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
17. What are these Hydrogen ions used for\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
18. Aty the end of the light dependant reactions, where do electrons end up
19. What are 2 other ways to refer to the calvin cycle
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
20. What does “fixation” refer to in the carbon fixation step
21. How many molecules of CO2 enter the calvin cycle\_\_\_\_\_\_\_\_\_\_\_
22. How many molecules of 3-PGA are produced\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
23. How many molecules of ATP & NADPH are required to convert 3PGA to GP3
	1. ATP=\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. NADPH=6\_\_\_\_\_\_\_\_\_\_\_
24. What does NADPH donate? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
25. What does GP3 stand for? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

AGAIN WORK THROUGH THE EXERCISES ON THE LFT OF THE SCREEN WHEN FINISHED

<http://wps.prenhall.com/wps/media/objects/1109/1135896/8_4.html>

1. What is the C4 pathway an adaptation to?
2. When does photorespiration occur?
3. What is the effect of photorespiration
4. How do C4 plants overcome this
5. List 2 plants that use the C4 pathway
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. What is one advantage and one disadvantage of the C4 pathway
	1. Advantage: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Disadvantage: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. What type of photosynthesis do hot weather plants like cacti utilize?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. How do the stomata of CAM plants behave differently than those of traditional photosynthetic plants, and what does this accomplish?
9. What does CAM stand for? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. Where does the C in CAM come from
11. List 3 types of plants that use CAM metabolism
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. List advantages and disadvantages of CAM metabolism
	1. Advantages: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Disadvantage: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DO EXERCISE 1 FOUND TO THE LEFT

Take all the online quizzes at

[http://wps.prenhall.com/esm\_krogh\_biology\_3/0,8750,1135943-,00.html](http://wps.prenhall.com/esm_krogh_biology_3/0%2C8750%2C1135943-%2C00.html)