

PHOTOSYNTHESIS: A QUICK OVERVIEW!

INTRODUCTION: Complete the following questions using the website:
http://phschool.com/science/biology_place/biocoach/photosynth/intro.html

Once you have navigated to the website, go through the screens by clicking the “next” button. Please note that you may have to view some of the provided animations to answer the questions.

1. Photosynthesis converts _____ into the _____ of _____ and other organic compounds.
2. A reactant is an “ingredient” that is needed for a reaction. What two reactants are needed for photosynthesis?
3. A product is the end result of a reaction. What two products are made in photosynthesis?
4. What part of light runs photosynthesis?
5. What is a wavelength? What does it have to do with energy? (move your cursor over the diagram to see how wavelength changes in the light spectrum)
6. Which wavelengths work best for photosynthesis?
7. What part of the plant is responsible for photosynthesis?
8. What is a waste product that is made in photosynthesis?
9. Using your cursor, label the parts of a leaf. Print your answers and attach to this sheet.
10. Using your cursor, label the parts of a plant cell. Print your answers and attach to this sheet.
11. Which organelles are responsible for photosynthesis?
12. Using your cursor, label the parts of a chloroplast. Print your answers and attach to this sheet.
13. What are thylakoids? What are grana?
14. What do plants keep inside of the thylakoids?
15. The _____ convert light energy into chemical energy in the form of _____ and _____.

16. The light reactions (also called the light dependent reactions) must have light in order to run. Therefore, they only happen during the day
17. The Calvin Cycle (also called the light independent reactions) does not need light to run; so they can take place whenever the plant wants them to.
18. The Light dependent reactions take Water and sunlight and use them to make ATP (cellular gasoline), Oxygen (which the plant releases) and NADPH (think of it as a car full of Hydrogen moving to the next location). (When you see electrons on this demo, think Hydrogen)
19. _____ provides the energy, and the _____ supplies the electrons for the _____ , which converts carbon dioxide to sugar.
20. The Calvin Cycle will use the ATP made in the light dependent reactions to run (just like your car uses gasoline). This is why it doesn't need light to work.
21. The Calvin Cycle will take the CO₂ (carbon dioxide) that the plant breathed in and add the hydrogen that has been brought over by the NADPH in order to make sugar.

Take the self quiz...print off your final score and attach to this sheet.