

Photosynthesis Web Quest

Directions: Open a Word document, and type the ANSWERS to each activity question, making sure you do so in complete sentences (hint: copy and paste these questions into your Word doc and then simply re-word the question into your answer).

Be sure to include, as always, your name/date/period! **Print and submit** to the teacher, or email your answers to bridgeL@ptbeach.com.

Follow the links to different websites to gain insight on the process of photosynthesis!

Website 1: http://www.sambal.co.uk/?page_id=218

1. What is a producer? Why are plants called “producers” (what are they producing)?
2. What is the definition of photosynthesis?
3. Where does the carbon for photosynthesis come from?
4. What do plants do with extra glucose they make?
5. What does photosynthesis require?
6. What does photosynthesis produce?

Website 2: <http://photosynthesiseducation.com/photosynthesis-for-kids/>

7. Write the balanced equation for photosynthesis.
8. (a) Where does the plant get the necessary *reactants* (molecules) to make sugar?
(Hint there should be two different places listed).

(b) Through what means (where/how) do these reactants enter the plant?

Website 3: <http://www.ftexploring.com/photosyn/chloroplast.html>

9. Where (in what organ) of a plant does photosynthesis happen?
10. Specifically in which *organelle* does photosynthesis take place?
11. What is a *granum*?
12. What is a thylakoid?

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Now Click on “INTRO TO PHOTOSYNTHESIS” at the top left of the page.

13. What are the two very important things that we get out of photosynthesis? Now think...why are those SO important?
14. How does the Earth get all of its energy?
15. What is the difference between an autotroph and a heterotroph? If you can't figure it out, click on the word autotroph!
16. Why are the people at the bottom of the page hugging a tree?

Website 4: <http://www.esf.edu/pubprog/brochure/leaves/leaves.htm>

17. Do leaves have any other colored pigments in them, besides chlorophyll? List some of these.
18. If leaves have other pigments, then why do leaves appear only green in the spring and summer?
19. In the fall, what two environmental factors cause the chlorophyll to break down?
20. Once the chlorophyll breaks down, how does this affect the leaf color?
21. List some tree species that *do not* change color in different seasons.
22. How might weather affect the colors change and intensity of color in autumn leaves? Use examples.

Website 5:

http://www.citruscollege.edu/lc/archive/biology/PublishingImages/c06_06.jpg

BIG QUESTION – double point value!

23. After looking at the Absorbance Spectrum picture...
 - (a) Explain in your own words **why** plants have evolved a variety of different pigments (rather than just one kind).
 - (b) How does this support the Darwinian concept of natural selection (“survival of the fittest”) among plant species?