

Name: _____

Date: _____ Period #: _____

Photosynthesis Webquest

1. View the overall process of photosynthesis

<http://earthguide.ucsd.edu/earthguide/diagrams/photosynthesis/photosynthesis.html>

What are the reactants (starting materials)?

2. Go to http://www.pbs.org/wgbh/nova/methuselah/phot_flash.html

- Click on the Cycle

- Click on Atomic Shuffle

o What are the names of the holes in the leaves? _____

o What is the equation for photosynthesis? _____

- Click on Three Puzzlers

o If all of its oxygen was removed, would a plant be able to survive? Explain your answer.

3. Go to the website http://www.phschool.com/science/biology_place/biocoach/photosynth/overview.html

- Concept 1 An Overview of Photosynthesis

o During photosynthesis energy changes forms. Solar (light) energy is converted to what type of energy during photosynthesis?

- Concept 2 Electromagnetic Spectrum

o What is the range in wavelengths of visible light? _____

4. Go to the website [http://highered.mcgraw-](http://highered.mcgraw-hill.com/olcweb/cgi/pluginpop.cgi?it=swf::535::535::/sites/dl/free/0072437316/120072/bio13.swf)

[hill.com/olcweb/cgi/pluginpop.cgi?it=swf::535::535::/sites/dl/free/0072437316/120072/bio13.swf](http://highered.mcgraw-hill.com/olcweb/cgi/pluginpop.cgi?it=swf::535::535::/sites/dl/free/0072437316/120072/bio13.swf)

::Photosynthetic Electron Transport and ATP Synthesis

a. Which organelle is the site of photosynthesis? _____

b. What are the stacks of membranes inside the chloroplast? _____

c. What is the semiliquid substance inside the chloroplast? _____

d. From what molecule (reactant) does photosystem II get its replacement electrons from?

5. Go to the website

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

a. In your own words, describe the process of photosynthesis at the molecular level.

b. What is the role of the NADPH molecule in photosynthesis?

c. Click on Strategy/Players tab on the left.

i. What are the two main stages of photosynthesis?

ii. Hover over the chloroplast. What are stacks of thylakoids called? _____

d. Click on light reactions. What happens when light strikes the pigments?