Section 1: Overview of Photosynthesis

<http://www.phschool.com/science/biology_place/biocoach/photosynth/overview.html>

Concept 1: An Overview of Photosynthesis

1. What is the overall equation for photosynthesis?

Concept 4: Structure of a Leaf –

1. Draw and label a cross section of a leaf.
2. What are the plant’s main photosynthetic organs?
3. What are the products of photosynthesis?

Concept 6: Chloroplast Structure

5) Draw and label a chloroplast

Concept 8: Cooperation of the Light Reactions and the

Calvin Cycle

1. What are the two sets of reactions that need to occur in order for Photosynthesis to take place?
2. The light reactions convert light energy into chemical energy in the form of \_\_\_\_ and \_\_\_\_\_\_\_.
3. Where do the light reactions take place within the chloroplast?
4. Where does the Calvin Cycle take place within the chloroplast?
5. What is the role of the ATP and NADPH molecules?
6. What is the major output product of the Calvin Cycle?

Section 2: Overview of Respiration

<http://www.biologyinmotion.com/atp/index.html>

1. How do living things mainly store energy?
2. What does ATP stand for?
3. What is ATP often thought of as a rechargeable battery?
4. What happens when a ADP molecule gains a phosphate?
5. What happens when a ATP loses a phosphate?
6. How do humans “recharge” their batteries?
7. Click the Right arrow on the bottom left of the corner. When we each large food molecules what happens to them first in our body?
8. In the diagram on the right, read the instructions on the left and describe to me what you had to manipulate in order to get a full “synthesis” to occur?

<http://www.bbc.co.uk/schools/gcsebitesize/science/add_aqa/respiration/respirationrev1.shtml>

1. What is aerobic respiration?
2. Write the formula for aerobic respiration.
3. Where does aerobic respiration occur?
4. What is anaerobic respiration?
5. Organisms such as yeast produce alcohol during anaerobic respiration. What do animals produce?
6. How does the amount of energy from aerobic respiration compare to the amount of energy from anaerobic?

Section 3: Carbon cycle

<http://eschooltoday.com/ecosystems/the-carbon-cycle.html>

1. Sketch the carbon cycle
2. What role do autotrophs play in the carbon cycle?
3. What role do heterotrophs play in the carbon cycle?
4. How do humans contribute to the carbon cycle (2 ways)
5. What are fossil fuels made of?