

Review of Chapter 8, Cell Energy

Name _____ Per. _____

Answer the following questions. You must refer to the diagram below each question. A word list is at the end.

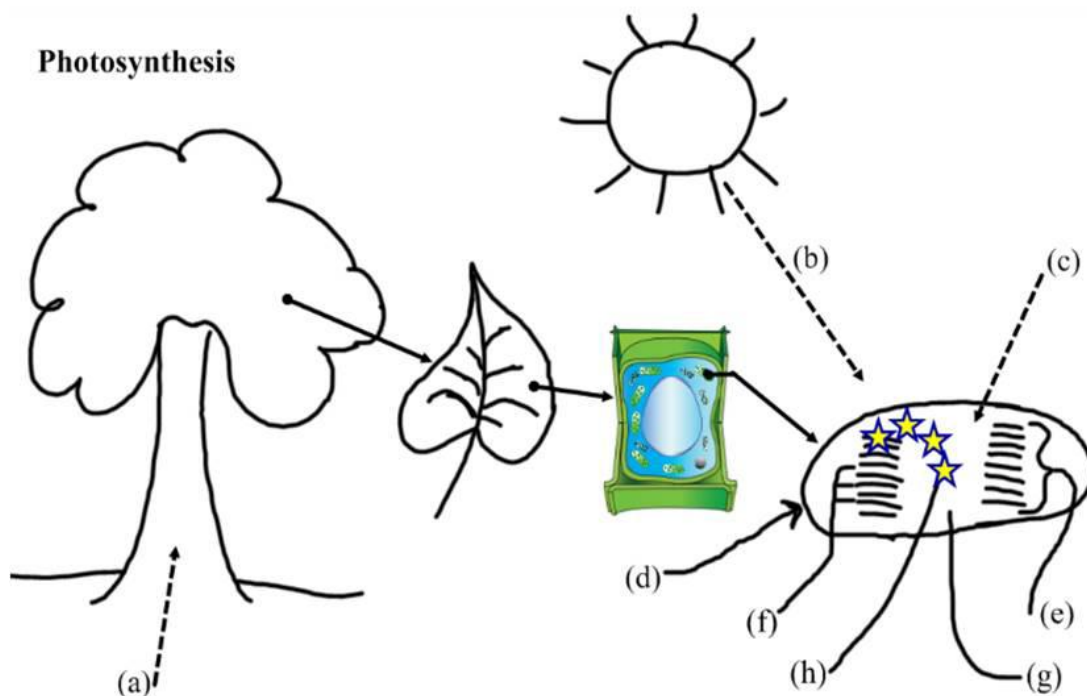
1. a. What is the purpose of Photosynthesis? _____

- b. What is the chemical equation illustrating photosynthesis? _____

- c. How does water get into a plant? _____
- d. Identify the ingredients labeled (a) _____, (b) _____, (c) _____
- e. Identify the structures labeled (d) _____, (e) _____, (f) _____, (g) _____
- f. Where in the plant do we typically find most of the structures labeled (d)? _____
- g. What are the reactions called that occur in (f)? _____
- h. What gets excited due to ingredient (b) **and** what does it do as a result? _____

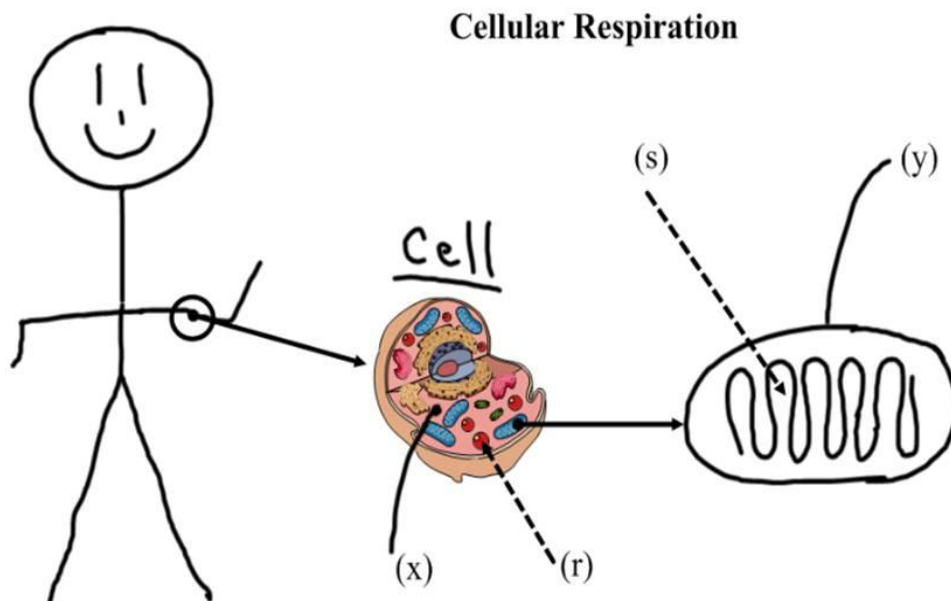
- i. What happens to ingredient (a) during this time? What is the process called that does this? _____

- j. What product results from the process identified in the previous question? _____
- k. What is the process (h) called? (Hint it moves electrons from (f) to (g)). _____
- l. What substance acts as tongs or a big stick to do this process? _____
- m. What are the reactions called that occur in (g)? _____
- n. What product results from this set of reactions? _____



2. a. What is the purpose of Cellular Respiration?
 - b. What is the chemical equation illustrating cellular respiration?
 - c. Identify the ingredients (r)_____ and (s)_____.
 - d. Identify the structures (x)_____ and (y)_____.
 - e. The first reaction occurs in (x). What reaction is this? _____
 - f. What three things result from this reaction? _____
 - g. If (s) is present, what kind of respiration occurs? _____
If (s) is *not* present, then what kind of respiration occurs? _____
 - h. What is the next set of reactions called? _____
 - i. Where do these reactions occur? _____
 - j. Name up to six things produced through this set of reactions. _____

 - k. What is the third and last phase of cellular respiration? _____
 - l. What are the two products resulting from this phase? _____
 - m. Where is energy stored in ATP? _____
 - n. What are the three components of ATP? _____
3. Describe the symbiotic relationship between photosynthesis and cellular respiration.



You may use these words: H₂O, thylakoid membranes, electron transport chain, ATP, pyruvate, adenine, O₂, sunlight, NADPH, chloroplast, aerobic, ribose, grana, light reactions, chlorophyll, cytoplasm, FADH₂, Calvin cycle, glycolysis, stroma, Krebs's cycle, CO₂, mitochondria, photolysis, acetyl Coenzyme A, C₆H₁₂O₆, NADH, citric acid, anaerobic, electrons, phosphates