



Photosynthesis & Cellular Respiration Worksheet



Name: _____ Period: _____

Vocabulary: Match the phrases on the left with the term that best fits. Use answers only one time.

- | | |
|---|-----------------|
| ___ 1. Organisms that make their own food | A. Chloroplasts |
| ___ 2. Site of photosynthesis | B. Anaerobic |
| ___ 3. Process occurs in a mitochondrion | C. Aerobic |
| ___ 4. C ₆ H ₁₂ O ₆ | D. Glucose |
| ___ 5. Process does not require oxygen | E. ATP |
| ___ 6. Process requires oxygen | F. Kreb's cycle |
| ___ 7. Adenosine diphosphate | G. Glycolysis |
| ___ 8. Energy storing molecule | H. Energy |
| ___ 9. The anaerobic process of splitting glucose and forming two molecules of pyruvic acid | I. ADP |
| ___ 10. The ability to do work | J. Autotrophs |

Directions: Answer each of the following questions in a clear and concise manner.

1. Compare and discuss how cells store energy and release energy using ATP. Be specific! You may draw the cycle.

2. Compare lactic acid fermentation and alcoholic fermentation by describing what pyruvic acid is changed in to. Be sure to include what type of organism each one takes place in.

HINT: USE YOUR NOTES

	What is pyruvic acid changed into?	Organism:
Alcoholic Fermentation		
Lactic Acid Fermentation		

3. Name the three processes of aerobic cellular respiration. How many ATP's does each process produce, and what is the total ATP produced from one glucose?

<u>3 Processes of Cellular Respiration:</u>	<u># ATP produced:</u>

Total ATP per 1 glucose = _____

4. Name the two stages of photosynthesis and list the starting molecule(s) and ending molecule(s) of each.

<u>Stages</u>	<u>Starting Molecule(s)</u>	<u>Product(s)</u>

5. What is the general chemical equation of photosynthesis?

6. In which organelle does photosynthesis take place? In which organelle does cellular respiration take place?

7. Of the three stages of cellular respiration, which stage is anaerobic (does not need oxygen)?

8. Explain how the equations for photosynthesis and cellular respiration compare.