

Chapter 8 Cellular Energy - Homework and Extra Credit

8.1 How Organisms Obtain Energy

Vocabulary

Energy	Photosynthesis	Adenosine Triphosphate (ATP)
Thermodynamics	Cellular Respiration	
Metabolism		

Date Due: Class Notes Only **Homework:** Read 8.1 / take notes

8.2 Photosynthesis

Vocabulary

Thylakoid	Pigment	Rubisco
Granum	NADP+	
Stroma	Calvin Cycle	

Date Due: Friday 1/8/16 **Homework:** Read 8.2 / take notes

8.3 Cellular Respiration

Vocabulary

Anaerobic Process	Aerobic	Krebs Cycle
Aerobic Respiration	Glycolysis	Fermentation

Date Due Wednesday 1/13/16: **Homework:** Read 8.3 / take notes

Date Due Wednesday 1/20/16: **Chapter 8 Assessment Homework Pg 237-239**

- Section 8.1: #1-13
- Section 8.2: #14-26
- Section 8.3 : #28-42

Chapter 8 Test Wednesday 1/20/16 (Extra credit is due the day of the test.)

Biology Chapter 8 Test Review Sheet -EXTRA CREDIT.

Section 8-1

1. Define energy and thermodynamics. What are the laws of thermodynamics?
2. What is the difference between Autotrophs and Heterotrophs? Give examples of each type of organism.
3. Define Metabolism. What is the difference between a catabolic pathway and anabolic pathway?
4. What is the basic difference between photosynthesis and cellular respiration?
5. What is ATP? How is it used?

Section 8-2

6. Define Photosynthesis. What is the main molecule that is made?
7. Where does the energy for photosynthesis come from? What types of organisms use photosynthesis?
8. What is the photosynthesis equation?
9. What is the waste product of photosynthesis?
10. What is produced in the light reaction of photosynthesis? What is used? Where does it occur? Why is called the light reaction?
11. What is produced in the light-independent reaction of photosynthesis? What is used? Where does it occur? What is another name for the light-independent reaction? Why is it called the light independent reaction?
12. Define the following parts of the chloroplast, thylakoid, grana, and stroma. Be able to identify them on a diagram.
13. What is a pigment? What are the four plant pigments we talked about in the chromatography lab? What color are they? Where are they found?
14. What is a photosystem?
15. Explain the basics of the light-dependent and light-independent reactions that we went over in class.

Section 8.3

16. Define cellular respiration. What is being broken down in cellular respiration?
17. What are the stages of cellular respiration?
18. What is the cellular respiration equation?
19. What is glycolysis? What is produced in glycolysis? Where does it occur? Why is it anaerobic?
20. What is Aerobic respiration (It includes the Krebs cycle and Electron Transport)? What is produced? What types of organisms use this (hint: plants must use energy too)? What is required? Where does it occur? What is the waste product of aerobic respiration?
21. What is anaerobic respiration? What are the two types? What is produced? What types of organisms use this? Anaerobic respiration is in the absence of what? What are the waste products of anaerobic respiration?
22. In eukaryotes how many ATP molecules ultimately come from one glucose molecule during the complete process of cellular respiration?

**** Compare and Contrast Photosynthesis and Cellular Respiration. What organisms perform these, what is used, what is produced, what is the end result? Make sure to talk about what is similar and what is different.