**CHAPTER 8: CELLULAR ENERGY OUTLINE QUIZ #1**

1. What is the sun the source of on earth?
2. Energy transformation that transfers sun’s energy into chemical energy.
3. Cellular respiration used \_\_\_\_\_\_ to carry out life functions.
4. \_\_\_\_\_\_\_ use energy to carry out biological processes
5. \_\_\_\_\_\_ is the ability to do work.
6. Thermodynamics is the study of the flow and \_\_\_\_\_\_\_ of \_\_\_\_\_\_\_.
7. Law that states energy cannot be created nor destroyed.
8. The second law of thermodynamics states energy cannot be converted without the loss of \_\_\_\_\_\_\_, usually as \_\_\_\_.
9. Measure of disorder or unusable energy in a system.
10. Organisms that must obtain food from other organisms
11. Organisms that make their own food.
12. List the following in terms of flow of energy from the initial source to final source: autotrophs, heterotrophs, sun.
13. \_\_\_\_\_\_ refers to all of the chemical reactions in a cell.
14. A \_\_\_\_\_ is a series of chemical reactions in which the product of one reaction is the substrate for the next reaction.
15. Anabolic pathways use energy released by \_\_\_\_\_\_\_ to build larger molecules from smaller molecules
16. Catabolic pathways \_\_\_\_\_\_\_\_ energy by breaking down larger molecules into smaller molecules.
17. Sketch figure 3 on p. 220 and give a brief explanation of what is occurring.
18. Process in which light energy is converted to chemical energy is known as \_\_\_\_\_\_\_ which is a type of \_\_\_\_\_\_ pathway.
19. Process in which organic molecules are broken down to release energy for use by a cell is known as \_\_\_\_\_\_ which is a type of \_\_\_\_\_\_ pathway.
20. What is used to break down glucose into carbon dioxide during cellular respiration.
21. What is used to convert carbon dioxide and water into glucose and oxygen?
22. What is the molecule that stores chemical energy?
23. Describe the structure of ATP.
24. Redraw figure 4 from p. 221 and explain how ATP is formed and how it releases energy in detail.