**CHAPTER 6: CHEMISTRY IN BIOLOGY RFC #3**

\* Read the following questions, **THEN** read from Chapter 6 p. 156 Chemical Bonds to p. 160 **STOP**, **THEN** answer the following questions on your own paper in complete sentences.

1. What do chemical reactions allow living things to accomplish?
2. What is the relationship between a chemical bond and a chemical reaction?
3. What happens to atoms in substances during a chemical reaction?
4. What happens to chemical bonds during reactions?
5. Type II: In a minimum of 5 lines explain the difference between a physical change and a chemical reaction.
6. What are some clues (list more than one) that indicate a chemical reaction has occurred?
7. Describe the difference between reactants and products?
8. What does the arrow stand for in a chemical equation?
9. What is the law of conservation of Mass **AND** how does it relate to a chemical equation?
10. What are coefficients used for?
11. Looking at the balanced equation on p. 157, list the number of atoms of each element for both the reactants and the products.
12. Explain why chemical equations must be balanced.
13. Why is activation energy needed in a chemical reaction?
14. **TYPE II:** Compare and Contrast Figure 15 and Figure 16 in terms of energy change. Begin by **drawing** both figures and then use them in your answer. Be sure to use the following words: activation energy, reactants, products, endothermic, exothermic, heat. *Underline the words when used.*
15. Compare and Contrast enzymes and catalyst? What do they do?
16. What happens to an enzyme after it is used in a chemical reaction?
17. **TYPE II**: Look at figure 17; Compare the activation of energy of the reaction without an enzyme to the activation energy of the reaction with an enzyme?
18. How does the enzyme-substrate complex form?
19. What does the enzyme-substrate complex help in a chemical reaction?
20. What factors affect enzyme activity?