**Name: Period: Date:**

**Focus Questions for Chapter 8.4 (Enzymes) due Thursday, 10/31**

# 08_12ExergonicReaction-UQuestions to answer as you read about enzymes. You will not be asked to turn these in, but Ms. Ransom may check to make sure you have completed them through a clicker quiz or short written response. You should be ready to discuss the answers during class.

1. How does an enzyme catalyze a chemical reaction?
2. What does EA stand for? What does this mean?
3. Explain in words what is being shown in the figure to the right. Label the image.
4. Can an enzyme change the total amount of energy used/given off by a reaction? Explain.
5. What does “substrate specific” mean? What implication does this have on the types (and concentrations) of enzymes in your body?
6. Summarize what happens during an enzyme-catalyzed reaction (induced fit).
7. What environmental factors can affect enzyme activity? How do they affect it?
8. What do cofactors/coenzymes do? What is the difference between them?
9. Compare and contrast competitive and noncompetitive inhibitors (you may use a Venn diagram if you wish). Include examples.
10. How can the study of enzymes, which is a part of Big Idea #2 (Biological systems utilize energy and molecular building blocks to grow, to reproduce, and to maintain homeostasis.) relate to what we studied in Big Idea #1 (The process of evolution drives the diversity and unity of life.)?