**Energy and Enzymes Review Guide**

You need to be confident with the following vocabulary. Visit <http://quizlet.com/7434986/bio-gt-energy-and-enzymes-flash-cards/> for online vocab practice:

Energy Autotrophs

Heterotrophs Decomposers

Chemical energy Free energy

Entropy Second Law of Thermodynamics

calorie Activation energy

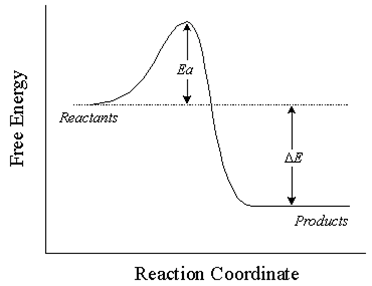
Biosynthesis Decomposition

Enzyme Substrate

Active site Induced fit

Enzyme-substrate complex Product (in the context of enzymatic reactions)

You should be able to…

* Explain how energy flows through an ecosystem
  + This includes describing the relationship between autotrophs and heterotrophs
* Differentiate between chemical energy and free energy
* Recognize which types of biological reactions require energy and which types of reactions release energy
* Recognize reactions that result in increased entropy and reactions that result in decreased entropy
* Explain why organisms, in spite of their organized structure, do not violate the 2nd Law of Thermodynamics
* Understand how the calorimetry lab we performed in class allowed us to collect data on the energy content of food
* Solve a calorie math problem
* Read and label an activation energy diagram—do you understand this?  
  
* Describe what happens during an enzyme-catalyzed reaction

**As always, e-mail me with any questions or concerns you have about this material. Make time to come see me before or after school if you need additional help.**