Honors Biology Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
NDHS Per: \_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Enzyme Quest Study Guide**

**Day 1**
Parts of Chemical Reaction
Activation Energy of Reaction
Role of Catalysts in Chemical Reactions
Exothermic vs. Endothermic
Draw and label an energy diagram for an endothermic and exothermic reaction. Be able to explain why the diagram shows it to be an exothermic or endothermic reaction.
Spontaneous Reactions vs. Non-spontaneous reactions

**Day 2**
Enzymes - What are they?
Be able to draw an energy diagram for a regular chemical reaction and the same reaction with the presence of an enzyme.
Active Site
Substrate
Induced Fit Theory
Factors that Affect Enzyme Reactions:
 Optimal Temperature
 Optimal pH
 - know normal range of most biological reactions
 Denaturation: What is it? What does it do to proteins and enzymes?
 Enzyme and Substrate Concentrations
 Cofactors and Coenzymes
 Competitive vs Non-competitive Inhibition
 Regulatory Feedback