Student Name	 Period

# TOPIC: Enzymes - PreAP

OPTION 3: Online

**Directions:** Using your laptop, type in the following link <u>http://tinyurl.com/grx6s53</u> or you may click on the link on the class website page. As you complete the online tutorial over enzymes, answer the questions on this sheet. As you work through the tutorial, the information is listed at the top. You may need to use the scroll bar to the right of the information so you can read everything.

### Introduction:

- 1. What is the role of an enzyme in a cell?
- 2. Define activation energy.

3. In an enzyme catalyzed reaction, the reactants are also known as \_\_\_\_\_\_.

### **Enzyme Shape Curve**

4. Draw the reaction curve below. Label the reactants and products on the curve. Draw a curve showing a reaction without an enzyme and label it as such.

- 5. Many enzymes end in the same three letters. What ending do a lot of enzymes end in?
- 6. Draw an enzyme and label the active site. Next to your label, define what an active site is.

- 7. Now, next to the enzyme draw the two substrates and draw a line from the substrate to where it would fit in the active site.
- 8. Go back to your curve in question 4, and draw an enzyme catalyzed reaction. Label the curve as such.
- 9. After the enzyme catalyzes the reaction, what does it release?

#### What affects enzyme activity?

- 10. Hexokinase is found in cells and works best at what temperature?
- 11. Click on the flame to increase the temperature. Describe what happened to the enzyme.

## **First Enzyme Activity**

12. Draw a reaction curve that shows both the reaction with and without an enzyme.

13. Change the pH to 14 and describe what happens to the enzyme.