SB1b - Enzymes
SB1c - Macromolecules
Test Review

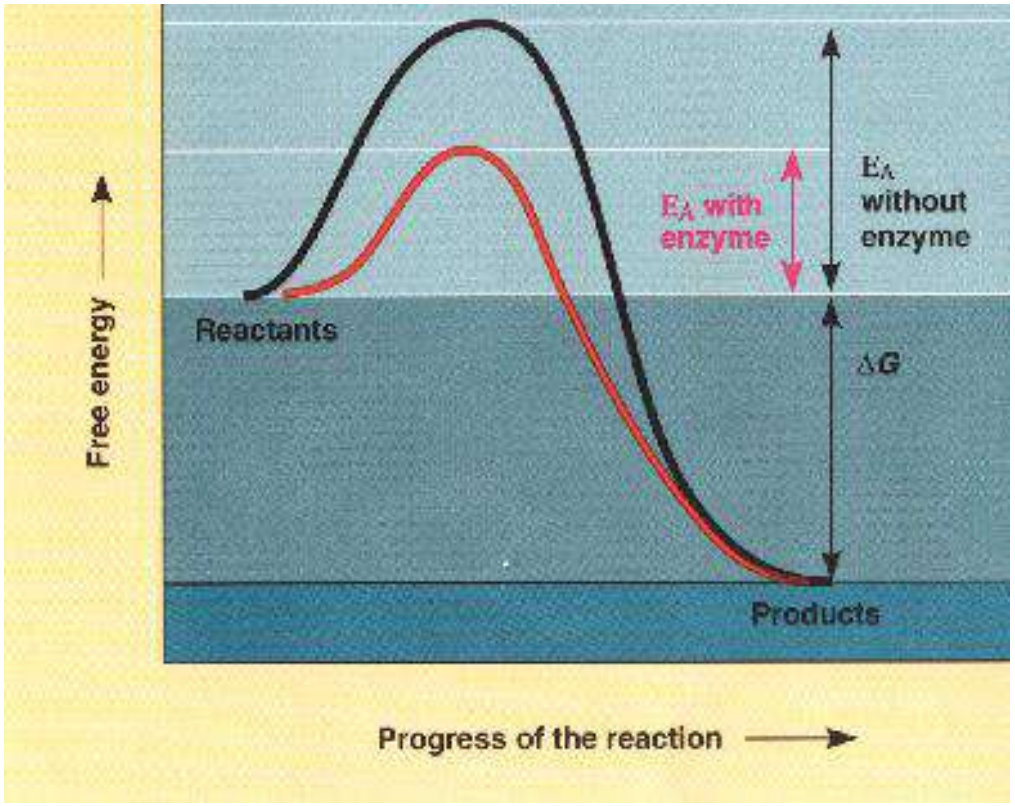
Enzymes

- Why is an enzyme such as lactase called a catalyst?
  - Because it **helps** a chemical reaction take place

- What is activation energy (E_A)?
  - The energy needed to **start** a chemical reaction

Enzymes

- On the graph, label the x-axis “Progress of the reaction” and the y-axis “Free Energy.” Label E_A on this sketch, both with and without enzyme.

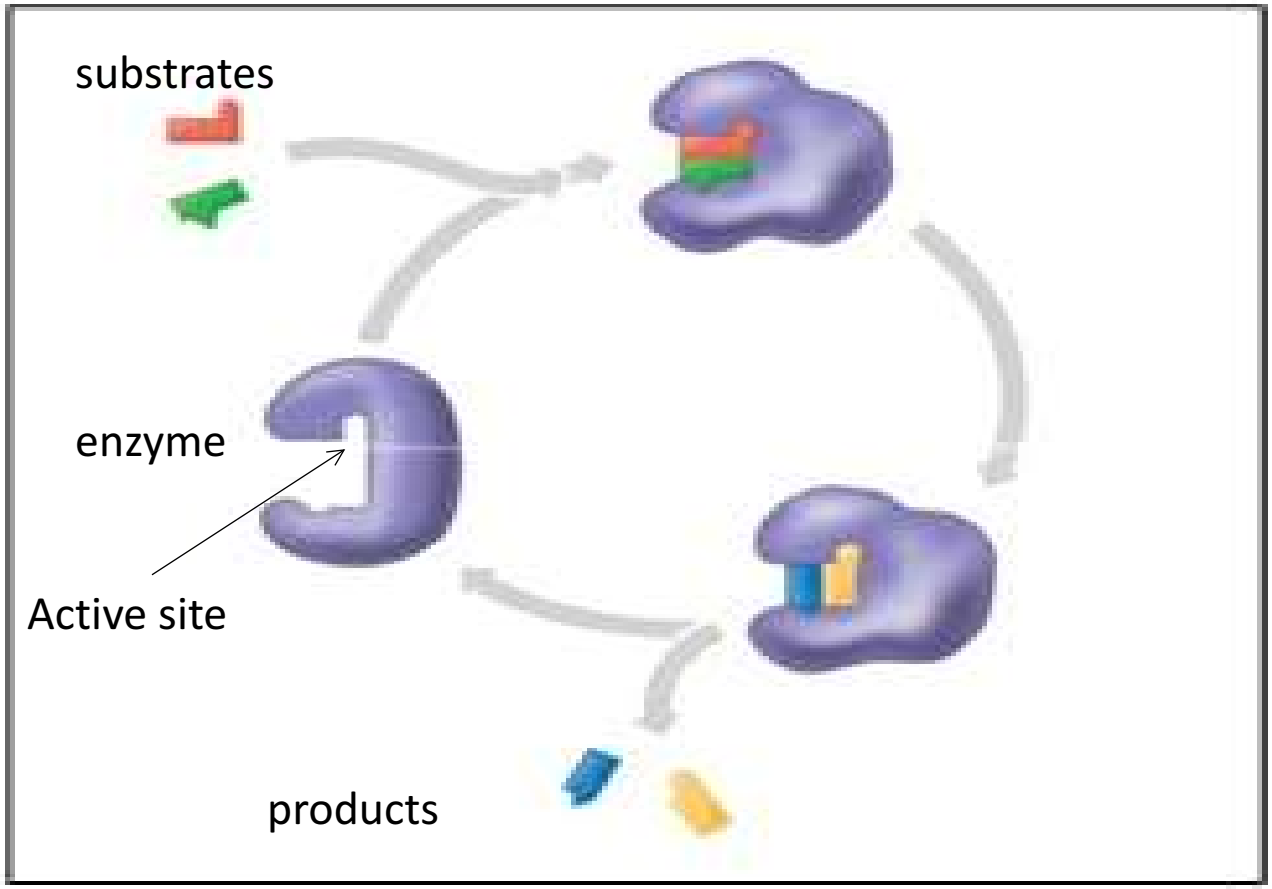


What effect does an enzyme have on E_A?

An enzyme lowers the E_A

Enzymes

- Label this figure while you define each of the following terms:



Enzymes

- Many factors can affect the rate of enzyme function. These factors include the concentration of substrate, pH, and temperature. Explain how.
  - These factors may alter the shape of the enzyme or delay with the formation of an Enzyme-Substrate Complex

Macromolecules

Biological Macromolecule	Function	Monomer	Examples
Carbohydrate	Short term energy storage Structure (cell walls & exoskeletons)	Monosaccharide (Glucose)	Glycogen Cellulose sucrose lactose
Lipids	Store energy Insulate Waterproof	Fatty Acids	Oil Wax Cholesterol
Proteins	Form muscles Act as hormones Catalyze reactions	Amino Acids	Insulin Lactase Catalase
Nucleic Acids	Store genetic information	Nucleotides	DNA RNA