SECTION 2.5

ENZYMES
Power Notes

A Catalyst:

1. decreases activation energy and increases reaction rate

2. is not used up during a reaction and does not alter the equilibrium of the reaction

Enzymes:

catalysts for chemical reactions in living things; almost all are proteins

Homeostasis and enzymes:

large changes in temperature or pH can cause enzymes to break down (hydrogen bonds break); stable conditions necessary for an organism's enzymes to function properly

Enzyme structure and function:

An enzymes structure depends on it's function. **Altered** enzyme structure prevents the enzyme from functioning properly. pH and temperature affect enzyme reaction rates.

Substrates and Lock-and-Key Model of Enzyme Function

Substrates:

reactants acted upon by an enzyme; bind to an enzyme's active sites

Lock-and-key model:

only particular substrates will bind to particular enzymes; when bound, enzymes weaken bonds within substrates and allow reactions to occur