Biology Chapter 8: Study Guide

Section 1

- Definitions

Autotroph Adenosine Triphosphate (ATP)
Heterotroph

- Know where the energy in most foods come from
- Be able to list at least one example of an autotroph and heterotroph
- Be able to list at least two forms of energy
- Know the components of ATP
- Be able to label a diagram of ATP
- Be able to recognize the full name of ATP
- Be able to define the prefixes "tri-" and "di-" in relation to ATP and ADP, respectively
- Know the difference between ATP and ADP
- Know where the energy is being stored in ATP
- Be able to list at least three uses of ATP in the cell
- Know whether ATP is a good source for storing large amounts of energy for extended periods of time

Section 2

- Definitions

Photosynthesis Pigment Chlorophyll

- Know the experiments, results and conclusions of van Helmont, Priestly and Ingenhousz
- Know the discovery made by van Helmont, Priestly, Ingenhousz and others
- Be able to write out the overall equation of photosynthesis
- Know what two things are required by the plant in order to undergo photosynthesis
- Know the two main types of chlorophyll
- Know what colors of light that pigments absorb and reflect

Section 3

- Definitions

Thylakoid $NADP^+$ Light-dependent rxn
Photosystem ATP synthase
Stroma Calvin Cycle

- Know where the light-dependent reaction and the Calvin Cycle take place
- Be able to label a diagram of a chloroplast
- Know how electrons get to be high energy electrons
- Know what carrier molecules are, what they do and an example
- Know what $NADP^+$ holds in order to become NADPH
- Know the steps of the light-dependent reaction
- Know what goes into the light-dependent reaction and what comes out

- Be able to fill in missing information in the light-dependent reaction diagram (page 211)
- Know the steps of the Calvin Cycle
- Know both names for the Calving Cycle
- Know what goes into the Calvin Cycle and what comes out
- Be able to fill in missing information in the Calving Cycle diagram (page 212)
- Be able to list at least two factors that affect photosynthesis and why