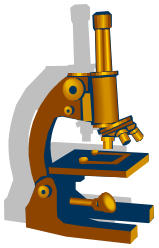
Student Study Guide – Honors Biology



Building Molecules - Chapter 3:

For your test you should be able to demonstrate your understanding of the following items:

- ❑ Draw the simplest hydrocarbon and name it.
- ❑ Definition of an ion, hydrocarbon, organic, functional group, steroid, hydrophilic, hydrophobic, dehydration synthesis, hydrolysis, peptide bond, denaturation
- ❑ Name and write the formula of a given sugar molecule. Also, be able to identify the number of carbon specified.
- ❑ Specify and explain the different forms carbon based molecules may take.
- ❑ Name and draw an example of the four major functional groups (remember, one has two possible configurations so this would be 5 drawing/diagrams altogether) and explain where they would be found.
- ❑ Explain dehydration synthesis and hydrolysis. Be able to tell which on is an anabolic process or a catabolic process and why.
- ❑ Differentiate and give examples of monosaccharides, disaccharides, and polysaccharides.
- ❑ Distinguish the difference between starch and glycogen (make sure your answer includes their function, how they are structurally different, and what organism are they found in?).
- ❑ Be able to identify specific characteristics and/or facts about cellulose.
- ❑ Differentiate between hydrophilic and hydrophobic properties and give examples of each one.
- ❑ What the difference is between saturated and unsaturated fats.
- ❑ The four basic macromolecules and their subunits (monomers), their function and an example of each one; the basic structure of an amino acid (draw a diagram and highlight and label its functional groups, and the basic structure of a nucleotide.
- ❑ The four levels of protein structure and the biological implications/significance for these differences.

Review all handout materials, class notes and chapter 3 of your text book

And

STUDY! ***STUDY!*** ***STUDY!***