**Magnet Bio Unit 1 Test Review- Some ‘Tips’**

1. Be sure to study ENZYMES.
   1. What is an enzyme?
   2. Type of molecule?
   3. Are they recyclable?
   4. Are they specific with their substrate(s)?
   5. How do they affect activation energy of a reaction?
   6. Draw a graph showing how they affect activation energy.
   7. Draw a diagram showing how an enzyme acts on a substrate.
   8. Give 3 ways enzymes can become denatured.
   9. Competitive inhibitor vs noncompetitive
2. Know properties of WATER. Explain (with examples):
   1. Cohesion
   2. Adhesion
   3. High Specific Heat (water can absorb a lot of energy and not change much in temperature)
   4. High surface tension
   5. Evaporation and Condensation
   6. Heat of Fusion; Heat of Vaporization
3. What makes water POLAR (hydrophilic)?
4. Explain: HYDROGEN BOND. How is it different from covalent and ionic bond?
5. Why is water a good solvent?
6. What is a SOLUTION?
7. Describe a COVALENT BOND
8. Write any chemical reaction. Where are the REACTANTS? PRODUCTS? Why must it be balanced?
9. Define HOMEOSTASIS.
10. Go over the SCIENTIFIC METHOD. Know: independent variable, dependent, control. Which axis is independent variable on? Dependent?
11. Study the FOUR TYPES of MACROMOLECULES. Hopefully, you made a good chart from the homework WS! The PPt is on my blog. Go over it!
12. Functional groups
13. Amino acids: Polar ‘R’ group vs nonpolar
14. Proteins: 4 Levels of structure.
15. Monomers of carbs, proteins, nucleic acids.
16. Bases in DNA and RNA; Sugars in DNA & RNA
17. Lipids: Triglycerides; Steroids. Polar or nonpolar?
18. Carbs: Empirical formula; monosacc vs disacc vs polysacc (and know examples)
19. Dehydration Syn vs Hydrolysis
20. What is an ION? ISOTOPE? ISOMER?
21. Go over characteristics of life ppt. Go over basic chem ppt.
22. Know an ACID from a BASE on the pH scale. [Remember: acids have H+ (hydronium) and bases have hydroxide]. Each increment is based on 10. (pH 4 has 10X more H+ than pH5)
23. There will be several graphs you will have to interpret and experiments to analyze.