**BioChemistry Study Guide**

Be sure to include as much information in each answer as you can! Also the more drawings the better! Know all vocab and put answers in your own words!

1. Define matter using 2 words.
2. what is matter?
3. What is the smallest unit of matter?
4. Draw label and thoroughly explain an atom and all of its parts.
5. Explain the difference between an element, isotope and compound.
6. Compare and contrast ionic and covalent bonding.
7. Be able to complete an ionic and covalent bond.
8. What is the difference between a molecule and an ion?
9. Explain what polarity is and how it affects bonding along with cohesion and adhesion.
10. Explain what a solution is and how the pH scale is used to measure acids and bases.
11. Describe a carbohydrate and its functions (use your handout).
12. Describe lipids and their functions (use your handout).
13. Describe proteins and their functions (use your handout).
14. Describe nucleic acids and their functions (use your handout).
15. Explain conservation of mass and conservation of energy.
16. Label the parts of a chemical reaction using the equation from the ppt.
17. Explain what an enzyme is and the steps of enzyme activity. (very important to know these steps!)
18. Are all proteins enzymes?
19. Are all enzymes proteins?
20. Why are enzymes important?
21. What is it called when an enzyme changes shape?
22. What two things cause and enzymes shape to change?
23. Explain how matter, atoms, carbohydrates, lipids, proteins, nucleic acids and enzymes are all related.