Honors Biology Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
NDHS Per: \_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Biomolecules Unit Test Study Guide**

**Test format:**

Multiple Choice Questions  
Short Answer Questions  
Food Calorie Calculations  
Food Label Reading  
Biomolecule Lab questions   
Microscope Wet Mount Test (You will have to make a wet mount of a newspaper letter so it appears in the upright orientation when viewed under the 100 power objective)

**STUDY TIPS:**

DO NOT WAIT UNTIL THE NIGHT BEFORE! Your brain might explode.   
Break the content up into manageable parts and study part of it each night.   
Don’t just stare at your notes and read them. Your brain will work better and remember more if you reprocess the information. Rewrite the notes, make flash cards, organize the information into a chart or outline. Use pictures. Your brain remembers more from a picture than words

**DAY One:**Characteristics of Life:  
 Know the 6 characteristics of life and examples of each Biomolecules:  
 6 main elements of biological molecules: symbols and names – know which elements are in each type of molecules  
 Four Biological Molecules:  
 - elements that make them up  
 - know functions and examples  
 - know how they fit into the nutrient cycles  
 - structure of glucose, fructose, saturated fat, unsaturated oil

**DAY TWO:**Digestive System:  
 Know organs and functions  
 Be able to label a diagram of the digestive system: A word bank WILL NOT be provided  
 Know where the major biological molecules are digested  
 Organs: Mouth, salivary glands, esophagus, cardiac sphincter, stomach, pyloric sphincter, duodenum, jejunum, ileum, villi and microvilli, Large intestine, liver, gall bladder, pancreas, appendix, rectum, anus  
 Digestive Secretions: saliva, amylase, pepsin, HCl, bile

**DAY THREE:**Nutrient Cycles  
 Know how the nutrient cycles work and flow  
 Explain the difference between how matter and energy move through ecosystems  
 Draw each nutrient cycle.  
 Terms: Producer, Consumer (Herbivore, omnivore, carnivore), Detrivore (Decomposer), Fixation, Assimilation, Consumption, Decomposition, Nitrification, Denitrification, Erosion, Precipitation, Evapotranspiration, Photosynthesis, Cellular Respiration, Mutualism, Legumes

**Day FOUR:**Review the Biomolecules Lab: Know what the following tests indicate – Benedicts, Lugols, Biruets, Soluble/Insoluble, Sudan IV, Melting Point  
Practice Calorie Calculations  
Know the difference between a Calorie and a calorie. What is a calorie?   
Review the material from day 1 – 3 focusing on your weak areas.

**Calorie Calculation Practice Problems: SHOW YOUR WORK!!!**

A sample of food has 8.0 grams of protein, 10.0 grams of fat, and 20.0 grams of carbohydrates with 3 of those being fiber.

1. How many Calories are from the protein?
2. How many Calories are from the fat?
3. How many Calories are from the carbohydrates? (REMEMBER THE FIBER RULE)
4. What is the total Caloric value?
5. What percentage of the Calories comes from the Fat?

**Answers**: 1) 32 Cal 2) 90 Cal 3) 68 Cal 4) 190 Cal 5) 47.4 % Fat

**Note: I will be available before and after school each day for extra help or if you would like to practice the microscope wet mount.**