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.**