**Safety/General Science**

1. Where is the following safety equipment in the classroom:
   1. Eyewash-
   2. Safety shower-
   3. Fire extinguisher-
2. Explain why it is important to wear safety goggles at all times, even when you think the materials are not dangerous.
3. Why is food not permitted in the science classroom/lab?
4. Why is horseplay not tolerated in the science classroom/lab? Give some specific examples of how horseplay can interfere with the learning process in science and how it can be dangerous.
5. What is “science”?
6. What is “theory” in science?

**Scientific Method**

1. What are the five steps of scientific methodology in order?
2. What is the difference between an independent and dependent variable? Give an example of a situation and identify each variable.
3. What is a hypothesis?
4. What is the difference between an experimental group and a control group?
5. What is the difference between quantitative and qualitative data? Give two examples of each.

**Characteristics of Living Things**

1. Give a brief description of each characteristic of living thing- MRS GREN
2. Pick one living organism (other than a human) and explain how it demonstrates each of the characteristics of living things.

**Macromolecules- Part 1**

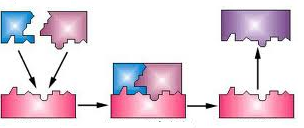
1. Which one element bonds with other elements like hydrogen, oxygen, phosphorus, and sulfur to form macromolecules?
2. What are the monomers of:
   1. Proteins
   2. Carbohydrates
   3. Nucleic Acids
   4. Lipids
3. Compare macromolecules to a section of chain.
4. What is the definition of:
   1. Monosaccharide
   2. Monomer
   3. Polymer
   4. Amino Acid
   5. Polysaccharide

**Macromolecules- Part 2**

1. Another name for macromolecule is….
2. The small pieces of a macromolecule are called…
3. What are examples of:
   1. Proteins
   2. Carbohydrates
   3. Nucleic Acids
   4. Lipids
4. What are the functions of:
   1. Proteins
   2. Carbohydrates
   3. Nucleic Acids
   4. Lipids
5. What are the three parts of a nucleotide?

**Enzymes- Part 1**

1. What is a catalyst?
2. What is:
   1. Active site
   2. Reactant
   3. Product
   4. Chemical reaction
3. On the diagram below, label the enzyme, substrate/reactants, active site, enzyme/substrate complex, and the products.



1. What are two factors that affect how well enzymes work?

**Enzymes- Part 2**

1. Explain why enzymes are biological catalysts.
2. Why are enzymes and substrates compared to a “lock and key” or “puzzle pieces”?
3. From your graphing activity, compare and contrast enzyme A, B, and C based on their activity at different pH and temperature levels. (ie: which worked best/worst/in the middle at high pH/low pH and high temp/low temp.)
4. Explain why some chemical reactions need enzymes in order to occur.