Chemistry and Biomolecules study guide:

Chemistry

1. How are atoms organized in a periodic table?
2. What does each number represent for each element on the periodic table?
3. How do you determine the number of valence electrons of an atom?
4. What are isotopes?
5. How do you find the number of neutrons in an atom using the periodic table?
6. Create a bohr model of an atom
7. Create a Lewis dot diagram of an atom
8. Which atoms have the same properties as other atoms? Why?
9. How many places can each atom bond?
10. How are covalent and ionic bonds different? Which is stronger? Why?

Biology and Biomolecules:

1. What characteristics do livings have to have to be considered alive?
2. What are the 6 most common atoms found in all living things?
3. Why are living things considered organic organisms?
4. What makes a carbohydrate a carbohydrate? A lipid a lipid? A nucleic acid a nucleic acid? A protein a protein
5. What are the functions of each biomolecule?
6. How are polymers formed from monomers
7. What are the basic structures of each biomolecule?
8. Why can humans digest starch but not cellulose?
9. How are saturated and unsaturated fats different
10. Why are phospholipids unique among the lipids? Why is this important for all life?
11. Create the complimentary strand of DNA to the strand below
    1. 5’-ATTGCCCTGAGGCGTAGTCAACGT-3”
12. How are DNA and RNA different
13. What determines the shape of a protein?
14. What causes the protein to fold?
15. What causes the protein to unfold?