**Biochemistry**

**Mr. Tracy**

This one semester course will investigate the chemistry of life. We will discuss the chemical properties of the compounds and structures involved with producing and maintaining life on earth.

1. **A View of Life** – What defines Life and where did it come from?
2. **Chemistry of Water** – We will discuss the properties of the most important chemical on the earth.
3. **Organic Molecules** – Investigate the wide variety of compounds that contain Carbon and Hydrogen and their chemical properties.
4. **Molecular Genetics** – Follow DNA and RNA from their discovery to how they function in living things.
5. **Gene Regulation** – How genes function and how the body regulates them.
6. **Metabolism – Bioenergetics** – The transfer of energy form nutrient molecules to biological systems.
7. **Photosynthesis** - Investigate the chloroplast and how it produces organic compounds from inorganic material.
8. **Cellular Respiration** – Investigate the mitochondrion and how it generates energy for the cell.
9. **Cell – Tissues – Organs** - The organization of multicellular of organisms and the chemistry behind it.
10. **Regulation in Organisms** - The chemistry involved with nerve transmissions and hormonal control in maintaining homeostasis.

The class will involve lecture and laboratory activities. The grade will be composed of homework assignments, lab write-ups, and topic quizzes. Lab reports should be completed in a timely manner and points will be deducted for late work. If you miss a quiz it must be made up the next time you are in class. There will be a final exam at the end of the semester.