**Honors Chemistry**

**Exam 1 Review Sheet**

**The breakdown of the exam will be as follows:**

Multiple Choice 20 pts.

Problems 33 pts.

Sample experiments 9 pts.

Identification 12 pts.

Atomic Structure problems 23 pts

97 pts.

**Exam Material**

Matter, Properties of matter, and Change

* Know the difference between signs of physical change and signs of chemical change.
* Understand what the following mean and be able to identify examples: chemistry, physical/ chemical properties, physical/chemical change, heterogeneous/homogeneous mixture, solution, elements, compounds, mixtures
* Know the law of conservation of mass and understand how it applies to chemical reactions.

Measurements, conversions, and calculations

* Be able to define the following: quantitative, qualitative, accuracy, precision
* Understand why significant figures are used
* Be able to identify the number of significant figures in a measurement and be able to round off to a designated number of significant figures
* Be able to use significant figures in calculations.
* Understand the difference between the Celsius and Kelvin scale
* Be able to convert measurements using significant figures. (Know metric conversions, English to metric will be given to you)
* Know what density means and know the density formula
* Be able to calculate density, mass, or volume using the formula given the other two.
* Know the formula for percent error and be able to calculate percent error given hypothetical experimental data

**Atomic Stucture**

* Be able to define the following: atom, electrons, protons, neutrons, atomic number, mass number, atomic mass, isotope, ion, cation, anion
* Know the names of the contributors to atomic theory and what their contributions were (Democritus, Dalton, Thomson, Rutherford, Chadwick. Goldstein)
* Be able to use the periodic table to determine the atomic number and atomic mass
* Be able to determine the number of protons, neutrons, and electrons in an atom using atomic number and mass number