Chemical Reactions Unit Outline

# Sub units:

## Naming and predicting equations:

You will learn:

* To write the full names of binary, polyatomic compounds and acids when given the chemical formula
* To write the formula when given the full name of a compound
* Learn and be able to identify 5 different kinds of chemical equation
* When given the reactants of an equation, be able to predict the products

## Isotopes and average atomic mass

You will learn:

* What an isotope is and be able to define it
* How to determine the average atomic mass when given the relative abundance of the isotopes
* Where isotopes are used in science and how they are used

## Moles and the conversions they involve

You will learn:

* What a mole is and be able to define it
* How to convert between moles and:

1. number of particles
2. mass
3. volume

* How to determine the volume and/or moles in different conditions. (change pressure and/or temperature)
* Interpret equations in terms of moles, mass or volume.

## Limiting reactants and percent composition

You will learn:

* How to determine the limiting reactant in an equation
* To perform a lab to verify your prediction
* Determine the percent composition, by mass, of a particular element in a compound
* Determine percent yield of a compound relative to the theoretical yield

## Stoichiometry

You will learn:

* What stoichiometry is and be able to define it
* Be able to balance stoichiometric equations
* Learn where knowledge of stoichiometry is used in science and technology

# Assessment

You will be assessed using a portfolio method (worth 80%) and 2 tests (10% each)

You will be required to:

1. Write both test
2. Choose one or more artifacts to represent your understanding of each of the above 5 sub units
3. Have a 10 minute, individual conference with me at the end of the unit where you will present your artifacts and explain your understanding of each sub unit
4. For each artifact you will fill out a Write up form to help you determine your grade for the sub unit

For each sub unit you will be given a combination of worksheets and mini assignments designed to help you understand the topic. These assignments will be handed in when completed for feedback.

Test Day: #1-April 5th #2-April 20th

Portfolio conference: April 23rd or April 24th

If you cannot write the tests on the days specified or do the portfolio conference on one of the 2 days above you must come see me. **Submissions after April 24th 3:30 pm will not be accepted!**