***Chemistry Activity Log***

**1st Quarter**

 M/T August 15/16

Introductions

Class Rules

Safety Rules

Homework: Have class rules signed and brought back- Due W.

Bell Ringer: Why are we here? In general and why do you think you have to take this class? Discuss with Table groups at start of class.

*Standards and Essential Questions for Unit I(Chapters 1 and 3)*

*NoS.1, NoS.3, NoS.4. NoS.6*

*Can students develop explanations based on reproducible data and observations and communicate their ideas both verbally and in written form? Can students evaluate the work of their peers and use mathematical analogies to simplify and convert their experience to recognize the limitations of those analogies and models?*

W August 17

Collect Rules Sheet

Chem Diagnostic Test

R/F August 18/19

Why are we here? Discussion

Chemistry Introduction/Scientific Method notes

Oreo Lab

Homework: Read Ch. 1 in book; do problems 1-33 in Chapter 1- Due M/T

Bell Ringer: Which is better Pure or Applied Science?

M/T August 22/23

Check Ch. 1 Review

Scientific Measurement Notes

Homework: Eng- Met worksheet DueW

Bell Ringer: Why do we need units?

W August 24

Check Ch. 3 Review

Sig Figs/Conversion Notes

Homework: Homework: conversion worksheet 3.3 practice problem side odds 1-23 and 2.3 1-13, 2.4 (1-4 only) Due R/F

Bell Ringer: Should the U.S. convert to the Metric System like the rest of the world?

R/F August 25/26

Safety Quiz

Conversion Practice

Homework: Do measurement test (odds only)Non SI side odds only and finish Ch 3 Prac problems, odds only due M/T

Bell Ringer: Tell me why it is important for scientists to understand uncertainty.

M/T August 29/30

Sig Fig Quiz

Uncertainty Lab

Conversion Group Board Work

Homework: Finish (evens) Non-Si worksheet due W

W August 31

Conversion Quiz

Sig Fig and Multiple Conversion Review

Homework: study for test!

R/F September 1/2

Unit 1 Test

*Standards and Essential Questions for Unit 2 (Chapter 2)*

*C1.1, C1.2, C1.3, C1.4, C1.5, C1.7*

*Can students: Differentiate between pure substances and mixtures; designate extensive and intensive while describing chemical and physical properties and changes; recognize indicators of chemical change; describe characteristics of states of matter and define density and perform calculations involving density?*

T/W September 6/7

Go over test

Mindtrap

Matter and Properties intro notes.

States of Matter Notes

Homework: property worksheet both sides due R/F.

Bell Ringer: Describe five characteristics of a person in the room, be nice! See if I can identify them based on your descriptions.

R/F September 8/9

Density Notes

Candle Lab

 Homework: density worksheets due M/T

Bell Ringer: Why does ice float? How much of it is above the water and why is this important to history?

M/T September 12/13

Property Lab

Matter Notes

Homework: Read Ch. 2 do questions 1-38 and Chapter 4 practice problems 6-16 due W

Bell Ringer: Why should you not use water to put out a gas fire?

W September 14

Finish Property Lab

Start Density Lab

Homework: Matter worksheets due R/F

R/F September 15/16

Density Quiz

Property Quiz

Finish Labs

Bell Ringer: How does a municipal water treatment plant clean the water for you to drink?

Bell Ringer: How does a municipal water treatment plant clean the water for you to drink?

M/T September 19/20

Foul Water Lab

Homework: Ch. 2 Review 50-86 Evens only, due W

W September 21

Mixtures Quiz

Review for Test

R/F September 22/23

Unit II Test

Bell Ringer: What makes up an atom?

*Standards and Essential Questions for Unit III(Ch. 4 and 25)*

*NoS.7,C2.1, C2.2,C2.3, C2.4, C2.7, C2.8*

*Can students: Describe varying models of atomic structure; describe subatomic particles and how they contribute to the structure of the atom; Determine the number of protons, neutrons and electrons and relate these to isotopes, atomic number and mass number and calculate relative abundance; compare and contrast nuclear reactions with chemical reactions differentiating between fission and fusion reactions; calculate half –lives of a radioactive sample?*

M/T September 26/27

Atoms and Ions notes

Homework: Atom Drawings 1-20 and 31-38 due Wednesday

Mindtrap

Bell Ringer: How do you calculate your grade in my class?

W September 28

Isotope notes and work

Homework: Exploring Atoms Packet- due R/F

Bell Ringer: What is radioactive material?

R/F September 29/30

Collect Atom Packet

Nuclear Intro notes

Bean Lab

Homework: Nuclear Reactions Packet p. 2 and 3 only- due M/T

Bell Ringer: How do we use nuclear reactions in our everyday life?

M/T October 3/4

Half Life review and work

Fission vs. Fusion notes

Nuclear Reactions Work

Homework: Radioactivity Packet p 1-11- due end of period R/F

 W October 5

Radioactivity Review

M and M lab

R/F October 6/7

Nuclear Work

Atom Quiz

Homework: Ch 4 35-71, ch 25 34-71 all due W Oct 12

M/T October10/11

Nuclear Review

Nuclear Quiz

W October 12

Atom Game

R/F October 13/14

Unit III Test Atomic Structure

*Standards and Essential Questions for Unit IV (Chapters 5 and 6)*

*C 2.5, C 2.6,*

*Can students: Write the electron configuration of an element and relate this to its position on the periodic table; use the periodic table and electron configurations to determine an element’s number of valence electrons and chemical and physical properties?*

**2nd Quarter**

M October 17 (4th)

Mindtrap

Notes on quantum mechanical model

Homework: Ch. 5 1-14, 27-44 due T

T October 18(traditional Day due to PSAT)

4th period T

Quantum mechanical model work and review

Homework: Electron Configuration Packet due R

5th/6th period T

Mindtrap

Notes on quantum mechanical model

Homework: Ch. 5 1-14, 27-44 due W

W October 19 (5th and 6th period due to PSAT)

5th and 5th period only

Quantum mechanical model work and review

Homework: Electron Configuration Packet due F

R/F October 20/21

Light Notes and work

Homework: Chapter 5 Review p. 152-153 45-64 due M/T

M/T October 24/25

Periodic Table Notes

Homework: Periodic Table Basics packet: due W

W October 26

Electron Configuration Quiz

M/T October 31/November 1

Periodic Table Notes

Periodic table group work- due in class

Homework: Ch. 6 1-25 due W

W November 2

Who am I Quiz?

Test Review

R/F November 3/4

Unit IV Test (Ch. 5 and 6)

*Standards and Essential Questions for Unit V (Chapters 7,8 and22)*

*C 3.1, 3.2, 3.3, 3.4, 3.5, 9.1, 9.2*

*Can students: Describe and differentiate the characteristics and interactions between atoms in covalent and ionic compounds; compare and contrast how ionic and covalent compounds form; compare and contrast ionic, covalent network, polar and non-polar compounds with respect to bonding strengths and attributes; use structural formulas to illustrate carbon atoms’ ability to bond covalently with many different substances; identify the molecular types formed by the covalent bonding of carbon atoms and describe the typical properties of these types.*

M/T November 7/8

Go over Test

Ionic Bonding and Covalent Bonding

Homework: Eye for an Ion packet and Covalent Bonding odd only on all + Polyatomic Ions due W

W November 9

VSEPR Theory

Homework: VSEPR packet pages due R/F

R/F November 10/11

Review VSEPR

Organic Chemistry Notes

Homework: Organic Chem Packet due next W

Bring Marshmallows (Big and Small) and toothpicks for lab on R/F

M/T November 14/15

Ionic vs Covalent Quiz

Hydrocarbon Derivatives

Homework: Organic Chem Packet due W

Bring Marshmallows (Big and Small) and toothpicks for lab on R/F

W November 16

Organic Chem Review

R/F November 17/18

Marshmallow Lab

Organic Quiz

M/T November 21/22

Unit V Test (Ch. 7,8,22)

*Standards and Essential Questions for Unit VI (Chapter 9)*

*C 3.5*

*Can Students draw structural formulas for and name covalent molecules; write chemical formulas for ionic compounds given names and vice versa?*

W November 23

Lifespan of a Bubble Lab

M/T November 28/29

Go over Test

Naming and Writing Introduction

Homework: Writing Ionic Formula Packet due W

W November 30

Naming and Writing Molecular and Acids

Homework: Naming and Writing packet due M

R/F December 1/2

Naming and Writing Quiz

M/T December 5/6

Naming and Writing Test

*Standards and Essential Questions for Unit VII (Chapter 11)*

*C 4.1, 4.2, 4.4, 4.5, 4.6*

*Can students: Predict simple reactions such as synthesis, decomposition, single replacement, double replacement and combustion; balance chemical equations using the law of conservation of mass; calculate the quantities of reactants needed and products made in a chemical reaction; describe and classify various types of reactions; determine oxidation states and identify the substances gaining and losing electrons in redox reactions?*

W December 7

Balancing Equations

Homework: Front Balancing Packet, due R/F

R/F December 8/9

Simple Reactions

Homework: Simple Reactions Packet due M/T

M/T December 12/13

Balancing Quiz

W December 14

Simple Reactions Quiz

R/F December 15/16

Semester Review

Homework: Semester Review Packet Due Final Exam Day

M December 19

Final Exam 4

W December 21

Final Exam 5

R December 22

Final Exam 6

M/T January 9/10

Balancing and Simple Reaction Review

Start Complex Reactions

W January 11

Complex Reactions

Homework: Complex Reactions Packet due T/W

R/F January 12/13

Reaction Lab Day 1

T/W January 17/18

Reaction Lab Day 2

R/F January 19/20 (19th textbook caravan day)

Reaction work

Homework: Complex Reactions Packet due M

M/T January 23/24

Reaction Review

Homework: Reactions Review Packet due W

W January 25

Reaction Quiz

R/F January 26/27

Reaction Type Test

*Standards and Essential Questions for Unit VII (Chapter 10)*

*C 4.3, 4.7*

*Can students: use the mole concept to determine the number of moles and number of atoms or molecules in samples of elements and compounds; perform calculations to determine percent composition by mass of a compound or mixture when given the formula?*

M/T January 30/31

Mole Introduction

Mole Conversions and Molar Volume

Homework: Mole worksheet packet due Wednesday

W February 1

Check homework

Percent composition notes

Homework: Ch. 8 practice problem worksheet 1-20 due R/F

R/F February 2/3

Empirical vs. Molecular Formulas

% composition lab

Homework: Formula Mass packet due M/T

M/T February 6/7

Nuts and Bolts Lab

Mole Conversions Quiz

Homework: Ch. 10 Review 80-95 due W

W February 8

Empirical and Molecular Quiz

R/F February 9/10

Chapter 10 Test

*Standards and Essential Questions for Unit VIII (Chapter 12)*

*C 4.3, 4.4*

*Can students: use the mole concept to determine the number of moles and number of atoms or molecules in samples of elements and compounds; use a balanced chemical equation to calculate the quantities of reactants needed and products made in a chemical reaction that goes to completion*

M/T February 13/14

Go over test

Mindtrap

Mole-Mole Conversions

Homework: Read Chapter 12. Do problems 1-12 in the book- due W

W February 15

Stoichiometry basics

Homework: Mole-Mole Packet due R/F

R/F February 16/17

Stoichiometry Review

T/W February 21/22

Limiting Reagents Intro

Homework: Stoichiometry Worksheet due R/F

R/F February 23/24

Stoichiometry Quiz

Homework: Finish LR Packet due T/W

M February 27

Stoichiometry Lab

T/W February 28/March 1

Limiting Reagents Review

% yield

Homework: Chapter 12 51-53, 55-65 due R/F

R/F March 2/3

Stoichiometry group review

Homework: Work on review

M/T March 6/7

Limiting Reagent Quiz

W March 8

Smores Lab

R/F March 9/10

Ch. 12 Test

*Standards and Essential Questions for Unit IX (Chapter 13-14)*

*C 6.1, 6.2, 5.1, 5.2, 5.3*

*Can students: Explain that atoms and molecules that make up matter are in constant motion and that this motion increases as thermal energy increases; distinguish between the concepts of temperature and heat flow; use kinetic molecular theory to explain changes in gas volumes, pressure, moles and temperature; use the ideal gas equation to calculate changes in variables while others are held constant; use ideal gas law calculate the volumes of reactants or products in a chemical reaction?*

M/T March 13/14

Go over test

Mindtrap

Start States of Matter notes

Homework: States of Matter work in book

W March 15

Notes on Pressure, Phase Changes and Phase Diagrams

Homework: Manometer worksheet due R/F

R/F March 16/17

Basic Gas law notes

Homework: Intro Gas laws worksheets – due M/T

M/T March 20/21

Ideal Gas Law, Daltons law and Grahams Law

Homework: Ideal gas law worksheets- due W

W March 22

Gas Law Work- due M/T after Spring Break

R/F March 23/24

Limiting Reagent Lab

M/T April 3/4

Gas Law Practice Problem Worksheet

W April 5

Gas Laws review and quiz

R/F April 6/7

Gas Law Test

*Standards and Essential Questions for Unit X (Chapter 13-14)*

*C 6.3, 6.4*

*Can students: solve problems involving heat flow and temperature changes, using known values of specific heat and /or phase change constants; classify reactions and phase changes as exothermic or endothermic?*

M/T April 10/11

Go over test

Mindtrap

Heat Units and Endo vs Exo thermic reaction notes

Boiling water lab

Homework: Heat and Temperature conversion worksheet due W

W/R April 12/13

Specific Heat Notes and work

Homework: Specific Heat worksheet – due M/T

M/T April 17/18

Phase Change Heat Calculations and Diagrams

Homework: Heat Packet due M/T

W April 19

Specific Heat Lab

Homework: Heat work due next M/T

R/F April 20/21

Phase Change Lab

Heat Quiz

M/T April 24/25

Heat Test

*Standards and Essential Questions for Unit XI (Chapter 15, 16, 18)*

*C 7.1,7.2, 7.3, 7.4, 7.5, 7.6*

*Can students: describe the composition and properties of types of solutions; explain how temperature, pressure and polarity of the solvent affect the solubility; describe the concentration of solutes in terms of molarity; prepare a specific volume of a solution of a given molarity when provided with a known solute; explain how the rate of a reaction is affected by changes in concentration, temperature, surface area and the use of a catalyst; write equilibrium expressions for reversible reactions?*

W April 26

Go over Test

Solution Notes

Homework: Solution Packet due R/F

R/F April 27/28

Reaction Rates and K expressions

Molarity Quiz

Homework: Solubility and Solution Stoichiometry worksheet due M/T

M/T May 1/2

Reaction Rates and Equilibrium expression

Homework: Equilbrium Expressions and Ch. 19 worksheet due W

*Standards and Essential Questions for Unit XII (Chapter 13-14)*

*C 8.1, 8.2, 8.3, 8.4, 8.5*

*Can students: use Arrhenius and Bronsted-Lowry models to classify substances as acids or bases; describe characteristic properties of acids and bases; compare and contrast the dissociation and strength of acids and bases in solution; calculate the pH and hydronium ion concentration in a solution; calculate the concentration of an unknown solution for an acid-base titiration?*

W May 3

Acid-Base Intro

Solution Stoichiometry Quiz

Homework: Naming acids sheet, Ch. 18 19-24, 63-67 due R/F

R/F May 4/5

pH notes

Homework: Ch. 19 1-24 Due M/T

M/T May 8/9

K work and Quiz

W May 10

Acid Base Reactions

Homework: Ch. 20 Non-SI side, mol, norm, dilution, titration worksheets due R/F

R/F May 11/12

pH quiz

Titration Quiz

M/T May 15/16

Acid-Base Test

W May 17

Acid Base Rocket Lab

R/F May 18/19

Mindtrap

Final Exam Review

Turn in Textbooks

M May 22

Final Exam Review

Tuesday May 23-Friday May 25

Final Exam and goodbye!!!!!!!

Dilution Lab and review if not taking Final