***Chemistry Activity Log***

**1st Quarter**

Thursday August 12

Introductions

Class Rules

Safety Rules

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

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?*

Monday August 17

Why are we here? Discussion

Collect Rules Sheet

Chemistry Introduction/Scientific Method notes

Chemistry Diagnostic Test- this is for participation points, not for an accuracy grade

Homework: Read Ch. 1 in book; do problems 1-33 in Chapter 1- Due Wednesday

Bell Ringer: Which is better Pure or Applied Science?

MATRIX 1- Oreo Lab and Scientific Method Work Review

Wednesday August 19-

Check Ch. 1 Review

Safety Rules

Scientific Measurement Notes

Homework: Ch. 3 1-18 and Sig Fig Worksheets Due Friday

Bell Ringer: Why do we need units?

Friday August 21

Check Ch. 3 Review

Conversion Notes

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

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

Tuesday August 25

Safety Quiz

Conversion Practice

Homework: Do measurement test (odds only)due Wednesday

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

Thursday August 27

Sig Fig Quiz

Uncertainty Lab

Conversion Group Board Work

Homework: Non-Si worksheet due Monday

Monday August 31

Conversion Quiz

Sig Fig and Multiple Conversion Review

Homework: English to Metric Conversion Worksheet and study for test!

Wednesday September 2

Review Unit 1

Unit 1 Test

Bell Ringer: Describe all the characteristics of your favorite food.

*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?*

MATRIX 2- Candle Lab

Friday September 4

Go over test

Mindtrap

Matter and Properties intro notes.

States of Matter Notes

Homework: property worksheet both sides due Wednesday.

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

Wednesday September 9

Density Notes

Property Lab

Homework: and density worksheets due Friday!

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

Friday September 11

Density Lab

Matter Notes

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

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

Tuesday September 15

Density Quiz

Property Quiz

Homework: Matter worksheets due Thursday

Review for test

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?

Thursday September 17

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?*

Monday September 21

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?

Wednesday September 23

Isotope notes and work

Homework: Exploring Atoms Packet- due Friday

Bell Ringer: What is radioactive material?

Friday September 25-White Day

Collect Atom Packet

Nuclear Intro notes

Bean Lab

Homework: Nuclear Reactions Packet p. 2 and 3 only- due Tuesday

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

Tuesday September 29

Half Life review and work

Fission vs. Fusion notes

Nuclear Reactions Work

Homework: Radioactivity Packet p 1-11- due Thursday

Thursday October 1

Radioactivity Review

M and M lab

Atom Quiz

Nuclear Quiz

Monday October 5

Unit III Test Atomic Structure

Matrix 3- Foul Water Lab

Bell Ringer: Explain the energy you use to climb a ladder.

*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?*

Wednesday October 7

Mindtrap

Notes on quantum mechanical model

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

Bell Ringer: Explain how you organize the clothes in your closet?

Friday October 9

Quantum mechanical model work and review

Homework: Electron Configuration Packet due Tuesday

Bell Ringer: How does light travel from the Sun to the Earth?

Tuesday October 13

Light Notes and work

Homework: Chapter 5 Review p. 152-153 45-64 due Thursday

Bell Ringer: In what ways do your family members act alike?

**2nd Quarter**

Matrix 4- Atom Game

Thursday October 15

Periodic Table Notes

Homework: Periodic Table Basics packet: due on Monday

Monday October 19

Periodic Table Notes

Periodic table group work- due in class

Homework: Ch. 6 1-25 due Wednesday

Wednesday October 21

Electron Configuration Quiz

Who am I Quiz?

Test Review

Homework: Ch. 6 26-48 due Friday

Friday October 23

Unit IV Test (Ch. 5 and 6)

Bell Ringer: How does salt stick together?

*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.*

Tuesday October 27

Go over Test

Mindtrap

Start Ionic Bonding

Homework: Eye for an Ion packet due Monday

Bell Ringer: Why is it good to share and play nice with others?

Matrix 5- Flame Test Lab

Monday November 2

Covalent Bonding Notes

Homework: Covalent Bonding Packet and ten polyatomic ion drawings due Wednesday

Bell Ringer: What holds a jungle gym together?

Wednesday November 4

Covalent Quiz

VSEPR Theory

Homework: VSEPR packet due Friday

Bell Ringer: What makes Carbon so special?

Friday November 6

Review VSEPR

Organic Chemistry Notes

Homework: Organic Chem Packet due next Thursday

Bring Marshmallows (Big and Small) and toothpicks for lab on Thursday

Bell Ringer: What differentiates alcohols from ethers, esters, acids, etc?

Tuesday November 10

Hydrocarbon Derivatives

Homework: Organic Chem Packet due Thursday

Bring Marshmallows (Big and Small) and toothpicks for lab on Thursday

Thursday November 12

Organic Chem Review

Monday November 16

Marshmallow Lab

Organic Quiz

Wednesday November 18

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?*

Friday November 20

Go over Test

Naming and Writing Introduction

Homework: Writing Ionic Formula Packet due Tuesday

Matrix 6- Lifespan of a Bubble Activity

Tuesday November 24

Naming and Writing Molecular and Acids

Homework: Naming and Writing packet due Monday after Thanksgiving

Monday November 30

Naming and Writing Review and Quiz

Wednesday December 2

Unit VI Test (Ch. 9)

*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?*

Friday December 4

Go over Test

Mindtrap

Balancing Equations

Homework: Front Balancing Packet, due Tuesday

Tuesday December 8

Simple Reactions

Balancing Quiz

Homework: Simple Reactions Packet due Thursday

Thursday December 10

Simple Reactions Quiz

Homework: Semester Review Packet Due Dec 14

Monday December 14

Semester 1 Review Day

Wednesday December 16

Final exam period 5, review period 6

Friday December 18

Final exam period 6

**3rd Quarter**

Wednesday January 6

Balancing and Simple Reaction Review

Friday January 8

Complex Reactions

Homework: Complex Reactions Packet due Thursday

Tuesday January 12

Reaction Review and work

Homework: Complex Reactions Packet due Thursday

Thursday January 14

Reaction Review

Homework: Reactions Review Packet due Tuesday

Tuesday January 19

Reaction Quiz

Thursday January 21

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?*

Matrix 7- Chemical Reactions Lab

Monday January 25

Mole Introduction

Mole Conversions and Molar Volume

Homework: Mole worksheet packet due Wednesday

Wednesday January 27

Check homework

Percent composition notes

Mole Conversions Quiz

Homework: Ch. 8 practice problem worksheet 1-20 due Friday

Friday January 29

Empirical vs. Molecular Formulas

Nuts and Bolts Lab

Homework: Formula Mass packet due Tuesday

Tuesday February 2

Empirical and Molecular Quiz

Homework: Ch. 10 Review 80-95 due Thursday

Thursday February 4

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*

Monday February 8

Go over test

Mindtrap

Mole-Mole Conversions

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

Matrix 8- % composition lab

Wednesday February 10

Stoichiometry basics

Homework: Mole-Mole Packet dueFriday

Friday February 12

Stoichiometry Review

Tuesday February 16

Limiting Reagents Intro

Homework: Stoichiometry Worksheet due Thursday

Thursday February 18

Stoichiometry Quiz

Homework: Finish LR Packet

Monday February 22

Limiting Reagents Review

% yield

Homework: Chapter 12 51-53, 55-65 due Wednesday

Wednesday February 24

Stoichiometry Review

Homework: Study for Test

Matrix 9- Stoichiometry Lab

Friday February 26

Limiting Reagent Quiz

Smores Lab

Tuesday March 1

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?*

Thursday March 3

Go over test

Mindtrap

Start States of Matter notes

Homework: States of Matter packet due Monday

Monday March 7

Notes on Pressure, Phase Changes and Phase Diagrams

Homework: Chapter 13 Review 1-30 due Wednesday and Manometer worksheet due Wednesday

Wednesday March 9

Basic Gas law notes

Homework: Intro Gas laws worksheets – due Friday

Friday March 11

Ideal Gas Law, Daltons law and Grahams Law

Homework: Ideal gas law worksheets- due Tuesday

Tuesday March 15

Gas Laws review and quiz

Homework: Gas Law Practice Problem worksheet- due Thursday

Thursday March 17

Gas Law Test