

Unit 1: Introduction to Chemistry

- Day 1 – ½ day of school
- Day 2 – Safety Contract & safety features of room
- Day 3 - Safety Is an Attitude
- Day 4 – Pure vs. Applied Science
- Day 5 – Alchemist's Dream (Hollow Penny Lab Activity)
- Day 6 – Quiz: Safety & Glassware Identification
- Day 7 – Scientific Method
- Day 8 – Pure Science vs. Technology
- Day 9 – Checkbook Activity (scientific method)
- Day 10 – Copper Chloride Lab
- Day 11 – Scientific Notation & Graphs
- Day 12 – Acids and Bases
- Day 13 – Review Day
- Day 14 – Test "Introduction to Chemistry"

Unit 2: Matter and Energy

- Day 1 – Composition and Properties of Matter
- Day 2 – How Do We Classify Matter?
- Day 3 – Energy
- Day 4 – Energy (Heat vs. Temperature)
- Day 5 – Classifying Matter
- Day 6 – Temperature Scales and Energy
- Day 7 – Percentage Composition
- Day 8 – Methods of Separation
- Day 9 – Density
- Day 10 – Density Lab
- Day 11 – Flow Diagram(s)
- Day 12 – Atoms, Mass, and the Mole
- Day 13 – Calorimetry
- Day 14 – Work day – Calorimetry
- Day 15 – Calorimetry 2
- Day 16 – Challenge Problems
- Day 17 – Buried In Ice Article
- Day 18 – Matter
- Day 19 – Review Day
- Day 20 – Test "Matter and Energy"
- Day 21 – Floating Golf Ball
- Day 22 – Lab "Density of a Golf Ball"

Try to ADD Qualitative Analysis Lab in Unit 2

Unit 3: Atomic Structure

- Day 1 – Begin Atomic Structure (history)
- Day 2 – Atomic Structure Developed
- Day 3 – Models of the Atom
- Day 4 – KABOOM – Video
- Day 5 – Develop Electron Configuration
- Day 6 – Electron Configuration
- Day 7 – Light
- Day 8 – Light Demonstrations
- Day 9 – Halloween Fun Day
- Day 10 – Emission Spectra
- Day 11 – Review Day
- Day 12 – Review Day
- Day 13 – Test “Atomic Structure”

Unit 4: Periodic Table and Trends

- Day 1 – Alien’s Activity
- Day 2 – Periodicity Packet
- Day 3 – Periodicity / Post-Test
- Day 4 – Lecture “Periodic Trends”
- Day 5 – Organization of the Periodic Table
- Day 6 – Summarize Periodic Trends
- Day 7 – Quiz: Periodicity

Unit 5: Chemical Equations and Formulas

- Day 1 – Element Brochure
- Day 2 – Criss-Cross Rule
- Day 3 – Nomenclature
- Day 4 – Nomenclature continued
- Day 5 – Nomenclature
- Day 6 – Lab “Bonding”
- Day 7 – Element Project / brochure due
- Day 8 – Quiz: Nomenclature
- Day 9 – Mole Island Concept
- Day 10 – Bonding - Lewis Dot
- Day 11 – Molecular Models Activity
- Day 12 – Formula of a Hydrate (pre-lab)
- Day 13 – Lab “Formula of a Hydrate”
- Day 14 – Balance Equations
- Day 15 – Classify Equations
- Day 16 – Practice Problems
- Day 17 – Review Day – Chemical Equations
- Day 18 – Test “Chemical Equations and Formulas”

Final Exam

- Day 1 – Review Day
- Day 2 – Review Day
- Day 3 – Final Exams
- Day 4 – Final Exams
- Day 5 – Final Exams

Unit 6: Stoichiometry

Second Semester

- Day 1 – Stoichiometry
- Day 2 – Mole Island Calculations
- Day 3 – Limiting Reactants
- Day 4 – Limiting Reactants
- Day 5 – Percent Yield and Energy
- Day 6 – Review Day
- Day 7 – Quiz “Stoichiometry”
- Day 8 – Stoichiometry Lab ($\text{NaHCO}_3 + \text{HCl}$)

Unit 7: Gas Laws

- Day 1 – Video “Crisis In the Atmosphere”
- Day 2 – Greenhouse Effect / Ozone Depletion
- Day 3 – Kinetic Molecular Theory
- Day 4 – Manometers & Barometers
- Day 5 – Combined Gas Law
- Day 6 – Ideal Gas Law
- Day 7 – Graham’s Law of Diffusion
- Day 8 – Density of Gases
- Day 9 – Quiz “Gas Laws”
- Day 10 – Dalton’s Law of Partial Pressures
- Day 11 – Gas Stoichiometry
- Day 12 – Lab “Mg + HCl”
- Day 13 – Post-lab “Mg + HCl” & Review Day
- Day 14 – Review Day
- Day 15 – Test “Gas Laws 2”
- Day 16 – Properties of Nitrogen (liquid)
- Day 17 – Post Test
- Day 18 – Quiz “Gas Laws 3”

Unit 8: Solutions

- Day 1 – Lab “Ions in Solution”
 - Day 2 – Post-lab
 - Day 3 – H₂O overview video
 - Day 4 – Solvents
 - Day 5 – Electrolytes
 - Day 6 – Dilution of Solutions
 - Day 7 – Molarity of Solutions
 - Day 8 – Molarity and Stoichiometry
 - Day 9 – Soap Article
 - Day 10 – Lab “Soap”
 - Day 11 – PowerPoint
 - Day 12 – Solubility Curve & Tyndall Effect demonstration
 - Day 13 – Colligative Properties
 - Day 14 – Review Day
 - Day 15 – Review Day
 - Day 16 – Test: Solutions
- Add Spectrophotometer Lab in Solutions Unit**

Unit 9: Acids, Bases and Salts

- Day 1 – Video “The Proton In Chemistry
- Day 2 – Post Test “Solutions”
- Day 3 – PowerPoint “Acids and Bases”
- Day 4 – pH Calculations
- Day 5 – pH & pOH Calculations
- Day 6 – Textbook problem day (acids and bases)
- Day 7 – Electrolytes and Dissociation
- Day 8 – Quiz “pH”
- Day 9 – Titration
- Day 10 – Amino Acids
- Day 11 – Indicators
- Day 12 – Indicators & Buffers
- Day 13 – Lab “Neutralization”
- Day 14 – Review Day
- Day 15 – Test “Acids and Bases”

Unit 10: Nuclear Chemistry

- Day 1 – Video “Back to Chernobyl”
- Day 2 – Video “Back to Chernobyl”
- Day 3 – PowerPoint “Nuclear”
- Day 4 – Nuclear Radiation
- Day 5 – Fission and Fusion
- Day 6 – Review Nuclear Concepts (Half-Life)
- Day 7 – Review Day
- Day 8 – Quiz “Nuclear”

Unit 11: Organic Chemistry

- Day 1 – Organic Nomenclature (alkanes, alkenes, alkynes)
- Day 2 – Isomers (structural & geometric)
- Day 3 – Organic Nomenclature
- Day 4 – Functional Groups
- Day 5 – Work Day (organic packet)
- Day 6 – Work Day (organic packet)
- Day 7 – PowerPoint “Organic”
- Day 8 – Organic Nomenclature
- Day 9 – Ester’s lab (sniff)
- Day 10 – Quiz “Organic Nomenclature”
- Day 11 – Lab “Reactions of Copper” (technique lab)
- Day 12 – Lab “Reactions of Copper”
- Day 13 -16 Video “Organic Chemistry” (Standard Deviants)
- ALTERNATIVE
- Day 13 – Synthesis of Aspirin
- Day 14 – Synthesis of Aspirin
- Day 15 – Synthesis of Esters – oil of wintergreen
- Day 16 – Functional Groups
- Day 17 – Organic Mechanisms
- Day 18 – Test: “Organic Chemistry”

FINAL EXAM

Day 1 – Lab Clean-up Day & Inventory

Day 2 – Review Day (work day on packet)

Day 3 – Review Day (work on packet)

Day 4 – Question Day (go over type and# of questions on final)

Day 5 – Final Exams

Day 6 – Final Exams

Day 7 – Final Exams