A Workbook for Learning Chemistry

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August 2012 edition

Acknowledgements

2012 Version

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Initial Text

Much of this text is taken directly from *POGIL Activities for High School Chemistry* , by Laura Trout, editor; Flinn Scientific, Inc., Batavia, IL; 2012. **May be used only by teachers who have purchased their own copy of the POGIL book.**

Additional text, labs, and exercises have been adapted from the National Science Foundation *CHEM STUDY* curriculum, which is no longer in print.

Some activities are from the *Target Inquiry* website, and **may be used only by teachers who have registered online with the Target Inquiry Project**. http://www.gvsu.edu/targetinquiry/tidocuments-login_register.htm

Song Lyrics

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Table of Contents

Chapter 2
The answer is blowin' in the wind

Chapter 3
Chemical Reactions

Chapter 4
It's a Gas!

Chapter 5
Physical Properties Matter!

Chapter 6
Thinking About Atoms & Interpreting the Data

Chapter 7
Energy and Chemical Reactions

Chapter 8
Go, Molecules, Go

Chapter 9
Reactions that Go Forward and Backward

Chapter 10
Solubility and Equilibrium

Chapter 11
Acids and Bases

Chapter 12
Oxidation-Reduction Reactions

Chapter 13
Why We Believe in Atoms

Vocabulary

Chapter 1	Chapter 2	Chapter 3
Calories Combustion Interpretation Observation Phase Change Qualitative Quantitative	Atomic mass Atomic weight Avogadro's Hypothesis Avogadro's number Mole Molecular weight Molecules Pressure Volume	Acid Balanced chemical equation Chemical reaction Concentration Conservation of atoms Endothermic Exothermic reaction Filtrate Molar heat of combustion Phase change Precipitate
Chapter 4	**Chapter 5**	
Absolute zero Barometer Density Kelvins Kelvin scale Kinetic theory Molar volume Partial pressure Pressure STP	Phase change Alloy Anions Boiling point Cations Heterogeneous Homogeneous Gas Liquid Molarity Nonelectrolyte Normal boiling point Phase	Precipitate Pure substance Saturation Solid Solubility Solute Solution Solvent Strong electrolyte System Vapor pressure Weak electrolyte
Chapter 6	**Chapter 7**	**Chapter 8**
Alkali metals Atoms Electrons Ionic bonds Ions Noble gases Nucleus Neutrons Protons	Calorimetry Enthalpy Fission Hess's Law Nuclear reactions Nucleons Potential Energy	Activated complex Activation energy Catalysts Collision frequency Reaction coordination diagrams Reaction rate Transition state

Chapter 9	**Chapter 11**	**Chapter 12**
Equilibrium Le Châtelier's Principle Macroscopic	Acid disassociation constant K_a Acidic Arrhenius acid Arrhenius base Basic Brønsted-Lowry acid Brønsted-Lowry base Conjugate acid-base pair Indicator solution Ionization Neutral pH pOH Strong acid Titration Water disassociation equilibrium constant K_w Weak acid	Anode Cathode Electronegativity Oxidation numbers Oxidation-Reduction Oxidized Reduced Reduction potential Standard half cell Standard reduction potential Voltage Voltaic cell
Chapter 10 K_{sp} solubility product Precipitate Saturated Solubility		
Chapter 13	**Chapter 14**	**Chapter 15**
Ampere Electron-to-mass ratio Empirical Formula Gold Foil Experiment J. J. Thompson John Dalton Rutherford Experiment	1s orbital 2s orbital Electron configuration Frequency Ionization Energy Niels Bøhr Orbital p orbital Quantum mechanics Quantum numbers Speed (c) Wavelength	Chemical bond Covalent bond Electric dipole Hybridize Ionic bond Lewis structures Polar molecule Tetravalent