



Conceptual Chemistry eScienceLab Kits

Ar = Argon, Ne = Neon, He = Helium



*The Conceptual Chemistry chapter alignments of eScience Labs to accompany
Conceptual Chemistry courses available at Conceptual Academy*

Chapter 1 About Science

Conceptual Chemistry Lab 1

Intro Chem Lab 1 Intro to Lab and Safety Procedures [Ar, Ne, He]

Exercise 1: Safety Contract

Experiment 1: Neutralization of Acids and Bases

Conceptual Chemistry Lab 2

Intro Chem Lab 2: Thinking Like a Chemist: The Scientific Method [Ar, Ne, He]

Experiment 1: Using the Scientific Method

Experiment 2: Writing a Lab Report

Chapter 2 Particles of Matter

Conceptual Chemistry Lab 3

Intro Chem Lab 3: Data Analysis and Graphing [Ar, Ne, He]

Experiment 1: Metric Measurement Lab

Experiment 2: Density of a Gummy Bear

Conceptual Chemistry Lab 4

Intro Chem Lab 20: Using the Ideal Gas Law [Ar]

Experiment 1: Charles's Law

Experiment 2: Using the Ideal Gas Law

Chapter 3: Elements of Chemistry

Conceptual Chemistry Lab 5

Intro Chem Lab 6: Examination of Physical and Chemical Properties [Ar]

Experiment 1: Density of a Substance

Experiment 2: Solubility and Reactivity

Conceptual Chemistry Lab 6

Intro Chem Lab 4: Types of Matter [Ar, Ne, He]

Experiment 1: Classification of Matter

Experiment 2: Separation of Sand and Salt

Chapter 4: Subatomic Particles

Conceptual Chemistry Lab 7

Intro Chem Lab 9 Electron Configuration [Ar, Ne]

Experiment: Chemistry of Fireworks

Chapter 5: The Atomic Nucleus

Conceptual Chemistry Lab 8

Gen Chem Lab 15: Nuclear Chemistry [Ar, Ne]

Experiment: Estimating Half-Life

Chapter 6: How Atoms Bond

Conceptual Chemistry Lab 9

Intro Chem Lab 11 Molecular Geometry: The VSEPR Model [\[Ar, Ne, He\]](#)

Experiment 1: Molecular Models

Conceptual Chemistry Lab 10

Intro Chem Lab 12 Types of Chemical Bonds [\[Ar\]](#)

Experiment 1: Ionic and Covalent Bonds

Experiment 2: Melting Points by Bond Type

Experiment 3: Solubility and Chemical Bonds

Chapter 7: How Molecules Mix

Conceptual Chemistry Lab 11

Intro Chem Lab 5: Exploring Solubility [\[Ar, Ne, He\]](#)

Experiment 1: Kool-Aid Molarity

Experiment 2: Slime Time

Conceptual Chemistry Lab 12

Intro Chem Lab 14 Evaluating Precipitation Reactions [\[Ar\]](#)

Experiment 1: Testing for Calcium ion

Chapter 8: How Water Behaves

Conceptual Chemistry Lab 13

Intro Chem Lab 7: Measuring Heats of Reactions [\[Ar, Ne, He\]](#)

Experiment 1: Specific Heat of a Metal

Experiment 2: Determining Energy in Food

Chapter 9: How Chemical React

Conceptual Chemistry Lab 14

Intro Chem Lab 17 Molar Mass [\[Ar\]](#)

Experiment 1: Percent Sugar in Bubble Gum

Conceptual Chemistry Lab 15

Intro Chem Lab 22 Chemical Kinetics and Catalysis [\[Ar, Ne\]](#)

Experiment 1: Enzymes in Food

Experiment 2: Effect of Temperature on Enzyme

Chapter 10: Acids and Bases in Our Environment

Conceptual Chemistry Lab 16

Intro Chem Lab 23: The Nature of Acids and Bases [\[Ar\]](#)

Experiment 1: Preparing a Buffer

Experiment 2: Buffer with Borax

Conceptual Chemistry Lab 17

Intro Chem Lab 24: Titrations and Equivalence Points [\[Ar, Ne, He\]](#)

Experiment 1: Indicators

Chapter 11: Oxidations and Reductions Charge the World

Conceptual Chemistry Lab 18

Intro Chem Lab 16: Oxidation-Reduction Reactions [\[Ar, Ne, He\]](#)

Experiment 1: Preparation of iron acetate

Chapter 12: Organic Compounds

Conceptual Chemistry Lab 19

General Chem Lab 22: Separation by Chromatography [\[Ar, Ne, He\]](#)

Experiment 1: Paper Chromatography

Chapter 13: Nutrients of Life

Conceptual Chemistry Lab 20

Forensics Lab 3: DNA [\[Ar, Ne\]](#)

Experiment 1: DNA Extraction

Experiment 2: Gel Electrophoresis

Chapter 14: Medicinal Chemistry

Conceptual Chemistry Lab 21

Forensics Lab 12: Toxicology [\[Ar\]](#)

Experiment 1: Identifying Unknown Substances

