

NOEO SCIENCE

CHEMISTRY III: It's ELEMENTary!

Book List

The Periodic Table: Elements with Style!

A Weird History of Science: Crazy Chemistry

Material Matters: Acids and Bases
 Chemical Reactions
 Mixtures, Compounds, and Solutions
 Metals
 Nonmetals
 States of Matter

Eyewitness Books: Chemistry

Experiment Kit

Thames and Kosmos CHEM C2000

WARNING! – This set contains chemicals that may be harmful if misused. Read cautions on individual containers carefully. Not to be used by children except under adult supervision.

NOTE: The CHEM C2000 kit must be used under adult supervision. Please read the cover, inside front cover, and pages 1-13 of the CHEM C2000 Experiment Manual prior to beginning any experiments contained in this kit.

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The following is a complete list of items that will be used for the required experiments over the entire 36-week course. This list includes many items that are common in most homes. The list does not include the items that are provided in *Thames and Kosmos CHEM C2000* kit.

Master Supply List	
Item needed:	Week(s) used:
Seltzer water	5
White vinegar	5, 9, 18, 21, 32, 33, 35, 36
Fine paintbrush	7, 9
Cotton-tipped swabs	9
Black ink pen	10
Pin	10
Colored felt-tip markers (water-soluble)	10, 15
Rubbing alcohol (70% ethyl alcohol)	10, 19, 20, 21
Table salt	10, 15, 17, 29, 30, 31
Sewing needle	11
Liquid dishwashing soap	11
Small piece of cardboard or heavy paper	12, 26
Paper clip	13, 15, 27
Coin	13
Small candle	14, 15, 21, 26, 27, 28
Cork	15
6 Volt lantern battery	16, 17
Variety of metal and nonmetal items	16
Hydrogen peroxide (3% solution)	20, 24, 36
Cigarette ashes (or dry spinach or lettuce leaves)	20
Iron nail	21
Wood splint (or popsicle stick)	24
Yeast	24
Aluminum foil	25, 26
Carbonated water ("sparkling" water)	26
Sand	29, 30
Ground coffee, instant coffee	30
Lemon juice	33, 35
Apple	33
Milk	33
Sugar	33, 36
Egg white, fat-free skim milk, piece of cloth, rubber band, detergent	36

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Weekly Schedule	
Week 1	A Brief History of Chemistry
Week 2	A Brief History of Chemistry
Week 3	A Brief History of Chemistry
Week 4	What is Chemistry?
Week 5	Chemical Reactions
Week 6	Chemical Reactions; Atoms; Elements
Week 7	Compounds; Periodic Table; Chemical Reactions
Week 8	Chemical Reactions
Week 9	Chemical Reactions
Week 10	Mixtures; Chromatography
Week 11	States of Matter
Week 12	States of Matter
Week 13	States of Matter
Week 14	States of Matter; Burning Reactions
Week 15	Burning Reactions; Chemical Analysis
Week 16	Metals; Electricity and Chemistry
Week 17	Metals; Electricity and Chemistry
Week 18	Metals
Week 19	Metals
Week 20	Metals
Week 21	Metals
Week 22	Metals; Oxidation and Reduction
Week 23	Metals; Metalloids; Nonmetals
Week 24	Water; Hydrogen; Oxygen
Week 25	Hydrogen; Carbon
Week 26	Carbon Dioxide; Nitrogen
Week 27	Phosphorus; Sulfur; Halogens
Week 28	Combustion; Noble Gases
Week 29	Mixtures; Compounds; Solutions
Week 30	Mixtures; Compounds; Solutions
Week 31	Mixtures; Compounds; Solutions
Week 32	Acids and Bases
Week 33	Acids and Bases
Week 34	Acids and Bases
Week 35	Acids and Bases; Biochemistry
Week 36	Food Chemistry; Chemiluminescence

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Week 1 - A Brief History of Chemistry				
	Day 1	Day 2	Day 3	Day 4
Crazy Chemistry	Pp. 4-7	Pp. 8-11	Pp. 12-15	Pp. 16-19

Supply List: none

Assignments:

Read the assigned pages and/or complete the experiment(s). In your own words, describe what you have learned. Use the reproducible sheets to create a science notebook for writing/sketching important ideas. At a *minimum*, be sure to report on the “**Keys to Understanding**” items below. Use the reproducible experiment pages to document your laboratory exercises.

Keys to Understanding:

Day 1 - Describe early “chemistry”. **Define: apparatus, laboratory**

Day 2 - Who were Mithradates and Aristotle, and how did they contribute to our understanding of chemistry? **Define: antidote, corroding, element, alchemy, elixir**

Day 3 - Who were Robert Boyle and Henry Cavendish, and how did they contribute to our understanding of chemistry? **Define: pressure, hydrogen**

Day 4 - Who were Joseph Priestley and Humphry Davy, and how did they contribute to our understanding of chemistry? **Define: carbon dioxide, respiration**