



CITY ON A HILL
Classical Christian Education

Class Chemistry I – Fall 2024

Teacher Mr. Jon S. Szabo

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Class Length 70 Minutes

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Class Description: Covers the first half of the Plourde chemistry textbook (see Curriculum/Tools below), with a foundational understanding of weights, measurements, and tables leading to the mathematical and algebraic understanding of chemical equations involving various reactions.

Grades/Ages: This class is designed for students in the 10th, 11th, and 12th grades.

Responsibilities

- **Parent Responsibility:** To establish and oversee an educational plan for the student. And, to grade and review the progress of the student. *In the Grammar stage this is a daily activity for each subject. In the Logic and Rhetoric stages this can become a weekly activity.*
- **Student Responsibility:** To actively engage with the teaching and study work. To respect the instructions and expectations of Dad and Mom. And, to come prepared to each CO-OP class.
- **Teacher-Tutor Responsibility:** To support (bolster) the educational plan of the parent. To offer passionate and accurate teaching/tutoring of the subject matter. And, to challenge the student in the subject.

Curriculum/Tools for Learning: Please purchase the following resources:

- *Exploring Creation with Chemistry (3rd Edition) – Kristy Plourde (Publisher: Apologia) ISBN 978-1-940110-25-7.* For utilizing an older or a newer addition, email Teacher your edition number and send photo of Table of Contents to see if it can be used.
- Pens, pencils, and notebook. Also, purchase of safety goggles and disposable gloves. The purchase of a microscope may be necessary, unless we share one in class. For at-home experiments, students may need certain household supplies (e.g., stove burner, kitchen gram scale, metric ruler) with parent's permission. For a complete list of lab supplies possibly needed, see Appendix C at the back of Plourde textbook.
- Use of a computer (Word, Excel) may be needed for some assignments.

Grading Rubric: As a reminder, although the teacher-tutor will provide each student/parent with a midsemester progress report and an end of semester progress report, it is the responsibility of the student's parents to determine the final grade for the student. The progress report provided by the teacher-tutor is meant to be a reflection of the work accomplished within the scope of the class and therefore NOT a reflection of the student's overall progress.

- Attendance & Participation: 10 %
Students are expected to attend and engage with the class discussion.
- Homework & Lab Notes: 10 %
A log that records "On Your Own" problems completed and additional lab work notes (strive for about one student-selected lab experiment for every module completed -see Plourde textbook and the "After Class Assignments" column on next page). We will complete as many lab experiments in class as time allows; other labs completed at home.
- Quizzes: 20 %
Helps prepare the student for upcoming tests; takes up one-third of class hour.
- Tests: 45 %
Each test is long enough to take one whole class hour to complete.
- Science Paper: 15 %
Near the end of the semester, students present their findings on one aspect of chemistry previously covered in class.

Classroom Behavior/Etiquette (Code of Conduct)

Although not all participants of City on a Hill activities confess Christ, there is still an expectation of the following general guidelines as a code of conduct.

Love God and Love Others (Romans 13:8-10) - The Law of God directs our steps. The two greatest commands direct all that we do (Matthew 22:36:40). The 10 Commands clearly explain the moral law written on everyone's heart (Deuteronomy 20:3-17).

Respect Authority (Romans 13:1-5) - In words, actions, behavior, attitudes, and in secret.

Order of Authority: 1. God 2. Parents 3. *Teacher-Tutors* 4. Students

Dress and Speak like Men/Women - What we wear and what we say should speak of maturity.

Diligence in our Work, Play, and Rest - We are to do well in whatever we find ourselves doing.

Meeting Dates and Content – Chemistry I Fall 2024

Date	Week	Class Topic <i>Come prepared for (i.e., read, practice, memorize):</i>	Homework <i>Complete after class</i>
Aug-20	1	Module 1 (Measurements & Units) pp. 1-37	“On Your Own” problems 1.1-1.17
Aug-27	2	Module 2 (Atoms & Molecules) pp. 44-77 and Module 3 (Atomic Structure – Part I) pp. 84-90a *	“On Your Own” problems 2.1-2.12 and problem 3.1.
Sep-3	3	Remainder of Module 3 (Atomic Structure – Part II) pp. 90b-125 *	“On Your Own” problems 3.2-3.12
Sep-10	4	Quiz 1 covering Modules 1 through 3 and Labs ____ & ____	Organize Labs & Notes from the past Modules 1 through 3
Sep-17	5	Module 4 (Molecular Structure – Part I) pp. 132-145a *	“On Your Own” problems 4.1-4.5
Sep-24	6	Remainder of Module 4 (Molecular Structure – Part II) pp. 145b-169 *	“On Your Own” problems 4.6-4.14
Oct-1	7	Module 5 (Polyatomic Ions & Molecular Geometry – Part I) pp. 172-185a *	“On Your Own” problem 5.1-5.8
Oct-8	8	Quiz 2 covering Module 4 through 5a and Labs ____ & ____. Discuss Science Paper – Focus of Study, Requirements	Organize Labs & Notes from the past Modules 4 through 5a
Oct-15	BREAK		
Oct-22	9	Remainder of Module 5 (Polyatomic Ions & Molecular Geometry – Part II) pp. 185b-197 *	“On Your Own” problem 5.9-5.11
Oct-29	10	TEST 1 covering Modules 1 through 5	
Nov-5	11	Module 6 (Changes in Matter and Chemical Reactions) pp. 207-232	“On Your Own” problems 6.1-6.10
Nov-12	12	Module 7 (Describing Chemical Reactions) pp. 241-269	“On Your Own” problems 7.1-7.11 Rehearse your Presentation
Nov-19	13	Module 8 (Stoichiometry – Part I) pp. 276-286 * Student In-Class Presentations on Science Paper	“On Your Own” problems 8.1-8.4
Nov-26	BREAK		
Dec-3	14	Quiz 3 covering Modules 6 through 8a * and Labs ____ & ____	Organize Labs & Notes from the past Modules 5 through 8a
Dec-10	15	Remainder of Module 8 (Stoichiometry – Part II) pp. 287-303 *	“On Your Own” problems 8.5-8.11 Finalize your Science Paper and labs
Dec-17	16	TEST 2 covering Modules 6 through 8 Submit Written Completed Science Paper	

* Page suffix “a” (or “b”) refers to the last (or first) portion of page of assigned reading, typically stopping at a given “On Your Own” breakpoint of the given module or chapter. Certain modules will take more time to understand.

6-Aug	Teacher Training Meeting
13-Aug	Returning Student Orientation
17-Aug	New Student Orientation
10-Sep	Parent Training Classes
12-Nov	
23-Nov	Music Recital

NOTE:

- All CO-OP classes and projects are a supplement, NOT a replacement of the education taking place at home.
- Parents are required to review any work to be turned in before class. Parents, please initial any work to be turned in.

Reading and Assignment Acknowledgement

We, (parents and student), have read this syllabus and understand the requirements for the following classes.

Please use one signature sheet per student for all classes:

Class: _____

Class: _____

Class: _____

Class: _____

Class: _____

Parent

Date

Parent

Date

Student

Date