



Seycove Secondary

Course: Chemistry 11

Teacher Name: Dr. Lorrie Welch

Contact information: lwelch@sd44.ca

Website information : Seycove Secondary Staff page

Course Description

Chemistry 11 deals with properties and reactions of materials. Calculations are an important part of the course. Understanding how atoms interact and the applications of chemistry are studied. A main feature of this course is learning laboratory skills. Chemistry 11 is a foundational course for future studies in science, engineering, healthcare, and other career choices.

Inquiry Questions

- How does the mole help us calculate the amount of material produced in a reaction?
- How can we determine if a substance is soluble?
- How does organic chemistry impact our daily lives?
- How can we accurately test and record scientific results?

Course Syllabus

- Safety in the Lab
- Introduction to Chemistry
 - Understanding conversions, significant figures, accuracy of measurements and scientific notation
- Physical Properties and Changes of Substances
 - Phase changes and categories of matter
- Naming of Inorganic Compounds
- The Mole Concept
 - Molar mass, molecular formula, empirical formula, percent yield and percent composition, conversions between moles, mass, volume and number of particles
- Chemical Reactions
 - Classifying reactions and predicting products
- Stoichiometry
 - Balancing equations, limiting reagent, reagent in excess

- Atoms and the Periodic Table
 - The structure of the atom, the periodic table, chemical bonding and chemical families
- Solution Chemistry
 - Solutions and solubility, calculating ionic strength in solutions
- Organic Chemistry
 - Naming basic organic compounds
- Gas Laws
 - Using equations to calculate gas pressure, temperature and amount of material

Detailed Learning Outcomes can be viewed at:

<https://curriculum.gov.bc.ca/curriculum/science/11/chemistry>

Lab Reports

Labs are an important part of Chemistry 11 and each lab report must be written with the following categories. A more detailed outline will be distributed in class.

- Purpose
- Materials List
- Procedure (cite references and list exceptions)
- Data and Observations – includes all data tables
- Calculations and Questions
- Error Analysis
- Conclusion

Classroom Expectations

As with all courses, students are expected to attend all classes, arrive on time, behave respectfully towards staff and other students, actively participate in the lessons and work to the best of their ability. Please note that students with unexplained absences for tests or quizzes will receive a mark of zero until I contact a parent or guardian. Students should also be aware of the Seycove Code of Conduct in regards to plagiarism. I consider allowing others to copy your work as cheating and thus both the student copying the work and the one allowing his or her work to be copied will receive a reduced mark. Students working in an unsafe manner during a lab session will be asked to leave the lab and receive a mark of zero.

All students are expected to bring either a scientific or graphing calculator to class each day. Normal supplies such as a pencil, paper and textbook are also required each day. Students wishing to complete their work on a computer are welcome to do so. Only computer-based students should submit their work in a typed form. All other students should submit hand-written labs and assignments. Computer-based students found playing computer games in class lose the privilege to work on a computer. Students found using technology inappropriately will be asked to put the technology away. In extreme cases, they will forfeit their technology for the remainder of the class.

Course marks are calculated as follows.

Tests	40%
Quizzes	20%
Labs	15%
Assignments*	10%
Final Exams	15%

*Note that assignments include project work. Each student will choose a project that relates chemistry to a current situation. Due to the heavy workload of most students in June, the Chemistry 11 exam is done in two parts before the last unit, Gas Laws, is completed. Gas law questions are not part of the exams.

Grade Boundaries

An “A” student can:

- demonstrate and apply curricular competencies
- Analyze information and synthesize the correct solution
- Apply the course concepts to contextualized situations
- Demonstrate computational accuracy
- Solve challenging questions without step-by-step instruction

A “B” student can:

- Demonstrate and sometimes apply curricular competencies
- Analyze information and synthesize the solution
- With help, identify complex patterns with the context of a problem
- Demonstrate computational knowledge
- Solve challenging questions when given direction

A “C” student can:

- Demonstrate the curricular competencies
- Organize information and attempt to find the solution
- Identify patterns with the context of the problem
- Build on learned concepts within the context of a larger situation
- Solve routine step-by-step problems

Resources

The textbook is BC Science Chemistry 11. Students may purchase a copy for \$25 to use as both a textbook and a workbook. If you do not write in the book, you can borrow one without paying. We also have a number of the older textbook, Hebden Chemistry 11, available to borrow.