

**Curriculum Overview:**

Chemistry 3202 is an academic Pan-Canadian science course that aims to develop scientific literacy. Scientific literacy is an evolving combination of the science related attitudes, skills, and knowledge students need to develop inquiry, problem-solving, and decision-making abilities; to become lifelong learners; and to maintain a sense of wonder about the world around them.

**Authorized Learning Resource:**

Department of Education Curriculum Guide for Chemistry 3202

<http://www.ed.gov.nl.ca/edu/k12/curriculum/guides/science/index.html>

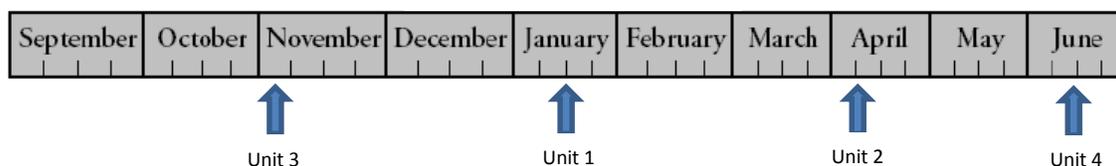
Science Resources and Support Documents - Senior High

<http://www.ed.gov.nl.ca/edu/k12/curriculum/documents/science/highschool.html>

Chemistry (McGraw-Hill Ryerson)

<http://www.mcgrawhill.ca/school/learningcentres/course/view.php?id=9780070938533/newfoundland+edition/default.php>

**Estimated Completion**



**Course Sequence:**

**Unit 3: Thermochemistry (27h-25%)**

Core Lab 5: *The Heat of Combustion of a Candle*

Core Lab 6: *Hess's Law and the Enthalpy of Combustion of Magnesium*

Core STSE 3

**Unit 1: From Kinetics to Equilibrium (28h-25%)**

Core Lab 1: *Studying Reaction Rate Core*

Lab 2: *Perturbing Equilibrium*

Core STSE 1

**Unit 2: Acids & Bases (33h-29%)**

Core Lab 3: *The Concentration of Acetic Acid in Vinegar*

Core Lab 4: *K<sub>a</sub> of Acetic Acid*

Core STSE 2

**Unit 4: Electrochemical Changes (22h-21%)**

Core Lab 7: *Measuring Cell Potentials of Galvanic Cells*

Core Lab 8: *Electroplating*

Core STSE 4

*Note: Change in sequence because outcomes useful in Kinetics are introduced in Thermochemistry. (See rationale)*

**Assessment and Evaluation: (Eastern Region)**

In the Eastern Region Assessment in this course is governed by the *Assessment and Evaluation Policy* of the Newfoundland and Labrador English School District - Eastern Region. This policy and associated regulations are located under "I: Instruction" at <https://www.nlesd.ca/about/easternpolicies.jsp>. This section may change as the new NLESD Assessment and Evaluation policy is updated.

Evaluation is the process of analysing, reflecting upon, and summarizing assessment information, and making judgments or decisions based upon the information gathered.

<i>Tests/Quizzes</i>	20%
<i>Performance Assessment</i>	15%
<i>Midyear Examination</i>	15%
<i>Public Examination</i>	50%

The evaluation of the course shall reflect the percent unit allocations.

**Note:** All evidence of learning shall be considered when determining a student's final grade. Averaging shall not be used as a sole indicator of a student's level of attainment of the course outcomes.

## Assessment:

Assessment is intended to inform instruction, provide feedback to students, and meet the needs of diverse learners. It is used for the purposes of grading, certifying, and promoting students. All assessments should be outcome-based and designed to test students' basic knowledge of content, their understanding and ability to apply content, and ability to synthesize and problem solve. Assessments should provide equal opportunity for all students according to their abilities, needs, and interests. As a result, teachers make adaptations to accommodate the diverse range of learners in their classes.

## Midyear Examination:

The mid-year examination tests all course outcomes to that point. It will include selected response (multiple-choice) and constructed response items. The examination is to be completed in a 2- hour time period.

## Final Examination:

The final provincial (public) examination in Chemistry 3202 is composed of two parts and is designed to be completed in a 3 hour time period. Part 1 contains 50 selected response questions (multiple choice) that measure students' achievement at all levels of cognitive learning. Part 2 contains constructed response questions that measure students' achievement only at the higher levels of cognitive learning. The examination contains 15-20% of core labs and STSE outcomes.

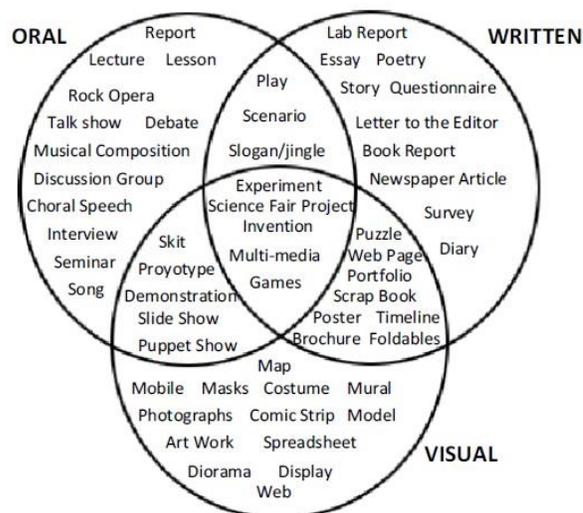
**Note:** Appropriate data sheets and periodic tables for testing are located at <http://www.ed.gov.nl.ca/edu/k12/evaluation/chemistry3202.html>

## Performance Assessment:

Performance assessments should emphasize project-based learning and require students to show what they can do by using a wide variety of activities that permit students to have their learning styles addressed. Performance assessment should also include student self- assessments and rubrics.

## Sequence Change Rationale:

In Unit 1, students learn about enthalpy, endothermic and exothermic reactions, and Potential Energy Diagrams, without having a foundational understanding of potential energy (which is address in Unit 3 - Thermochemistry). By completing Unit 3 first, students will have the required prerequisite learning to explore both Potential and Kinetic Energy with a greater understanding. Also, completing the units as suggesting makes a better split for midyear (Units 3 and 1 should be completed then).



Source: K. O'Connor, *The Mindful School: How to Grade for Learning* (Skylight Publications, 1999)