

Level of Instruction: Senior High

Curriculum Overview:

Science 1206 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.

NOTE: Science 1206 is required for graduating high school with honors or academic standing.

Authorized Learning Resource:

Nelson Science 10

Unit Plan:

Science 1206 is intended to be an introductory academic science course before taking Physics, Chemistry, Biology or Earth Systems courses. It is composed of four units that contain core labs. All schools are expected to complete these core labs.

Unit 1: Sustaining Ecosystems

Core Lab 1: *Schoolyard Ecosystem OR Natural Ecosystem*

Core Lab 2: *Soil Nutrients and Plant Growth OR The Animal Community in Soils*

Unit 2: Weather Dynamics

Core Lab 3: *Heat Absorption and Radiation*

Core Lab 4: *Energy Changes During Melting and Evaporation*

Unit 3: Chemical Processes

Core Lab 5: *Properties of Ionic and Molecular Compounds*

Core Lab 6a: *Single Displacement Reactions*

Core Lab 6b: *Double Displacement Reactions*

Unit 4: Motion

Core Lab 7: *Determining an Average Speed*

Core Lab 8: *Speeding Up and Slowing Down*

Assessment:

Assessment in this course is governed by the *Assessment and Evaluation Policy* of the Eastern School District. This policy is located at http://www.esdnl.ca/about/policies/esd/i_IL.pdf. The regulations are located at <http://www.esdnl.ca/aboutesd/policies/regulations.jsp?cat=I&code=IL>

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.

Assessment and Evaluation Plan for Science 1206:

Evaluation is the process of analysing, reflecting upon, and summarizing assessment information, and making judgments or decisions based upon the information gathered. All schools are expected to adhere to the evaluation scheme below for Science 1206.

Tests/Quizzes	20%
Performance Assessment	40%
First Examination	20%
Second Examination	20%

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.

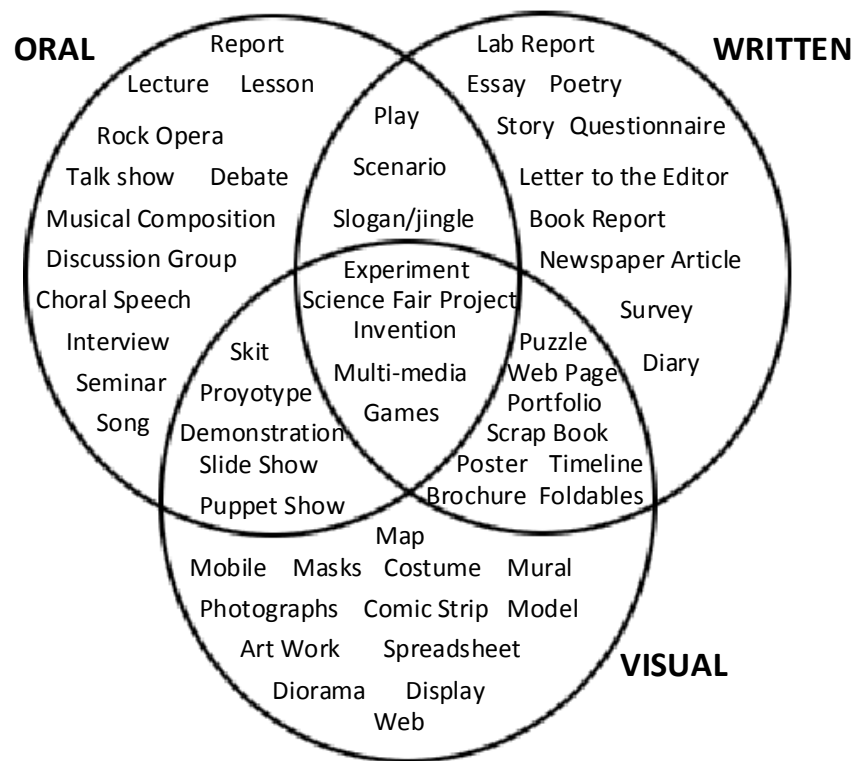
Note: Students should be provided the Periodic Table and Chemistry Data Sheet located on <http://www.ed.gov.nl.ca/edu/k12/pub/courses/chem3202.htm> for the Chemical Processes unit. They should also be provided with all applicable formulae for the Motion unit.

Examinations:

Science 1206 has two major examinations that should be designed to be completed in a 2-hour time period. Each examination should test all course outcomes from two units and include selected response (multiple choice) and constructed response items and contain 8-10% of core lab content.

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-assessment. Some suggestions are included in the diagram below.



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

Rubrics are used to inform and measure learning during performance assessments. A rubric defines the expectations to achieve at a certain level. It also provides information about how well students performed an activity, and it provides a clear indication of what students need to accomplish in the future to better their performance. Links to samples of rubrics for different types of performance assessments can be found on

<http://www.esdnl.ca/programs/rubricresources/>. The Assessment tab of the Teacher Resource contains rubrics and checklists.

Resource Links:

Department of Education Curriculum Guide for Science 1206

<http://www.ed.gov.nl.ca/edu/k12/curriculum/guides/science/index.html#sci1206>

Science Resources and Support Documents - Senior High

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