



FOREST HILL CI

SCH4C GRADE 12 COLLEGE CHEMISTRY COURSE OUTLINE

PREREQUISITE: GRADE 10 SCIENCE, ACADEMIC OR APPLIED

Resources

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Textbook: Chemistry 12 College Preparation – Nelson. The replacement cost of the textbook is \$100.

Tools for Success/Learning Skills

Responsibility	<ul style="list-style-type: none">Understand and follow this course outline and the policies outlined in the Student Agenda.Arrive on timeCome prepared to work with all necessary tools
Organization	<ul style="list-style-type: none">Keep an organized notebookKeep an organized calendar of important dates
Independent Work	<ul style="list-style-type: none">Stay on taskAvoid disrupting the learning of others.Do homework regularly and complete all assigned workReview/study the work often
Collaboration	<ul style="list-style-type: none">Be a responsible group member.Help your peers succeed by sharing ideas, tutoring and studying togetherPrepare for labs as a team with a focus on each other's safety
Initiative	<ul style="list-style-type: none">Be active participants in the classroomAsk questions when unsure of the material & seek extra help when needed.Ensure that you get any missed handouts and catch up on missed work
Self-Regulation	<ul style="list-style-type: none">Set goals and make good choices regarding academic success.Respect yourself, classmates and teachers.

Academic Honesty: Cheating and Plagiarism

Students are expected to submit only their own original work on evaluations done in class or out of class. Plagiarism is the passing off the ideas or writings of another as one's own. Cases of academic dishonesty (cheating and/or plagiarism) will be dealt with on a case-by-case basis, but each case will involve investigation, communication with the student and his/her parent/guardian, and a mark of zero for plagiarized work. Whether the student has an opportunity to demonstrate his/her learning in another assignment will be at the discretion of the teacher and/or Principal.

Assessment and Evaluation

The primary purpose of assessment and evaluation is to improve student learning. Assessment can take on one of three forms (described below). See page 31 of *Growing Success* for a detailed description of assessment.

Diagnostic	Assessment FOR learning determines how learning should proceed at the beginning of a unit.
Formative	Assessment AS learning provides feedback for a student to determine where improvement is needed. An example of this is homework.
Summative	Assessment OF learning evaluates what a student has learned at the conclusion of a unit/course. An example of this is a test or exam.

Evaluation of student achievement will be defined by four broad **Achievement Categories** (described below). The category weighting for semester work is shown.

Semester Work		70%
Knowledge & Understanding	Specific content acquired in the course and the comprehension of its meaning and significance.	25%
Thinking & Investigation	The use of critical and creative thinking skills and inquiry, research, and problem-solving skills.	25%
Communication	The conveying of meaning through various forms.	25%
Application	The use of knowledge and skills to make connections within and between various contexts.	25%

Culminating*		30%
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Academic Integrity: Missed Classes, Evaluations and Assignments

It is the **responsibility of the student** to notify **all** appropriate parties (teachers, office, etc) **in advance** where appropriate and in compliance with school policies and procedures if the student will be absent. This allows for both the student and teacher to make alternative arrangements. **In the event that advance notice is not possible**, students/ parents should **email the school** and **email their teacher** to ensure that student and teacher have an opportunity to connect about alternative arrangements.

Electronic Learning Expectations: Students are expected to access our [Google Classroom](#) on a daily basis. This tool will be used to supplement our in-class instruction. Some student work will be collected through our Google Classroom.

***Should brick and mortar schools be shut down due to the COVID-19 pandemic, all course materials will be posted on Google Classroom. Students must also check their TDSB email multiple times daily for important course, school, and board updates as the pandemic progresses*

Overall Course Expectations

Specific expectations can be found at the Ministry of Education's Website:

<http://www.edu.gov.on.ca/eng/curriculum/secondary/science.html>

A. SCIENTIFIC INVESTIGATION SKILLS AND CAREER EXPLORATION

Throughout this course, students will:

- demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analyzing and interpreting, and communicating);
- identify and describe careers related to the fields of science under study, and describe contributions of scientists, including Canadians, to those fields.

B. MATTER AND QUALITATIVE ANALYSIS

- The properties of matter can be predicted and analyzed qualitatively.
- Substances can be identified based on their distinct properties.
- Quantitative analysis of matter is used in many different fields of endeavor.

By the end of this course, students will:

- evaluate the effects of chemical substances on the environment, and analyze practical applications of qualitative analysis of matter;
- investigate matter, using various methods of qualitative analysis;
- demonstrate an understanding of the basic principles of qualitative analysis of matter.

C. ORGANIC CHEMISTRY

- Organic compounds have predictable chemical and physical properties.
- Organic compounds can be synthesized by living things or through artificial processes.
- Organic chemical reactions and their applications have significant implications for society, health and environment.

By the end of this course, students will:

- evaluate the impact on society, human health, and the environment of products made using organic compounds;
- investigate the physical and chemical properties of organic compounds, and analyze some common organic chemical reactions;
- demonstrate an understanding of the structure and the physical and chemical properties of organic compounds.

D. ELECTROCHEMISTRY

- Oxidation and reduction are paired chemical reactions in which electrons are transferred from one substance to another in a predictable way.

- The control and applications of oxidation and reduction reactions have significant implications for society and the environment.

By the end of this course, students will:

- analyze technological applications or processes relating to oxidation-reduction reactions, and assess their impact on the environment;
- investigate the oxidation-reduction reaction that occurs in galvanic cell;
- demonstrate an understanding of the concepts of oxidation and reduction, and the principles of oxidation-reduction reactions.

E. CHEMICAL CALCULATIONS

- Relationships in chemical reactions can be described quantitatively.
- Quantitative relationships of chemical reactions have applications in the home, workplace and the environment.

By the end of this course, students will:

- analyze processes in the home, the workplace, or the environmental sector that use chemical quantities and calculations, and assess the importance of accuracy in chemical calculations;
- Investigate chemical compounds and chemical reactions using appropriate techniques of quantitative analysis, and solve related problems;
- demonstrate an understanding of the mole concept and its quantitative relationships in chemical reactions.

F. CHEMISTRY IN THE ENVIRONMENT

- Air and water quality can be affected by both natural processes and human activities.
- Quantitative relationships of chemical reactions can be used to assess air and water quality.

By the end of this course, students will:

- evaluate the importance of government regulations, scientific analysis, and individual actions in improving air and water quality, and propose a personal plan of action to support these efforts;
- investigate chemical reactions, using appropriate techniques of quantitative analysis;
- demonstrate an understanding of chemical reactions that occur in the environment as a result of both natural processes and human activities.