



Cardinal Leger Secondary School

Science Department



Course Name:	Chemistry, Grade 12	Ministry Guidelines:	Science, 2008
Course Code:	SCH4U1	Replacement Cost:	Number:
Level:	University		
Textbook:			

Course Overview:

This course enables students to deepen their understanding of chemistry through the study of organic chemistry, the structure and properties of matter, energy changes and rates of reaction, equilibrium in chemical systems, and electrochemistry. Students will further develop their problem-solving and investigation skills as they investigate chemical processes, and will refine their ability to communicate scientific information. Emphasis will be placed on the importance of chemistry in everyday life and on evaluating the impact of chemical technology on the environment.

Specific Strands of Study and Overall Expectations include:

Scientific Investigation Skills and Career Exploration

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 the contributions of scientists, including Canadians, to those fields.

Organic Chemistry

Assess the social and environmental impact of organic compounds used in everyday life, and propose a course of action to reduce the use of compounds that are harmful to human health and the environment;

Investigate organic compounds and organic chemical reactions, and use various methods to represent the compounds;

Demonstrate an understanding of the structure, properties, and chemical behaviour of compounds within each class of organic compounds.

Structure and Properties of Matter

Assess the benefits to society and evaluate the environmental impact of products and technologies that apply principles related to the structure and properties of matter;

Investigate the molecular shapes and physical properties of various types of matter;

Demonstrate an understanding of atomic structure and chemical bonding, and how they relate to the physical properties of ionic, molecular, covalent network, and metallic substances.

Energy Changes and Rates of Reaction

Analyze technologies and chemical processes that are based on energy changes, and evaluate them in terms of their efficiency and their effects on the environment;

Investigate and analyze energy changes and rates of reaction in physical and chemical processes, and solve related problems;

Demonstrate an understanding of energy changes and rates of reaction.

Chem. Systems and Equilibrium

Analyze chemical equilibrium processes, and assess their impact on biological, biochemical, and technological systems;

Investigate the qualitative and quantitative nature of chemical systems at equilibrium, and solve related problems;

Demonstrate an understanding of the concept of dynamic equilibrium and the variables that cause shifts in the equilibrium of chemical systems.

Electrochemistry

Analyze technologies and processes relating to electrochemistry, and their implications for society, health and safety, and the environment;

Investigate oxidation-reduction reactions using a galvanic cell, and analyze electrochemical reactions in qualitative and quantitative terms;

Demonstrate an understanding of the principles of oxidation-reduction reactions and the many practical applications of electrochemistry.

Evaluation

Term Work	70%
Knowledge and Understanding	25%
Thinking	35%
Communication	15%
Application	25%
Final Assessment	30%
Formal Examination	30%
Course Total	100%

Learning Skills and Work Habits

E= Excellent G=Good S=Satisfactory N= Needs Improvement

Responsibility	<ul style="list-style-type: none"> Fulfills responsibility and commitments. Takes responsibility for and manages own behavior.
Organization	<ul style="list-style-type: none"> Devises and follows a plan and process for completing tasks. Establishes priorities and manages time
Independent Work	<ul style="list-style-type: none"> Independently monitors, assesses, and revises plans to complete tasks and meet goals. Uses class time to complete tasks.
Collaboration	<ul style="list-style-type: none"> Accepts various roles and an equitable share of work in a group. Builds healthy peer-to-peer relationships.
Initiative	<ul style="list-style-type: none"> Looks for and acts on new ideas and opportunities. Approaches new tasks with a positive attitude.
Self-Regulation	<ul style="list-style-type: none"> Sets own goals and monitors progress towards achieving them. Seeks clarification or assistance when needed.

Missed/Late/Incomplete Assignments

It is the student's responsibility to address missed, late, or incomplete assignments. Students are expected to complete assignments and to adhere to assignment deadlines as follows:

Due Date	10% Penalty Zone	Closure Date
A due date is set by the teacher.	1 school day late – 3% 2 school days late – 6% 3 school days late – 10% Maximum penalty of 10%	Once the closure date has passed, work is considered incomplete and a mark of zero applies.

Missed Quiz/Test/Lab Procedure

If a student is absent on a day of a quiz, a “no mark” will be assigned. Quizzes will not be re-written on any other day. The “no mark” will not affect a student's grade. Students will only be granted a maximum of two “no mark” evaluations so if they are absent for three quizzes the third mark will be a mark of zero. A mark of zero **may** be assigned for a missed lab.

If a student is absent on a day of a test, the student will receive a mark of “zero” unless a doctor's note is provided.

Parent Signature: _____ Student Signature: _____