

COURSE INFORMATION

DATE: September 2023

SCHOOL: Yeshiva High School of Ottawa

DEPARTMENT HEAD: N/A

TEACHER: Mr. Glen Armstrong

DEPARTMENT: General Studies



CURRICULUM POLICY DOCUMENT	The Ontario Curriculum: Grades 11 and 12 – Science (2008, revised)		
COURSE TITLE	Chemistry, Grade 11	COURSE CODE	SCH3U
PRE-REQUISITE	Grade 10 Science, Academic	GRADE & TYPE	Grade 11 University
FULL YEAR / SEMESTER	Semester	CREDIT VALUE	1.0

COURSE DESCRIPTION

This course enables students to deepen their understanding of chemistry through the study of the properties of chemicals and chemical bonds; chemical reactions and quantitative relationships in those reactions; solutions and solubility; and atmospheric chemistry and the behaviour of gases. Students will further develop their analytical skills and investigate the qualitative and quantitative properties of matter, as well as the impact of some common chemical reactions on society and the environment.

UNIT DESCRIPTIONS:

UNIT 1 – MATTER AND CHEMICAL BONDING

TIME: 35 HOURS

Students will learn about relationship among periodic trends, types of chemical bonding, and the properties of ionic and molecular compounds. Through lab studies, students will observe, identify and categorize chemical reactions, and analyze chemical reactions in terms of the type of reaction and the reactivity of starting materials. They will learn and use appropriate symbols and formulas to represent the structure and bonding of chemical substances and describe how an understanding of matter and its properties can lead to the production of useful substances and new technologies.

UNIT 2 – QUANTITIES IN CHEMICAL REACTIONS

TIME: 15 HOURS

Students learn the mole concept and use that concept in the analysis of chemical systems. They will have an opportunity to carry out experiments and complete calculations based on quantitative relationships in balanced chemical reactions. The importance of quantitative chemical relationships will be identified, in the home and in industry.

UNIT 3 – SOLUTIONS AND SOLUBILITY

TIME: 20 HOURS

Identification and understanding of the properties of solutions, the concept of concentration and the importance of water as a solvent. Students prepare, analyze and react solutions using

qualitative and quantitative methods. Relating scientific knowledge of solutions and solubility to a variety of technical, societal and environmental examples, including water quality.

UNIT 4 – GASES AND ATMOSPHERIC CHEMISTRY **TIME: 30 HOURS**

In this unit, students will demonstrate an understanding of the laws that govern the behaviour of gases, and investigate, through experimentation, the relationships among the pressure, volume, and temperature of a gas, and solve problems involving amount of substance in moles, molar masses and volumes, and the gas laws. Students will learn how gases have helped to advance technology and how such technical advances have led to a better understanding of environmental phenomena and issues.

UNIT — SUMMATIVE PERFORMANCE TASKS **TIME: 10 HOURS**

This course will include a summative project and a final exam, both including content from all units of the course.

STUDENT EVALUATION CRITERIA				
TERM – 70%		FINAL – 30%		FINAL REPORT CARD GRADE CALCULATION
Knowledge/Understanding	25%	Knowledge/Understanding	25%	TERM TOTAL + FINAL TOTAL = REPORT CARD MARK
Inquiry/Thinking	25%	Inquiry/Thinking	25%	
Communication	25%	COMMUNICATION	25%	
Application	25%	Application	25%	

ASSESSMENT METHODS		
OBSERVATIONS:	CONVERSATIONS:	PRODUCTS:
<ul style="list-style-type: none"> ● Informal presentations ● Reading skills ● Writing process steps (graphic organizers, research notes, outlines, drafts, editing checklists) ● Listening and speaking skills ● Self-assessment ● Records of practice including checklists, anecdotal notes (homework, classroom contributions, metacognition charts, notetaking) 	<ul style="list-style-type: none"> ● Peer feedback / editing ● Group work records ● Conferences (student- teacher, group) ● Classroom contributions ● Composition/ arrangements ● Response Journals 	<ul style="list-style-type: none"> ● Review quizzes ● Unit tests ● Projects ● Oral presentations ● Assignments ● Summative tasks ● Final Examination (30%)

LEARNING SKILLS	
Report Cards will include a letter grade for the following Learning Skills:	
INDEPENDENT WORK	<p>The student:</p> <ul style="list-style-type: none"> ▪ accomplishes tasks independently ▪ accepts responsibility for accomplishing tasks ▪ follows instructions ▪ regularly completes assignments on time and with care ▪ uses time effectively
COLLABORATION	<p>The student:</p>

ORGANIZATION	<ul style="list-style-type: none"> ▪ works willingly and cooperatively with others ▪ listens attentively, without interrupting ▪ takes responsibility for his/her share of the work to be done ▪ helps to motivate others, encouraging them to participate ▪ shows respect for the ideas and opinions of others
	<p>The student:</p> <ul style="list-style-type: none"> ▪ organizes work when faced with a number of tasks ▪ devises and follows a coherent plan to complete a task ▪ demonstrates ability to organize and manage information ▪ follows an effective process for inquiry and research
	<p>The student:</p> <ul style="list-style-type: none"> ▪ completes homework on time and with care ▪ follows directions ▪ shows attention to detail ▪ perseveres with complex projects that require sustained effort ▪ applies effective study practices
	<p>The student:</p> <ul style="list-style-type: none"> ▪ seeks out new opportunities for learning ▪ seeks necessary and additional information ▪ requires little prompting to complete a task, ▪ approaches new learning situations with confidence and a positive attitude ▪ seeks assistance when needed
RESPONSIBILITY	
INITIATIVE	
SELF-REGULATION	<p>The student:</p> <ul style="list-style-type: none"> ▪ sets individual goals and monitors own progress ▪ seeks clarification or assistance when needed ▪ reflects and assesses critically own strengths, needs and interests ▪ perseveres and makes an effort when responding to challenges

NOTE: The above chart is a reformatting of the skills identified in the Ministry of Education's *Guide to the Provincial Report Card, Grades 9 – 12 : Appendix C: pages 27 to 29*.

POLICIES AND PROCEDURES	
ATTENDANCE	<p>The Ontario Ministry of Education requires 110 hours of instruction for each course. As such, it is essential for the students to arrive punctually to each class.</p> <p>Students arriving more than ten minutes late will be marked "Late" on their report card.</p> <p>Students who are absent for an acceptable reason (see below) still have to make up the number of hours missed under the supervision of a teacher or the principal according to their availability. It is the student's duty to determine and arrange this supervision, and YHSO does not guarantee teacher's or principal's availability.</p> <p><i>Students who are absent for non-acceptable reasons will forfeit their credit.</i></p> <p>ACCEPTABLE REASONS FOR ABSENCE</p> <ul style="list-style-type: none"> • Medical reason (may require a physician's note) • Family trips or special occasions (up to four missed classes per course) <p>Regardless of reason for an absence, if a student misses more than 26 classroom hours they will forfeit their credit.</p>
ASSIGNMENTS	<p>Students are responsible to complete all their assignments and homework on time. Teachers will write all assignments, homework and tests on a classroom board, along with their due dates, but students are accountable to complete these assessments punctually. <i>Assignments handed in late may result in a deduction of marks.</i></p> <p>Teachers will post all assessments and assignments and their due dates on Google Classroom.</p>

	Students and their parents will have access to the Google Classroom for their courses.
BEHAVIOUR	<p>Students may not act in any manner that disrupts the education of another, or distracts a teacher.</p> <p>This includes:</p> <ul style="list-style-type: none"> • Excessive noise • Physical disruptions • Eating (unless granted individual permission) • Use of technology not for schoolwork purposes • Acts of disrespect such as name calling, abusive or offensive language or gestures <p>Failure to adhere to these rules will result in disciplinary action as described in the Student Handbook and Course Calendar.</p>
PLAGIARISM	<p>Academic integrity and honesty is expected from every student in Yeshiva High School of Ottawa. We take all instances of suspected dishonesty, plagiarism, or any form of “cheating” very seriously. A student who submits work that is, in whole or in part, plagiarized, will be subject to academic penalties. Repeated infractions may result in the loss of a credit and further disciplinary action. A student who assists another student in academic dishonesty may face academic consequences, including revocation of a credit.</p>