



Grade 10 Academic Science

COURSE CODE	SNC2D	GRADE	10
TEACHER(S)	Ha	CREDIT VALUE	1.0
DEPARTMENT	Science	PREREQUISITE	SNC1D

COURSE DESCRIPTION:	<p>This course enables students to enhance their understanding of concepts in biology, chemistry, earth and space science, and physics, and of the interrelationships between science, technology, society, and the environment. Students are also given opportunities to further develop their scientific investigation skills. Students will plan and conduct investigations and develop their understanding of scientific theories related to the connections between cells and systems in animals and plants; chemical reactions, with a particular focus on acid-base reactions; forces that affect climate and climate change; and the interaction of light and matter.</p> <p>additional information can be found at: http://www.edu.gov.on.ca/eng/curriculum/secondary/subjects.html</p>
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COMMUNICATION
Please direct all questions or concerns regarding student progress or program of study to the course teacher. Please call the main office to leave a message at 416-395-3240.

CONCRETE LEARNING RESOURCES	DIGITAL LEARNING RESOURCES
Textbook: ON Science 10 (Replacement Cost \$90.00)	My School Day App
	Brightspace
	Applications such as EdPuzzle

GEORGE S. HENRY ACADEMY'S COURSE WORK POLICY
<p>For each evaluation, the teacher will inform students of the due date and the ultimate deadline. The ultimate deadline is the last opportunity for students to submit an assignment for evaluation. Teachers may also use a variety of other methods for dealing with late and missed assignments at their discretion.</p> <p>Strategies to assist students in meeting deadlines include:</p> <ul style="list-style-type: none"> • Peer tutoring • Using the school app • Using a personal agenda • Seeking extra help from teachers • Requesting for assistance with time management and organizational skills • Getting help from parents/guardians • Getting help from a caring adult in the school

ASSESSMENT AND EVALUATION OF STUDENT ACHIEVEMENT

Each course follows an achievement chart which enables teachers to make judgements about student work that are based on clear performance standards and on a body of evidence collected over time. Additional information can be found on the Ministry of Education website noted within the course description.

ACHIEVEMENT CHART CATEGORIES

Knowledge and Understanding (K & U): Subject-specific content acquired in each course (knowledge), and the comprehension of its meaning and significance (understanding)

Thinking (T): The use of critical and creative thinking skills and/or processes

Communication (C): The conveying of meaning through various forms

Application (A): The use of knowledge and skills to make connections within and between various contexts

COURSE WORK (70% of your overall grade)

Categories	%	Possible Assessments of Learning
K & U	30 %	<ul style="list-style-type: none">• knowledge of content (e.g., facts, terminology, definitions, safe use of equipment and materials)• understanding of content (e.g., concepts, ideas, theories, principles, procedures, processes)
T	20 %	<ul style="list-style-type: none">• use of initiating and planning skills and strategies (e.g., formulating questions, identifying the problem, developing hypotheses, selecting strategies and resources, developing plans)• use of processing skills and strategies (e.g., performing and recording, gathering evidence and data, observing, manipulating materials and using equipment safely, solving equations, proving)• use of critical/creative thinking processes, skills, and strategies (e.g., analysing, interpreting, problem solving, evaluating, forming and justifying conclusions on the basis of evidence)
C	20 %	<ul style="list-style-type: none">• expression and organization of ideas and information (e.g., clear expression, logical organization) in oral, visual, and/or written forms (e.g., diagrams, models)• communication for different audiences (e.g., peers, adults) and purposes (e.g., to inform, to persuade) in oral, visual, and/or written forms• use of conventions, vocabulary, and terminology of the discipline in oral, visual, and written forms (e.g., symbols, formulae, scientific notation, SI units)
A	30 %	<ul style="list-style-type: none">• application of knowledge and skills (e.g., concepts and processes, safe use of equipment, scientific investigation skills) in familiar contexts• transfer of knowledge and skills (e.g., concepts and processes, safe use of equipment, scientific investigation skills) to unfamiliar contexts• making connections between science, technology, society, and the environment (e.g., assessing the impact of science on technology, people and other living things, and the environment)• proposing courses of practical action to deal with problems relating to science, technology, society, and the environment

FINAL EVALUATION (30% of your overall grade)		
Type	Description	%
Culminating Task	TBA such as a Paper or Presentation	15%
Exam	Formal written examination during exam week	15%

UNITS OF STUDY/COURSE ROAD MAP (subject to change)

Units based on Ministry Course Profiles.

Throughout this course, students will

Unit A. Scientific Investigation Skills and Career Exploration

A1. Demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analysing and interpreting, and communicating);

A2. Identify and describe a variety of careers related to the fields of science under study, and identify scientists, including Canadians, who have made contributions to those fields.

Unit B. Biology: Tissues, Organs, and Systems of Living Things

B1. evaluate the importance of medical and other technological developments related to systems biology, and analyse their societal and ethical implications;

B2. investigate cell division, cell specialization, organs, and systems in animals and plants, using research and inquiry skills, including various laboratory techniques;

B3. demonstrate an understanding of the hierarchical organization of cells, from tissues, to organs, to systems in animals and plants.

Unit C. Chemistry: Chemical Reaction

C1. analyse a variety of safety and environmental issues associated with chemical reactions, including the ways in which chemical reactions can be applied to address environmental challenges;

C2. investigate, through inquiry, the characteristics of chemical reactions;

C3. demonstrate an understanding of the general principles of chemical reactions, and various ways to represent them.

Unit D. Earth and Space Science: Climate Change

D1. analyse some of the effects of climate change around the world, and assess the effectiveness of initiatives that attempt to address the issue of climate change;

D2. investigate various natural and human factors that influence Earth's climate and climate change;

D3. demonstrate an understanding of natural and human factors, including the greenhouse effect, that influence Earth's climate and contribute to climate change.

Unit E. Physics: Light and Geometric Optics

E1. evaluate the effectiveness of technological devices and procedures designed to make use of light, and assess their social benefits;

E2. investigate, through inquiry, the properties of light, and predict its behaviour, particularly with respect to reflection in plane and curved mirrors and refraction in converging lenses;

E3. demonstrate an understanding of various characteristics and properties of light, particularly with respect to reflection in mirrors and reflection and refraction in lenses

Lab & Inquiry Activities

In this course you will complete several labs and inquiries, in addition to appropriate computer simulations, including:

- ✓ Microscopy and/or microslide
- ✓ Dissection
- ✓ Investigate chemical reactions and conservation of mass
- ✓ Investigate optics involving mirrors and/or lenses
- ✓ investigate evidence for changing climate and its effects

GEORGE S. HENRY ACADEMY'S LATE & MISSED EVALUATION POLICY

It is the responsibility of the student to make arrangements with their teacher for any missed course material and/or assignments. Extenuating circumstances will be considered on a case-by-case basis.

GEORGE S. HENRY ACADEMY'S ACADEMIC DISHONESTY POLICY

Cheating and plagiarism will not be condoned. For more information, refer to the Academic Honesty Policy found in the Student Handbook. The Student Handbook can be found in the George S. Henry Academy My School Day app.

SPECIALIST HIGH SKILLS MAJOR (SHSM) REQUIREMENTS

GRADE 11 AND 12 CREDITS	ENVIRONMENT	HEALTH & WELLNESS	HOSPITALITY & TOURISM
Major Credits	4	4	4
English (<i>including a CLA*</i>)	2	1	1
Mathematics (<i>including a CLA</i>)	1	1	1
Science or Social Sciences and Humanities (<i>including a CLA</i>) (<i>May be substituted with 1 coop credit</i>)	-	1	-
Business Studies or Science (<i>including a CLA</i>) (<i>May be substituted with 1 coop credit</i>)			1
Cooperative Education	2	2	2

TOTAL	9	9	9
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*Contextualized Learning Activity