

**Guelph Collegiate Vocational Institute  
Upper Grand District School Board**

Course Outline



**Department: Science**

**Course Title: Grade 10 Academic Science**

**Course Type: Academic**

**Grade: 10**

**Course Code: SNC 2D**

**Credit Value: 1**

**Department Head: C. Warren**

**Teachers: C. Kurylo, S. Lodge, B. MacNeill, J. Snell**

**Teacher email: (not mandatory)**

**Date of Development: September 2015**

**Curriculum Document:** (copy subject-specific document from secondary curriculum website <http://www.edu.gov.on.ca/eng/curriculum/secondary/>)

**Course Prerequisites/Corequisites:**

Science, Grade 9, Academic or Applied

**Course Description:**

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.

## Term Work (70% of the final mark)

### Unit Title, Big Ideas, and Unit Culminating Tasks

#### *Biology: Tissues, Organs, and Systems of Living Things*

**Big Ideas**

Plants and animals, including humans, are made of specialized cells, tissues, and organs that are organized into systems.

Developments in medicine and medical technology can have social and ethical implications.

**Culminating Tasks**

Medical Imaging Research Project

Unit Test

#### *Chemistry: Chemical Reactions*

**Big Ideas**

Chemicals react with each other in predictable ways.

Chemical reactions may have a negative impact on the environment, but they can also be used to address environmental challenges.

**Culminating Tasks**

Nomenclature Test

Conservation of Mass Lab Activity

Unit Test

#### *Earth and Space Science: Climate Change*

**Big Ideas**

Earth's climate is dynamic and is the result of interacting systems and processes.

Global climate change is influenced by both natural and human factors.

Climate change affects living things and natural systems in a variety of ways.

People have the responsibility to assess their impact on climate change and to identify effective courses of action to reduce this impact.

**Culminating Task**

Unit Test

#### *Physics: Light and Geometric Optics*

**Big Ideas**

Light has characteristics and properties that can be manipulated with mirrors and lenses for a range of uses.

Society has benefited from the development of a range of optical devices and Technologies

**Culminating Tasks**

Significant Digits and Calculations Test

Refraction Lab Activity

Unit Test

## Culminating Tasks/Exams (30% or the final mark)

### Course Culminating Task/Exams and Description

SNC 2D Final Examination

Based on the range of students' learning needs, a selection from the strategies listed below may be utilized. Refer to [list of teaching and assessment strategies](#).

**Teaching Strategies:**

- teacher lecture
- teacher lecture with demonstration
- class discussion
- group work (brainstorming, jigsaw, think-pair-share)
- laboratory investigations
- library research
- textbook assignments

**Assessment and evaluation strategies:**

- diagnostic assessments
- formative assessments (e.g. nomenclature, balancing equations)
- peer editing (e.g. Medical Imaging Research Project)
- summative Assessments (e.g. laboratory investigations, unit tests)

**Textbooks/Learning Resource Materials (align with Policy 603)**

**Investigating Science 10**

[Sandner, L., & Ellis, C. (2009). *Investigating science 10*. Canada: Pearson.]

**Fees for Learning Materials/Activities**

Learning Materials/Activities	Cost

Please refer to the [GCVI Student Handbook](#) for our school policies on:

- academic integrity
- late and missed assignments