

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

Course Outline



Department: Science

Course Title: Grade 10 Science

Course Type: Applied

Grade: 10

Course Code: SNC2P

Credit Value: 1.0

Department Head: Ms. C. Warren

Teachers: Ms. C. Kurylo, Mr. G. Robinson, Ms. S. Lodge, Ms. K. Gekiere

Teacher email: (not mandatory)

Date of Development: September 29, 2015

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

Course Prerequisites/Corequisites:
Grade 9 Science, Applied or Academic

Course Description:

This course enables students to develop a deeper understanding of concepts in biology, chemistry, earth and space science, and physics, and to apply their knowledge of science in real-world situations. Students are given opportunities to develop further practical skills in scientific investigation. Students will plan and conduct investigations into everyday problems and issues related to human cells and body systems; chemical reactions; factors affecting climate change; and the interaction of light and matter.

Term Work (70% of the final mark)

Unit Title, Big Ideas, and Unit Culminating Tasks

Unit 1 - Chemistry

Big Ideas

1. Analyse how chemical reactions are employed in common products and processes, and assess the safety and environmental hazards associated with them;
2. Investigate, through inquiry, the characteristics of simple chemical reactions;
3. Demonstrate an understanding of simple chemical reactions and the language and ways to represent them.

Assessment – Assignment, Lab, Unit Test

Unit 2 – Biology

Big Ideas

1. Analyse some current technologies or substances that have an impact on human tissues, organs, or systems, and evaluate their effects on human health;
2. Investigate cell division, cell specialization, and the organization of systems in animals, including humans, using various laboratory techniques;
3. Demonstrate an understanding of the hierarchical organization of cells, from tissues, to organs, to systems in animals, including humans.

Assessment – Assignment, Microscope Lab, Unit Test

Unit 3 – Optics

Big Ideas

1. Analyse how properties of light and colour are applied in technology and the impact of these technologies on society;
2. Investigate, through inquiry, properties of light, and predict its behaviour in mirrors and as it passes through different media;
3. Demonstrate an understanding of characteristics and properties of light, particularly with respect to reflection and refraction and the addition and subtraction of colour.

Assessment – Assignment, Optics Lab, Unit Test

Unit 4 – Climate Change

Big Ideas

1. Analyse effects of human activity on climate change, and effects of climate change on living things and natural systems;
2. Investigate various natural and human factors that have an impact on climate change and global warming;
3. Demonstrate an understanding of various natural and human factors that contribute to climate change and global warming.

Assessment – Assignment, Unit Test

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

Course Culminating Task/Exams and Description

Practical Exam - 10%

Final Exam - 20%

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:

Class discussion, teacher demonstrations, simulations, paired or small group lab, video presentations, guest speakers, paired or small group directed lab activities, small group discussion, use of graphic organizers, informal lab reports,

Assessment and evaluation strategies:

Ongoing project work, written and/or oral presentations, individual assignments including lab work, teacher conferences, peer assessment, self assessment, unit tests.

Textbooks/Learning Resource Materials (align with Policy 603)

Science Links 10 – McGraw-Hill 2009
Various Web sources

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