

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

Course Outline



**Department:** Science

**Course Title:** Gr. 9 Science

**Course Type:** Academic

**Grade:** 9

**Course Code:** SNC 1D

**Credit Value:** 1.0

**Department Head:** C.Warren

**Teachers:** C.Warren, L. Maggs, G. Robinson, C. VanBeurden

**Teacher email: (not mandatory)**

**Date of Development:** September, 2015

**Curriculum**

**Document:** [http://www.edu.gov.on.ca/eng/curriculum/secondary/science910\\_2008.pdf](http://www.edu.gov.on.ca/eng/curriculum/secondary/science910_2008.pdf) (p47-58)

**Course Prerequisites/Corequisites:**

None

**Course Description:**

This course enables students to develop their understanding of basic concepts in biology, chemistry, earth and space science, and physics, and to relate science to technology, society, and the environment. Throughout the course, students will develop their skills in the processes of scientific investigation. Students will acquire an understanding of scientific theories and conduct investigations related to sustainable ecosystems; atomic and molecular structures and the properties of elements and compounds; the study of the universe and its properties and components; and the principles of electricity.

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

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

#### **Biology: Sustainable Ecosystems**

Students will demonstrate an understanding of the dynamic nature of ecosystems and their ability to respond, within limits, while maintaining their ecological balance. They will also assess society's responsibility to regulate their impact on the sustainability of ecosystems in order to preserve them for future generations.

#### **Ecosystems Assignment**

#### **Summative Unit Assignment**

#### **Unit Test**

#### **Chemistry: Atoms, Elements, and Compounds**

Students will investigate the specific physical and chemical properties of elements and compounds that can be used to determine their practical uses. They will also demonstrate an understanding that elements and compounds have both positive and negative effects on society and the environment.

#### **Element Assignment**

#### **Summative Unit Assignment**

#### **Unit Test**

#### **Physics: The Characteristics of Electricity**

Students will demonstrate an understanding that electricity is a form of energy produced from a variety of non-renewable and renewable sources. They will investigate the distinct properties of static and current electricity that determine how they are used. Students will also evaluate the social, economic, and environmental implications of the production and consumption of electrical energy.

#### **Element Assignment**

#### **Summative Unit Assignment**

#### **Unit Test**

#### **Earth and Space: The Study of the Universe**

Students will demonstrate an understanding that different types of celestial objects in the solar system and universe have distinct properties that can be investigated and quantified. They will investigate how people use observational evidence of the properties of the solar system and the universe to develop theories to explain their formation and evolution. Students will also evaluate the enormous cost of space exploration that has generated valuable knowledge of the solar system and universe.

#### **Planet Assignment**

#### **Unit Test**

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

### **Course Culminating Task/Exams and Description**

Final Exam 30 %  
Based on entire course.

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	Assessment Strategies
<ul style="list-style-type: none"><li>● structured overview</li><li>● explicit teaching</li><li>● mastery lecture</li><li>● drill and practice</li><li>● compare and contrast</li><li>● demonstrations</li><li>● field trips</li><li>● peer practice</li><li>● problem solving</li><li>● case studies</li><li>● inquiry/conducting experiments</li><li>● reading for meaning</li><li>● homework</li><li>● concept formation</li><li>● brainstorming</li><li>● concept attainment</li></ul>	<ul style="list-style-type: none"><li>● self-evaluation</li><li>● peer-evaluation</li><li>● conferencing</li><li>● quizzes</li><li>● observation</li><li>● interview</li><li>● reflection</li><li>● journaling</li><li>● portfolio</li><li>● demonstration</li><li>● written response</li><li>● timed exam</li></ul>

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

Investigating Science 9 ( Pearson, 2009)

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

- academic integrity
- late and missed assignments