

**York Region District School Board**  
**The Dr. G. W. Williams Secondary School**  
Personalized Alternative Education Department  
***Grade Nine Locally Developed Science (SNC1LA)***  
Subject Head: C. Cluff

**Credit Value:** 1 Credit **Prerequisite:** None **Course Fee:** None

**Curriculum Policy Document:** The Ministry of Education does not provide specific expectations in *The Ontario Curriculum* for locally developed courses

**Department:** Science

**Course Description:**

This course emphasizes reinforcing and strengthening science-related knowledge and skills, including scientific inquiry, critical thinking, and the relationship between science, society, and the environment, to prepare students for success in everyday life, in the workplace, and in the Grade 10 Science, and Grade 11 Science Workplace Preparation courses.

Students explore a range of topics, including science in daily life, properties of common materials, life-sustaining processes in simple and complex organisms, and electrical circuits. Students have the opportunity to extend mathematical and scientific process skills to continue developing their skills in reading, writing, and oral language through relevant and practical science activities.

**Units of Study:**

Students will demonstrate scientific investigation skills in the four areas of skills (initiating and planning, performing and recording, analysing and interpreting, and communicating) and, identify and describe careers related to the fields of science under study, and describe the contributions of scientists to those fields.

The following units of study will be covered:

- Scientific Inquiry: Science in Daily Life
- Biology: Staying Alive
- Chemistry: Properties of Common Materials
- Physics: Electrical Circuits

**Overall Expectations**

- Illustrate how science is part of daily life
- Use appropriate scientific skills, tools and safety procedures to investigate problems
- Examine the connections between science and activities in daily life
- Explain the characteristics and classification of common materials
- Investigate the physical and chemical properties of common materials
- Analyse how the use of various materials is based on their physical and chemical properties
- Explain the systems and processes required by simple and complex organisms to sustain life
- Investigate the processes organisms sustain life
- Analyse how personal health and safety in everyday life and in the workplace are protected through the use of proper equipment and safety practices
- Describe the characteristics of electrical circuits and investigate simple electrical circuits
- Analyse the practical uses of electrical circuits and their impact on daily life

**Learning Skills: (abridged list from *Growing Success, 2010*)**

Learning Skills will be assessed, modelled, and reflected upon throughout the course. Students will be required to address several critical questions regarding their own development of essential learning skills and how effective use of learning skills impacts their learning process.

**Responsibility**

- completes and submits class work, homework, and assignments according to agreed-upon timelines
- takes responsibility for and manages own behavior

**Organization**

- devises and follows a plan and process for completing work and tasks
- establishes priorities and manages time to complete tasks and achieve goals

**Independent Work**

- uses class time appropriately to complete tasks
- follows instructions with minimal supervision

**Collaboration**

- responds positively to the ideas, opinions, values, and traditions of others
- shares information, resources, and expertise and promotes critical thinking to solve problems and make decisions

**Initiative**

- demonstrates the capacity for innovation and a willingness to take risks
- demonstrates curiosity and interest in learning

**Self-Regulation**

- sets own individual goals and monitors progress towards achieving them
- seeks clarification or assistance when needed

**Assessment**

- *Diagnostic assessment* is used at the beginning of a unit to help determine a starting point for instruction.
- *Formative assessment* provides information to students, as they are learning and refining their skills.
- *Summative assessments* at the end of units and a course give students an opportunity to synthesize/apply/demonstrate their learning. Summative assessments are counted toward the student's final mark.

<b>Evaluation Breakdown:</b>			
Knowledge /			Final Activities
Understanding	10%	+	30%
Thinking / Inquiry	10%		
Communication	25%		
Application	25%		
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<b>Term Mark</b>	<b>70%</b>		<b>Final Mark</b>
			<b>100%</b>

**Instructional Strategies:**

Any course can offer traditional and creative approaches to learning. Current research indicates that students can learn more effectively if given time and opportunity (*Growing Success*, 2010) - teachers incorporate a wide variety of differentiated instructional methods to respond to the varied intelligences and needs of our school community. Students will, through a miscellany of activities, explore the various skills required in this course. As such, many instructional strategies, which include (but are not limited to):

- **socratic learning**
- **concept attainment**
- **collaborative learning**
- **peer learning and assessment**
- **written and verbal reflection**
- **performance**

When deemed appropriate, either through a student's IEP, or through in-class needs, alternate means of instruction and assessment will be used.