|  |  | **Course Outline and Evaluation Summary****Course Code**  |  |
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|  | Title of Course: Grade 10 Science SNC2D  | 416-395-3210 |
|  | Department: Science |  |

| **Course Description** |
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| This course enables students to develop a deeper understanding of concepts in biology, chemistry, earth and space science, and physics; to develop further their skills in scientific inquiry; and to understand the interrelationships among science, technology, and the environment. Students will conduct investigations and understand scientific theories related to; chemical reactions; tissues, organs and systems; light and geometric optics; and climate change. **Prerequisite:** Science Grade 9  |

| **Course Evaluation**Course evaluations incorporate one or more of the achievement categories (KICA). A brief description of each category can be found [here](https://www.dcp.edu.gov.on.ca/en/assessment-evaluation/categories-of-knowledge-and-skills). The final grade is calculated using the weighted percentages below. |
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| **Term Work:** | **A variety of tasks where you show your learning and have marks assigned using the Achievement Categories/Strands** | **Summative****Evaluation:** | **Marked summative tasks which assess your learning on the entire course** |
| 70% | 20% | Knowledge & Understanding | 30% | Culminating Tasks |
| 20% | Thinking & Inquiry |
| 20% | Communication |
| 10% | Application |

| **Learning Skills** |
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| Learning skills provide Information to help students understand what skills, habits & behaviors are needed to work on to be successful. These are not connected with any numerical mark. A brief description of each skill can be found [here](http://www.edu.gov.on.ca/eng/policyfunding/growsuccess.pdf#page=17). **Responsibility, Organization, Independent Work, Collaboration, Initiative and Self-Regulation**E – Excellent G – Good S – Satisfactory N – Needs Improvement |

| **Required Materials:** Any educational resource required for this course will be provided by the school. It is the student’s responsibility to come to class with the following materials. Chromebook, 3 ring binder, loose-leaf paper, graph paper, calculator, pen(s), pencil(s), ruler, tape, and scissors. |
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| **School/Departmental/Classroom Expectations** |
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| **Attendance:** The student is expected to attend class on time. Parents/guardians will be contacted if lates/attendance becomes an issue/hindrance. If the student knows about an absence in advance, they should contact the teacher.**Plagiarism/Cheating:** A mark of 0 will be assigned for any work submitted that does not belong to the student. A mark of 0 will be assigned to a student who was found to have cheated. Parents/guardians will be informed.**Missed Work:** If a student is absent from class, (e.g. illness, sports team) it is **their** responsibility to find out what they have missed and to catch up. The student is responsible for completing all of the work that was missed due to an absence. If a student misses an assignment or test without a legitimate explanation and documentation, marks up to and including the full value of the evaluation may be deducted. Make-up tests must be arranged to be written.**Late Work:** Late work may result in a deduction of marks up to and including the full value of the evaluation. |

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| **Course Assessment Tasks** |
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| ***Unit/Topic/Strand*** | ***Big Ideas*** | ***Major Assignments / Evaluations*** | ***Estimated Duration*** |
| Unit 1: Scientific Investigation Skills and Career Exploration | o Demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analyzing and interpreting, and communicating).o 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.  | Students will be given the opportunity to demonstrate their learning in a number of ways comprising:o Written assessments in the forms of quizzes and/or testso Note taking skillso Projects including resource production and scientific writingo Presentations o Performance taskso Lab skills and report writing | Entire course |
| Unit 2: Chemistry | o Analyze 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.o Investigate, through inquiry, the characteristics of chemical reactiono Demonstrate an understanding of the general principles of chemical reactions, and various ways to represent them.  | 35 hours |
| Unit 3: Biology | o Evaluate the importance of medical and other technological developments related to systems biology, and analyse their societal and ethical implicationso Investigate cell division, cell specialization, organs, and systems in animals and plants, using research and inquiry skills, including various laboratory techniqueso Demonstrate an understanding of the hierarchical organization of cells, from tissues, to organs, to systems in animals and plants. | 26 hours |
| Unit 4: Physics | o Evaluate the effectiveness of technological devices and procedures designed to make use of light, and assess their social benefito 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 | 26 hours |
| Unit 5: Earth and Space Science | o Analyze 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.o Investigate various natural and human factors that influence Earth’s climate and climate change.o demonstrate an understanding of natural and human factors, including the greenhouse effect, that influence Earth’s climate and contribute to climate change. | 11 hours |
| Culminating Task(s) | Will include a review of the knowledge, materials and skills amassed throughout the duration of the course. | a summative project and final examination | 12 hours |