|  |  | **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 tests  o Note taking skills  o Projects including resource production and scientific writing  o Presentations  o Performance tasks  o 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 reaction  o 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 implications  o Investigate cell division, cell specialization, organs, and systems in animals and plants, using research and inquiry skills, including various laboratory techniques  o 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 benefit  o 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 |