



# FOREST HILL CI

## SNC2D GRADE 10 ACADEMIC SCIENCE COURSE OUTLINE

Prerequisite: Grade 9 Academic Science (SNC1D)

### Resources

**Textbook:** The Grade 10 science textbook is 'ON Science 10' by McGraw-Hill. The replacement cost of the textbook is \$80.

### Tools for Success/Learning Skills

Responsibility	<ul style="list-style-type: none"><li>Understand and follow this course outline and the policies outlined in the <b>Student Agenda</b>.</li><li>Arrive on time</li><li>Come prepared to work with all necessary tools</li></ul>
Organization	<ul style="list-style-type: none"><li>Keep an organized notebook</li><li>Keep an organized calendar of important dates</li></ul>
Independent Work	<ul style="list-style-type: none"><li>Stay on task</li><li>Avoid disrupting the learning of others.</li><li>Do homework regularly and complete all assigned work</li><li>Review/study the work often</li></ul>
Collaboration	<ul style="list-style-type: none"><li>Be a responsible group member.</li><li>Help your peers succeed by sharing ideas, tutoring and studying together</li><li>Prepare for labs as a team with a focus on each other's safety</li></ul>
Initiative	<ul style="list-style-type: none"><li>Be active participants in the classroom</li><li>Ask questions when unsure of the material &amp; seek extra help when needed.</li><li>Ensure that you get any missed handouts and catch up on missed work</li></ul>
Self-Regulation	<ul style="list-style-type: none"><li>Set goals and make good choices regarding academic success.</li><li>Respect yourself, classmates and teachers.</li></ul>

### Assessment and Evaluation

The primary purpose of assessment and evaluation is to improve student learning. Assessment can take on one of three forms (described below). In accordance with *Growing Success*, a student's most recent and consistent work will be taken into account.

Diagnostic	Assessment <b>FOR</b> learning determines how learning should proceed at the beginning of a unit.
Formative	Assessment <b>AS</b> learning provides feedback for a student to determine where improvement is needed. An example of this is homework.
Summative	Assessment <b>OF</b> learning evaluates what a student has learned at the conclusion of a unit/course. Examples include tests, quizzes, assignments and labs.

Evaluation of student achievement will be defined by four broad **Achievement Categories** (described below). The category weighting for semester work is shown.

Semester Work		70%
Knowledge & Understanding	Specific content acquired in the course and the comprehension of its meaning and significance.	25%
Thinking & Investigation	The use of critical and creative thinking skills and inquiry, research, and problem-solving skills.	25%
Communication	The conveying of meaning through various forms.	25%
Application	The use of knowledge and skills to make connections within and between various contexts.	25%
Exam 30%		30%

### Academic Honesty: Cheating and Plagiarism

Students are expected to submit only their own original work on evaluations done in class or out of class. Plagiarism is the passing off the ideas or writings of another as one's own. Cases of academic dishonesty (cheating and/or plagiarism) will be dealt with on a case-by-case basis, but each case will involve an investigation, communication with the student and his/her parent/guardian, and a mark of zero for the plagiarized work. Whether the student has an opportunity to demonstrate his/her learning in another assignment will be at the discretion of the teacher and/or Principal.

### Academic Integrity: Missed Classes, Evaluations and Assignments

It is the responsibility of the student to notify **all** appropriate parties (teachers, attendance office, coach, etc) **in advance** where appropriate and in compliance with school policies and procedures as per the student handbook if the student will be absent. In doing so this allows for both the student and teacher to make alternative arrangements regarding missed assignments or evaluations. In the event that advance notice is not possible, students should seek out the teacher first thing (before school) with the appropriate documentation (e.g. Doctor's note, photocopied note from office) in order to ensure that they have the opportunity to make-up the missed evaluation/assignment and course work.

# Overall Course Expectations

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## A. SCIENTIFIC INVESTIGATION SKILLS AND CAREER EXPLORATION

Throughout this course, students will:

- 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);
- 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.

## B. BIOLOGY: TISSUES, ORGANS, AND SYSTEMS

- Development in medicine and medical technology can have social and ethical implications.
- Plants and animals, including humans, are made of specialized cells, tissues, and organs that are organized into systems.

By the end of this course, students will:

- analyze some current technologies or substances that have an impact on human tissues, organs, or systems and evaluate their effects on human health, as well as societal and ethical implications
- investigate cell division, cell specialization, and the organization of systems in animals, including humans, using inquiry skills including various laboratory techniques;
- demonstrate an understanding of hierarchical organization of cells, from tissues to organs, to systems in animals, including humans.

## C. CHEMISTRY: CHEMICAL REACTIONS AND THEIR PRACTICAL APPLICATIONS

- Chemicals react with one another in predictable ways.
- Chemical reactions may have a negative impact on the environment, but they can also be used to address environmental challenges.



By the end of this course, students will:

- 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 changes;
- investigate, through inquiry, the characteristics of chemical reactions;
- demonstrate an understanding of the general principles of chemical reactions and the language and ways to represent them

## D. EARTH AND SPACE SCIENCE: EARTH'S DYNAMIC CLIMATE

- Global climate change is affected by both natural and human factors.
- Climate change affects living things and natural systems in a variety of ways
- People have the responsibility to assess their impact on climate change and to identify effective courses of action to reduce this impact.

By the end of this course, students will:

- 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;
- investigate various natural and human factors that have an impact on climate change and global warming;
- demonstrate an understanding of various natural and human factors that contribute to climate change and global warming.

## E. PHYSICS: LIGHT AND APPLICATIONS OF OPTICS

- Light has characteristics and properties that can be manipulated with mirrors and lenses for a range of uses.
- Society has benefited from the development of a range of optical devices and technologies.



By the end of this course, students will:

- Evaluate the effectiveness of technological devices and procedures designed to make use of light, and assess their social benefits;
- investigate, through inquiry, properties of light, and predict its behaviour in mirrors and lenses;
- demonstrate an understanding of characteristics and properties of light, particularly with respect to reflection and refraction.