WELCOME TO:
GRADE 9 SCIENCE

@ Forest Hill Collegiate Institute

WHAT WILL YOU BE LEARNING?

Units of Study

SUSTAINABLE ECOSYSTEMS

BIG IDEAS:

- Ecosystems are dynamic and have the ability to respond to change, within limits, while maintaining their ecological balance.
- People have the responsibility to regulate their impact on the sustainability of ecosystems in order to preserve them for future generations.

ATOMS, ELEMENTS & COMPOUNDS

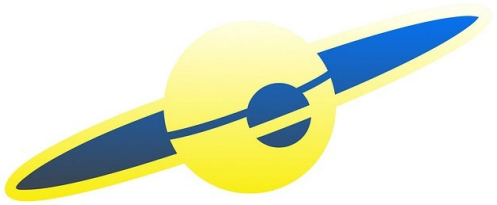
BIG IDEAS:

- Elements and compounds have specific physical and chemical properties that determine their practical uses.
- The use of elements and compounds has both positive and negative effects on society and the environment.

CHARACTERISTICS OF ELECTRICITY

BIG IDEAS:

- Electricity is a form of energy produced from a variety of non-renewable and renewable sources.
- The production and consumption of electrical energy has social, economic, and environmental implications.
- Static and current electricity have distinct properties that determine how they are used.



THE STUDY OF THE UNIVERSE

BIG IDEAS:

- Different types of celestial objects in the solar system and universe have distinct properties that can be investigated and quantified.
- People use observational evidence of the properties of the solar system and the universe to develop theories to explain their formation and evolution.
- Space exploration has generated valuable knowledge but at enormous cost.

EMBEDDED INTO EVERY LAYER OF THE CURRICULUM IS THE DEVELOPMENT OF SCIENTIFIC INVESTIGATION SKILLS:

- Initiating and Planning
- Performing and Recording
- Analyzing and Interpreting
- Communication

EVALUATIONS

Evaluations will include a variety of different opportunities for students to demonstrate knowledge, investigation, communication and the application of knowledge and skills.

COURSE OUTLINE

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SNC1D GRADE 9 ACADEMIC SCIENCE COURSE OUTLINE

Welcome to Grade 9 Science! This course will help you to gain a deeper understanding of chemistry, ecology, electricity, space and astronomy as well as an understanding of the interrelationships between science, technology and the environment. You will also be given opportunities to increase your skills in scientific inquiry, including designing and performing experiments. Please read the following document paying close attention to your responsibilities and how you will be evaluated. Good luck!

Resources

Textbook: The grade 9 science textbook is 'ON Science 9' by Nelson. The replacement cost of the textbook is **$80.**

Tools for Success/Learning Skills

Responsibility	☐ Understand and follow this course outline and the policies outlined in the **Student Agenda**. ☐ Arrive on time ☐ Come prepared to work with all necessary tools
Organization	☐ Keep an organized notebook ☐ Keep an organized calendar of important dates
Independent Work	☐ Stay on task ☐ Avoid disrupting the learning of others. ☐ Do homework regularly and complete all assigned work ☐ Review/study the work often
Collaboration	☐ **Share questions and ideas during class time** ☐ Be a responsible group member. ☐ Help your peers succeed by sharing ideas, tutoring and studying together ☐ Prepare for labs as a team with a focus on each other's safety
Initiative	☐ Be active participants in the classroom ☐ Ask questions when unsure of the material & seek extra help when needed. ☐ Ensure that you get any missed handouts and catch up on missed work
Self-Regulation	☐ Set goals and make good choices regarding academic success. ☐ Respect yourself, classmates and teachers.

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 **FOR** learning determines how learning should proceed at the beginning of a unit.
Formative	Assessment **AS** learning provides feedback for a student to determine where improvement is needed. An example of this is homework.
Summative	Assessment **OF** 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 15% + Culminating Science Portfolio 15%		30%

Percentages of Course Work & Culminating/Exam has recently been changed (as of October 9, 2020). Final grade will be based on course work throughout the Quadmester. Please speak with your child's teacher if you have any questions about how that will be implemented in their class.

Electronic Learning Expectations: Students are expected to access our Google Classroom on a daily basis. This tool will be used to supplement our ~~in class~~ instruction, provide work to be done during our asynchronous learning time at home, and to supplement our synchronous online learning. Some student work will be collected through our Google Classroom.

Academic Honesty: Cheating and Plagiarism
Students are expected to submit only their own original work on evaluations and assignments 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 investigation, communication with the student and his/her parent/guardian, and a mark of zero for 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.

***Should brick and mortar schools be shut down due to the COVID-19 pandemic, all course materials will be posted on Google Classroom. Students must also check their TDSB email multiple times daily for important course, school, and board updates as the pandemic progresses.*

Academic Integrity: Missed Classes, Evaluations and Assignments
It is the **responsibility of the student** to notify **all** appropriate parties (teachers, office, ~~etc~~) **in advance** where appropriate and in compliance with school policies and procedures if the student will be absent. This allows for both the student and teacher to make alternative arrangements. **In the event that advance notice is not possible**, students/parents should **email the school** and **email their teacher** to ensure that student and teacher have an opportunity to connect about alternative arrangements.

Overall Course Expectations

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: SUSTAINABLE ECOSYSTEMS
By the end of this course, students will:

- assess the impact of human activities on the sustainability of terrestrial and/or aquatic ecosystems, and evaluate the effectiveness of courses of action intended to remedy or mitigate negative impacts;
- investigate factors related to human activity that affect terrestrial and aquatic ecosystems, and explain how they affect the sustainability of these ecosystems;
- demonstrate an understanding of the dynamic nature of ecosystems, particularly in terms of ecological balance and the impact of human activity on the sustainability of terrestrial and aquatic ecosystems.

C. CHEMISTRY: CHEMICAL REACTIONS
By the end of this course, students will:

- assess social, environmental, and economic impacts of the use of common elements and compounds, with reference to their physical and chemical properties;
- investigate, through inquiry, the physical and chemical properties of common elements and compounds;
- demonstrate an understanding of the properties of common elements and compounds, and of the organization of elements in the periodic table.

D. EARTH AND SPACE SCIENCE: THE STUDY OF THE UNIVERSE
By the end of this course, students will:

- assess some of the costs, hazards, and benefits of space exploration and the contributions of Canadians to space research and technology;
- investigate the characteristics and properties of a variety of celestial objects visible from Earth in the night sky;
- demonstrate an understanding of the major scientific theories about the structure, formation, and evolution of the universe and its components and of the evidence that supports these theories.

E. PHYSICS: THE CHARACTERISTICS OF ELECTRICITY
By the end of this course, students will:

- assess some of the costs and benefits associated with the production of electrical energy from renewable and non-renewable sources, and analyze how electrical efficiencies and savings can be achieved, through both the design of technological devices and practices at home;
- investigate, through inquiry, various aspects of electricity, including the properties of static and current electricity, and the quantitative relationships between potential difference, current, and resistance in electrical circuits;
- demonstrate an understanding of the principles of static and current electricity.

RESOURCES

GOOGLE CLASSROOM + BRIGHTSPACE

- Each teacher will have their own Google Classroom or Brightspace site designed for their classes.
- Students will be added to their Google Classroom or Brightspace by their teacher.

- The use of either platform facilitates learning in a variety of ways, including *(but not limited to)*: notes being posted, class discussions boards, access to online virtual class sessions, and the ability to submit work electronically.

ASYNCHRONOUS WORK + VIRTUAL LEARNING

- Work to be completed asynchronously will be posted to the online platform organized by the teacher.
- A link to access the virtual synchronous class (2:00pm classes) will also be available on the online platform.

OUR SCIENCE DEPARTMENT IS LOOKING FORWARD TO TEACHING YOU!

WELCOME TO FHCI!

** Teaching Grade 9 Science this year*

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Mr. Geomolean

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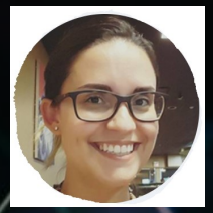

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