



Science 10 – Course Outline 2025/2026

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Room:

- 144

Google Classroom Codes

- Pd 1 - kxyvolrx
- Pd 5 - yibsttsb

Course Overview

The course focuses on the big interconnecting ideas that unify the various disciplines of Chemistry, Biology and Physics. The program is also centered on the process of science and scientific thinking. You will be expected to participate in your own learning, to experiment, to question, to predict, to gather, analyze and to evaluate.

This is a difficult, academic course and requires a significant amount of time spent studying and practicing the concepts.

Student Expectations

Students are expected to attend class regularly, punctually, and to be prepared to work. Students are expected to keep up with **both formative and summative assessments (defined below)**. Students are expected to take ownership of their learning by completing their assignments, participating in classroom activities, and coming in for extra help when needed.

Attendance:

Science 10 is a fast paced course and it is paramount that you attend every class and are on time. If you are absent from class, it is your responsibility to stay current with the class. Talk to your classmates and/or email me to find out what you missed.

Missed Work/Tests:

If an exam, quiz or summative assignment is missed due to a student being away the student must schedule a time to write the summative assessment with me in a timely manner. It will have to be written during TAG, hours before or after school, not during class time unless there is a work period provided.

Materials and Costs:

The replacement cost of any equipment that is damaged due to the carelessness or misuse will be charged to the student. **A scientific calculator is required for this course. A binder, paper, pens, pencils, highlighters, pencil crayons are highly recommended. Textbook:** Gue, David et al. Science Focus 10. Canada: McGraw-Hill, 2004.

Extra Help: if you need extra help, please come see me to schedule additional time for us to meet. I will make a strong effort to be available to help.

Process of Appeal

A student should consult his/her teacher outside of class time if he/she feels dissatisfied with their evaluation, treatment in class or other individual matters.

Course Outline & Assessment

- o Unit 0- Science Skills
- o Unit 1 – Energy and Matter in a Chemical Change (Chemistry)
- o Unit 2 – Cycling of Matter in Living Systems (Biology)
- o Unit 3 – Energy Flow in Technological Systems (Physics)
- o Unit 4- Energy Flow in Global Systems (Climate)
- o Final Exam

The order of these units is subject to change.

Course Evaluation

Assignment/Labs	10 %
Quizzes/ Projects	30 %
Unit Test	40 %
Final Exam	20 %

There will be summative assignments, quizzes and exams given within each unit of study, as well as a final exam. The final exam will be more heavily weighted than chapter exams, chapter exams will be more heavily weighted than quizzes, quizzes will be more heavily weighted than assignments.

The final exam will contain a Multiple Choice and a Long Answer portion. The final exam will incorporate a Chemistry, Biology, Physics and Environmental section. You will get a mark for each section of the final exam. How you do on each section will be incorporated into the unit breakdown above. The date of these final assessments will be communicated to you once finalized.

Assessment Plan: Students will be assessed in a variety of ways both formatively and summatively. Student evaluation of their level of understanding of curricular outcomes will come from a compilation of data taken from formative assessments, summative assessments and professional judgment.

Formative Assessment: Evaluation of student comprehension and needs that occurs in the midst of a lesson, unit or course. The purpose of a formative assessment is to help students learn and to improve the learning process itself, to supply quick feedback and enables students to reflect on their learning. Professional judgment will be used throughout the quarter in various ways to assess students' knowledge of the various outcomes.

Types of formative assessments include but are not limited to:

- Exit and Entry Questions/ Bellwork
- Activities throughout the lesson
- Practice homework and questions
- Peer to peer collaboration on questions
- Hands on Labs

Summative Assessment: Assessment of students' learning, skill acquisition, comprehension of outcomes at the conclusion of a unit/chapter or during the unit of study. Students will have formative assessments and practice leading into their summative assessments.

- Assignments: there will be 1-3 summative assessments per unit. Summative assignments must be completed in class and individually. Students may use their formative homework, notes and ask for guidance from the teacher during these tasks
- Quizzes- there will be 1-3 quizzes per unit of study. These are given after students have gotten feedback from their formative and/or summative assignments. These are closed book assessments.
- Unit Exams- There will be an exam for each unit in Science 10 (4)
- Final Exam- One cumulative final exam at the end of the semester

The best way to be successful on summative assessments is to ensure completion of the formative practice assignments and come in for help when an outcome is not understood.

Reassessment on Summative work: Re assessment opportunities will be provided for quizzes. Assignment corrections can be made, but there will be no adjustments made to their overall grade. There will be no rewrite opportunities for unit exams.

Submitting Late Summative Assignments: A summative assignment will be accepted late only if the following conditions are met:

- The student meets one on one with the teacher to discuss why assignments are not being done in a timely manner or why classes are being missed when summative assessments take place
- The student completes the summative assignment during lunch hour or after school

Labs: Labs are a privilege, not a right. Labs can be a fun and entertaining environment to learn however, **SAFETY** will trump all decisions. Any inappropriate actions or behaviors in the lab may result in exclusion from the lab or possibly the class. Some important guidelines to follow:

- Always wear appropriate safety gear: glasses, gloves and jacket during labs
- Do not eat or drink anything from the lab
- Do not steal anything from the lab
- Do not sit on counter tops
- Respect the equipment
- Respect other people's personal space in the lab

Food and Drink:

- Any drink brought into class must have a resealable cap.
- Snacks are allowed, but class time is NOT the time to eat your lunch.
- Gum is allowed as long as it is not seen, heard, or found under desks or chairs.

- **There will be absolutely no food or gum allowed during times at which labs are in progress.**

If these rules are not followed, or if littering becomes a problem these privileges will be revoked.

Electronic Devices: Cell phones, iPods, iPads or other digital technology will NOT be allowed in class for non-educational purposes. Refer to the EBHS policy for more information. *Students found with active electronic equipment during exams may receive a 0% on the exam.*

Plagiarism: In this class having the same work as a classmate because you “worked on it together” or because you “helped” your classmate with their work will be considered cheating.

****Your work should be original and a reflection of your understanding of the material. Assignments are not group projects. The teacher should not be able to tell who you worked with if you did get help from someone else.

- Often students hand in the same work as their friends/ classmates. They claim that they worked on it together or that one helped the other. The problem is the fact that the work is identical and not original.
- A student will help a classmate with a problem usually by:
 - Showing/ sharing his/her work with their classmate; or
 - Telling the classmate how to do the problem step-by-step
 - In a sense the student has helped his classmate but not in the right/ ethical way.

It is important for students to realize that this type of “helping” is cheating. It is grounds for expulsion in many college/ university settings. Consequently, it is important for students to know what is really helping versus what is cheating.

Students found to be copying others’ work, sharing their own with others, or handing in work that is not an original reflection of his/her own understanding will receive a grade of incomplete as it is no longer an accurate reflection of the students capabilities. Repeated occurrences of plagiarism will be dealt with by administration.

Science 10 Plan - SUBJECT TO CHANGE*

Unit 0: Science Skills

- Chapter 1: Skills
 - Lesson 1- Significant Digits & Scientific Notation
 - Lesson 2- Conversions & graphing
 - Lesson 3- Formula Manipulation
- Chapter 2: Lab Safety
 - WHMIS/ HHPS

Unit 1: Chemistry Focus

- Chapter 1: Atoms and Elements
 - Lesson 1 - WHMIS, Safety and Scientific Method
 - Lesson 2 - Classifying Matter and Atomic Theories
 - Lesson 3 -The Atom and Nuclear Notation
 - Lesson 4 - The Periodic Table and Electron Diagrams
- Chapter 2: Compound Names, Formulas and Properties
 - Lesson 5 - Ions and Compounds
 - Lesson 6 - Chemical Names and Formulas
 - Lesson 7 - Water, Acid and Base Properties
- Chapter 3: Chemical Reactions
 - Lesson 8 - Solubility and Reactions
 - Lesson 9 - Chemical Equations, Balancing and Reaction Types
 - Lesson 10 - Molar Mass

Unit 2: Physics Focus

- Chapter 1: Motion
 - Lesson 1 - Sig Digs + Scientific Notation
 - Lesson 2 - Uniform Motion
 - Lesson 3 - Non-Uniform Motion
 - Lesson 4 - Graphing
- Chapter 2: Energy, Work and Efficiency
 - Lesson 5 - Force and Work
 - Lesson 6 - Energy (Ep, Ek, Et)
 - Lesson 7: Efficiency
 - Lesson 8: Energy Conversions
- Chapter 3: Heat
 - Lesson 9: Specific Heat, Heat of Fusion/ Vaporization

Unit 3: Biology Focus

Chapter 1: Microscopes, Cells and Transport

- Lesson 1: Microscopes
- Lesson 2: Plant and Animal Cells
- Lesson 3: Cell Membranes + Transport
- Lesson 4: Surface Area
- Chapter 2: Plants
 - Lesson 5: Plants
 - Lesson 6: Tropism

Unit 4: Climate Focus

- Chapter 1: Solar energy and climates
 - Global systems and solar energy
 - Thermal energy transfer
 - Distributing heat
- Chapter 2: Climate and Biomes
 - Climate and biomes
 - Adaptations and biomes
 - Biomes change naturally
- Chapter 3: Climate Change and Humans
 - Are climates changing?
 - Climate affects/life affects
 - Climates and Biomes and the future
 - Human Response to Climate Change