Dartmouth High School
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Contact

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- ✓ Parents and students please to refer to the HRSB *Assessment, Evaluation, and Communication of Student Learning* Policy accessible at http://www.hrsb.ns.ca/

Term Mark: 80% Exam: 20%

Course Introduction

Science 9 develops the fundamental knowledge and skills required in content specific courses, while providing an in depth exploration of biology, chemistry, physics and space intended for students pursuing secondary science courses.

Evaluation

When determining a students' final grade:

- ✓ *No single assessment tool (i.e. presentations, labs, demonstrations, portfolios, debates, written tests/quizzes) will account for more than half of the value of each Gradebook category*
- ✓ *Learning trends over time will be considered, more recent student work and the teacher's professional judgment*
- ✓ *Students will participate in a final cumulative assessment opportunity that allows them to demonstrate an appropriate range of the learning outcomes and process skills involved in the course. This final assessment will be worth no more than 20%.*

Students in Science 9 will explore the following units and topics:

Unit 1 - Reproduction (25%)

Cellular Processes

• illustrate and describe the basic processes of mitosis and meiosis
• identify major shifts in scientific worldviews

Reproduction

• identify questions and investigate, in the laboratory, the reproduction of plants and communicate findings
• distinguish between sexual and asexual reproduction in representative organisms
• compare sexual and asexual reproduction in terms of their advantages and disadvantages

Genetics

• provide examples that arise at home, in an industrial setting, or in the environment that cannot be solved using scientific and technological knowledge
• discuss factors that may lead to changes in a cell's genetic information

Unit 2 - Atoms and Elements (25%)

Physical and Chemical Changes

• perform experiments, collect evidence, report findings, and demonstrate a knowledge of WHMIS standards in the laboratory
• investigate materials and describe them in terms of their physical properties
• describe changes in the properties of materials that result from some common chemical reactions

Atomic Theory

• use models in describing the structure and components of atoms and molecules, and explain the appropriate operational definition

Periodic Table

• identify examples of common elements, and compare their characteristics and atomic structure
• use the periodic table as a classification system and compile data about its structure
• identify the elements and number of atoms, given a chemical formula

Unit 3 - Characteristics of Electricity (25%)

Electric Current

• describe the flow of charge in an electrical circuit and explain the factors affecting the circuit
• investigate, in the laboratory, and compare qualitatively, static electricity and electric current

Series and Parallel Circuits

• describe series and parallel circuits involving varying resistance, voltage, and current
• rephrase questions in a testable form and clearly define practical problems
• use instruments effectively and accurately for collecting data

Electricity, Energy, and the Environment

• relate electrical energy to domestic power consumption costs
• determine quantitatively the efficiency of an electrical appliance that converts electrical energy to heat energy

Unit 4 - Space Exploration (25%)

The Beginnings

• describe theories on the formation of the solar system
• explain the need for new evidence in order to continually test existing theories about the composition and origin of our solar system and galaxies
• describe theories on the origin and evolution of the universe

The Solar System

• describe the composition and characteristics of the components of the solar system
• describe the effects of solar phenomena on Earth \

The Universe

• describe and classify the major components of the universe
• describe and explain the apparent motion of celestial bodies

Assessment Practice

Students will be provided with multiple opportunities to demonstrate their progress toward achievement of outcomes.

- ✓ Assessment **for** Learning/Formative Assessment is the ongoing process of gathering and interpreting evidence about student learning for the purpose of determining where students are in their learning, where they need to go, and how best to get there; instructional strategy that takes place while the student is still learning and served to promote learning
- ✓ Assessment **of** Learning/Summative Assessment is the process of analyzing, reflecting upon, and summarizing assessment information and making a judgment and/or decision based upon the information gathered.
- ✓ Assessment will take many forms, and will include observations, conversations, and products.
- ✓ Assessment Tools include, but are not limited to homework probes, quizzes, in-class assignments, group work, in class discussions, tests, projects, and the final exam.

Creating Opportunities for Success (reference school code of conduct)

- ✓ Students are expected to attend class regularly, be punctual, be prepared with appropriate materials, and homework complete.
- ✓ Students are expected to take an active part in their own learning, and follow the DHS school code of conduct (as outlined in the student handbook).
- ✓ Students are expected to demonstrate responsible use of technology.
- ✓ Students are expected to make positive contributions to the learning environment.

Procedural Expectations

Students are responsible for:

- ✓ *Seeking assistance with assignments when required;*
- ✓ *Requesting an extension for assignments in a timely manner when required;*
- ✓ *Completing assignments by specified due dates so that teachers can provide timely feedback;*
- ✓ *Responding to feedback provided during the learning process.*
- ✓ *In the event that a due date for an assignment is missed, it will be at the discretion of the teacher and principal to extend the deadline.*
- ✓ *Students who do not adhere to the extended deadline will have missed that opportunity to demonstrate achievement towards the outcomes addressed in that assignment.*

- ✓ When an assessment is missed due to an absence, students/ parents are asked to communicate with the teacher to arrange for the assessment to be completed before the assessment occurs if at all possible. Unless otherwise arranged, the student is expected to write the missed assessment upon their return to class.
- ✓ Students are **able** to exempt the final exam providing that they have met the requirements for Dartmouth High's exam exemption policy.

Communication Tools

Dartmouth High School will use a variety of methods to communicate student achievement throughout the school year.

- ✓ Parents and students are encouraged to monitor progress (as well as lates and absences) using the PowerSchool portal.
- ✓ Assessments may be coded as collected, late, missing, or not included in final grade. There may also be comments listed, such as areas of improvement or dates for negotiated extensions.
- ✓ When assessments start to be categorized in a new strand, these assessments are initially weighed heavily and may cause significant change in a student's overall grade. This weighting will become more balanced as assessments continue to be included in the new strand.
- ✓ While DHS has a number of scheduled opportunities for communication between home and school (Curriculum Night, Parent-Teacher Interviews, Mid Term Reports, Final Report Cards), parents and students are encouraged to contact the teacher any time during the semester to discuss progress.

Accessing Help

- ✓ Extra-help is available upon request. The best learning opportunities occur during class time so being in class is an essential part of this course. That being said, if you are struggling with a concept please come and see me as soon as you are encountering the issue and we will work it out ☺.

Equipment Needs

- ✓ Textbook: Omnisciences 9 (Chenlière/McGraw-Hill)
- ✓ Students will need a binder with loose-leaf to use when taking class notes, and completing practice problems.
- ✓ A duotang will be required for lab activities
- ✓ Other materials for the course include a scientific calculator, pencil, pencil crayons, eraser, pen, highlighter, ruler, and graph paper.

If you have any questions about the communication plan, please contact me at the contact information listed above.