SCIENCE 10

Spring Term 2023 – Period 4 Room 119

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Course Overview

In Science 10, you will learn the building blocks and the rules that govern living beings, chemical reactions and the universe. In this course, we will be using the scientific method in Biology, Chemistry and Physics. The course will prepare you with the fundamental skills and knowledge for your senior level courses. You will have some lecture-styled learning to help introduce scientific terminology and concepts. Your scientific understanding will be enhanced by conducting experiments and doing activities independently and in a group. I look forward to learning with you this fall!

Big Ideas

1. DNA is the basis for the diversity of living things.
2. Energy change is required as atoms rearrange in chemical processes.
3. Energy is conserved, and its transformation can affect living things and the environment.
4. The formation of the universe can be explained by the big bang theory.

Course Content

Unit Content

1: Introduction to Scientific 1. Lab safety

Processes 2. Setting up and performing experiments

3. Scientific Method

2: Biology 1. DNA structure and function

1. Mechanisms for biodiversity
2. Ethics of genetic applications

3: Chemistry 1. Chemical reactions

1. Energy in chemical processes
2. Applications of chemical processes

4: Physics 1. Conservation of energy

1. Potential and kinetic energy
2. Impacts of energy transformations
3. Nuclear energy and radiation

Unit Content

**Science 10 Spring Term - 2023 Page 2**

5: Astronomy 1. Formation of the universe

2. Technologies that deepen our understanding of the universe

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| Mark Distribution |  |
| Participation marks | 10% |
| Assignments | 25% |
| Quizzes | 10% |
| Tests (including midterm) | 40% |
| Final Exam: | 15% |
| Textbook |  |

The following textbook will be available to you as a resources in the classroom. Please use it to guide you through your class work.

Science Connections 10 (Nelson Education, 2018)

Course Materials

* Science 10 Connections Workbook
* Binder and lined paper
* Calculator – the calculator cannot be your phone. Your phone will not be allowed during testing. Conduct in the Classroom

To be successful, the following behavioural will be expected in the classroom:

* BE RESPECTFUL: there is only one person allowed to talk at one time during class lecture, class discussions and presentations. During independent work time (working on homework, assignments, studying, etc.) you may talk quietly to each other.
* BE INCLUSIVE: to give everyone the opportunity to learn and help each other, English will be the language used in the classroom.
* BE ON TIME: this means come to class on time, hand in your homework and assignments on time. Any late homework and assignments will be given a late penalty.

BE PREPARED: come to class with all the materials you will need to participate fully in the class (see Course Materials).

**Science 10 Spring Term - 2023 Page 3**

Homework & Participation

Homework will be assigned and will be checked for completion regularly. These completion marks will be tallied and will make up a small percentage of your participation marks.

Participation marks are gained by regular attendance and contributing to discussions and group work. How well you participate will be assessed by the teacher as well as by using peer- and self-evaluations.

Assignments

* All assignments are due in class on the due date. If you have a legitimate reason for handing in an assignment late, please talk to me.
* All homework, tests, quizzes, labs, assignments that you submit for marking must be your own unique work. Copying someone else’s work is unacceptable and will result in a mark of zero. Cheating on a test or quiz will result in a mark of zero.

Extra help: Extra help is available; please arrange a time with me ahead of time.