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Course: Science 10
Teacher: Ms. Elixia Neumann
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Course 10 months
Length: (approx. 120 hours)

Course Outline: Science 10

Course Description

The curriculum for this course is organized around these Big Ideas:

DNA is the basis for the diversity of living things.	Energy change is required as atoms rearrange in chemical processes.	Energy is conserved, and its transformation can affect living things and the environment.	The formation of the universe can be explained by the big bang theory.
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Students are expected to know the following:

- DNA structure and function
- patterns of inheritance
- mechanisms for the diversity of life: mutation and its impact on evolution, natural selection and artificial selection
- applied genetics and ethical considerations
- rearrangement of atoms in chemical reactions
- acid-base chemistry
- law of conservation of mass
- energy change during chemical reactions
- practical applications and implications of chemical processes, including First Peoples knowledge
- nuclear energy and radiation
- law of conservation of energy
- potential and kinetic energy
- transformation of energy
- local and global impacts of energy transformations from technologies
- formation of the universe: big bang theory, components of the universe over time
- astronomical data and collection methods

Course Layout

Each unit features a Learning Guide, two Inquiry Projects, and a Unit Test. This course is broken down as follows:

Unit	Topic
Preliminary Assignments	Course Outline About Me
1	Biology
2	Chemistry
3	Physics
4	Earth Science
Course Completion	Core Competency Reflection

Activation

To finalize registration in the course, students need to complete the Learning Guide for Unit 1 within 30 days of registration. Students may be removed from the course if this has not been completed in time.

Assessment

Learning Guides and Inquiry Projects will feature a rubric which will determine the resulting grade for the assignment. Here is an overview of the proficiency grading used within the rubrics:

Proficiency	Explanation
Extending	Student has demonstrated a sophisticated understanding of the concept and competency and/or broadened learning beyond the expectations of this outcome. The work is detailed and tidy and demonstrates an exceptional understanding of the learning outcomes.
Proficient	Student has a complete understanding of the concept and competency. The work is tidy and demonstrates the strategies used to solve the problems.
Developing	Student has demonstrated a partial understanding of the concept and competencies.
Emerging	Student has demonstrated an initial understanding of the concept and competency and require additional support to demonstrate understanding.

Upon the completion of this course, students will receive a final grade calculated by weight:

Category	Percentage
Learning Guides	20%
Inquiry Projects	30%
Quizzes	15%
Unit Tests	35%

Learning Guides and Inquiry Projects

These are the primary assignment for each unit. Students will download the Learning Guide at the start of each unit and complete it as they go through the unit. Students are expected to keep their work neat and organized, communicate their ideas as well as they can, and not skip any questions.

Before writing a unit exam, students must submit all assignments leading up to the exam. Students should be reviewing feedback from the teacher for the Learning Guide before taking the unit test.

Exam Supervision

Students may complete quizzes independently.

All exams are "closed book" and require supervision from a parent, guardian, or teacher. No additional notes or resources are to be used while taking the test.

Course Activity

Students must be working to complete learning engagements on a regular basis. Students who are inactive after two weeks will receive an email to their Brightspace email program providing a warning of inactivity. Students who are inactive after 1 month may be withdrawn from the course. If a student is planning to be inactive due to personal reasons, they need to contact their teacher to inform them of the period of inactivity.

Students should aim to complete a minimum of one unit per month to finish the course within a 10-month period.

Contacting the Teacher

Students are expected to contact the teacher when help is needed or questions arise. The best way to communicate with the teacher is through the Brightspace Email program. Students should be checking their Brightspace email program at least once a week.

Parents and Guardians can email the teacher at Elixa.Neumann@burnabyschools.ca

Resources

There are NO textbooks required for this course. Students need a basic scientific calculator.

Plagiarism

Plagiarism is unacceptable under any circumstance. Students are expected to create authentic work which demonstrates their own understanding. If students are caught cheating, plagiarizing, or submitting AI-generated responses within this course, they may be removed from the course. All sources must be cited.