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**Course:** Earth Sciences 11  
**Teacher:** Ms. Leila Dianati  
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**Course Length:** 10 months  
 (approx. 120 hours)

**Course Curriculum**

The curriculum for this course is built around the following Big Ideas:

<p><b>Earth materials</b> are changed as they cycle through the geosphere and are used as resources, with economic and environmental implications.</p>	<p><b>Plate tectonic theory</b> explains the consequences of tectonic plate interactions.</p>	<p>The transfer of energy through the <b>atmosphere</b> creates weather, and this transfer is affected by climate change.</p>	<p>The distribution of <b>water</b> has a major influence on weather and climate.</p>	<p>Astronomy seeks to explain the origin and interactions of <b>Earth and its solar system</b>.</p>
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- Students are expected to know the following:*
- properties of earth materials:
    - **minerals**
    - **igneous rocks**
    - **sedimentary rocks**
    - **metamorphic rocks**
    - **geologic resources**
  - surface and internal **processes** of the rock cycle
  - **economic and environmental implications** of geologic resources within B.C. and globally
  - evidence that supports plate tectonic theory
  - factors that affect **plate motion**
  - First Peoples knowledge of local plate tectonic settings and geologic terrains
  - the **hydrologic cycle**
  - changes in the composition of the atmosphere due to natural and human causes
  - **weather** as the interaction of water, air, and energy transfer
  - solar radiation **interactions** and **impacts on the energy budget**
  - **evidence of climate change**
  - First Peoples knowledge of climate change and interconnectedness as related to environmental systems
  - **water as a unique resource**
  - First Peoples knowledge and perspectives of water resources and processes

- **properties of the ocean and the ocean floor**
- local and global **ocean currents**
- influences of large bodies of water on **local and global climates**
- **effects of climate change** on water sources
- the nebular hypothesis (explanation of the formation and properties of our solar system)
- **Earth as a unique planet** within its solar system
- **stars** as the center of a solar system
- impacts of the **Earth-moon-sun system**
- application of space technologies to the study of changes in Earth and its systems

### Mark Weighing

Category	Weighing
Learning Guide	30%
Unit Projects	30%
Unit Exams	40%

### Resources

- Textbook not required.
- Scientific calculator required

### Course Content

*Completion of one project or learning guide will activate a student.*

Module	Units	Formative Assessment	Summative Assessment
Module 1	1: Introduction to Astronomy, Stars, and Galaxies	1 Assignment 1 Project	1 Unit Test
	2: Bodies of the Solar System	1 Assignment 1 Project	1 Unit Test
	3: Earth, Sun and Moon as a System	1 Assignment 1 Project	1 Unit Test
Module 2	4: Plate Tectonics and Internal Processes of the Earth	1 Assignment 1 Project	1 Unit Test
	5: Surface Processes	1 Assignment 1 Project	1 Unit Test
	6: Minerals, Rocks and the Rock Cycle	1 Assignment 1 Project	1 Unit Test
Module 3	7: Oceanography	1 Assignment 1 Project	1 Unit Test
	8: Atmospheric Sciences	1 Assignment 1 Project	1 Unit Test

ESC11

**Students are expected to:**

- contact the teacher by email or phone when help is needed or questions arise
- be actively engaged and submitting work on a regular basis
- inform the teacher when they will be inactive for two or more weeks.
- be aware that if they are inactive in a course for four or more weeks they may be removed from that course
- check their email at least twice a week
- create and submit completed solutions for all activities in the unit/chapter before requesting a test.
- cite all sources properly
- answer in their own words
- check that their work and tests have been marked.
- make appointments to write tests at least 2 school days in advance.