

Course Name: Earth Science 11  
Course Format: Flexible-Paced  
Location: Coquitlam Learning Opportunity Centre  
#104-2748 Lougheed Hwy, Port Coquitlam

Instructor: Mr. Haymen Leong  
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Instructor Hours: Monday & Wednesday 5:00-9:00 p.m.

Learning Centre Hours: Monday–Friday 10:00 - 2:00pm  
Monday-Thursday 4:00 - 9:00pm  
Sat, Sun Closed

### **INTRODUCTION**

Earth Science 11 is an overview of the major branches of earth science. It provides an introduction to geology, oceanography, astronomy, and meteorology.

### **EARTH SCIENCE 11 AT CLOC**

Earth Science 11 at CLOC is a self-paced, self-directed course. It is a textbook-based course with assignment sheets for each unit that outline the specific information that needs to be covered. You will be responsible for reading the assigned pages and answering specific questions in the textbook. The answers to these questions will form the notes you need to study to be successful on the unit tests.

You may write your tests during any of the hours that CLOC is open. Make sure that you allow enough time to complete your test comfortably.

The following **BIG IDEAS** are emphasized:

- Earth materials are changed as they cycle through the geosphere and are used as resources, with economic and environmental implications.
- Plate tectonic theory explains the consequences of tectonic plate interactions.
- The transfer of energy through the atmosphere creates weather, and this transfer is affected by climate change.
- The distribution of water has a major influence on weather and climate.
- Astronomy seeks to explain the origin and interactions of Earth and its solar system.

### **CURRICULAR COMPETENCIES**

Students are expected to be able to do the following:

- Questioning and predicting
  - Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest

- Make observations aimed at identifying their own questions, including increasingly abstract ones, about the natural world
- Formulate multiple hypotheses and predict multiple outcomes
- Planning and conducting
  - Collaboratively and individually plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data (qualitative and quantitative)
  - Assess risks and address ethical, cultural, and/or environmental issues associated with their proposed methods
  - Use appropriate SI units and appropriate equipment, including digital technologies, to systematically and accurately collect and record data
  - Apply the concepts of accuracy and precision to experimental procedures and data:
    - significant figures
    - uncertainty
    - scientific notation

## **CONTENT**

Earth Science 11 is presented in six units, each covering four to six chapters of the textbook.

- Unit 1: Introduction to earth science, general structure of the earth, mineral structure and identification, rock structure and identification
- Unit 2: Weather and erosion, running water, glaciers, wind and waves
- Unit 3: Plate tectonics, volcanism, earthquakes, mountain building, and geologic time scale
- Unit 4: Composition of the ocean, the ocean floor, ocean currents, and natural resources
- Unit 5: The stars and galaxies, the sun and solar system, the planets, the moon, and movement of the earth in the solar system
- Unit 6: The atmosphere, precipitation, condensation and evaporation, Pressure and winds, weather, climate

## **EVALUATION**

The breakdown for marks is as follows:

- |  |     |    |               |
|--|-----|----|---------------|
| • Unit exams   | 60% |    | Grading Scale |
| At the end of each unit there will be a unit test. It will cover the material that you have studied from the textbook. Unit 1 will have a rewrite available. The rewrite mark is the mark you will receive. There are no rewrites on units 2 to 6. |     | A  | 86 - 100      |
|  |     | B  | 73 – 85       |
|  |     | C+ | 67 – 72       |
|  |     | C  | 60 – 66       |
|  |     | C- | 50 – 59       |
|  |     | I  | below 49      |
| • Cumulative final exam  | 40% |    |               |

## **TEXTBOOK**

Spaulding, Nancy, *et al.* *Earth Science*. Canadian edition. Evanston: McDougal Little, 1999.