



SES4U

Course Profile & Evaluation

Course Description/Rationale/Overview

This course develops students' understanding of Earth and its place in the universe. Students will investigate the properties of and forces in the universe and solar system and analyze techniques scientists use to generate knowledge about them. Students will closely examine the materials of Earth, its internal and surficial processes, and its geological history, and will learn how Earth's systems interact and how they have changed over time. Throughout the course, students will learn how these forces, processes, and materials affect their daily lives. The course draws on biology, chemistry, physics, and mathematics in its consideration of geological and astronomical processes that can be observed directly or inferred from other evidence.

Prerequisite: Science, Grade 10, Academic (SNC2D)

Class Requirements

Student Responsibility

Students must seek assistance from the teacher for all work missed due to absence and must make arrangements to complete missed work.

Course Requirements/Department Policies

Attendance requirement

Students are required to log in at least once per week on course activity. Students are expected to spend approximately 7 hours per week for both online and offline learning activities. Students are required to keep a Student Learning Log for each course documenting online and offline activities.

What is considered an Absence

If a student fails to login in two consecutive weeks, it will be considered as one absence. When a student has 2 absences, the school will issue a warning letter. By mid-term (within two months from the start of a course), if a student fails to complete 40% of course work, the principal may ask the student to withdraw from the course.

Evaluation

Assignments, projects, quizzes, tests, culminating activity and final examination

Curriculum Strands

1. Astronomy (Science of the Universe)
2. Planetary Science (Science of the Solar System)
3. Recording Earth's Geological History
4. Earth Materials
5. Geological Processes

Achievement Categories

- Knowledge & Understanding 20%
- Application 15%
- Problem Solving & Inquiry 20%
- Communication 15%

Learning Skills

- Initiative
- Work Habits/Homework
- Organization
- Works Independently
- Teamwork

Evaluation

Assignments	30 % (approximately)
Quizzes and Tests	40 % (approximately)
Culminating Activity	10%
Final Evaluation	20 %

FINAL MARK

Term Work:	70%
Culminating Activity	10%
Summative Evaluation	20%

Resources

Textbook

Geology, the Environment and the Universe. McGraw-Hill Ryerson (2013)

Supplementary Teaching Materials

Worksheets organized by teacher.

Course Outline

1. Geological Processes

By the end of this course, students will learn:

1. about Earth's lithosphere;
2. how it is constantly changing as the result of natural phenomena and human activities;
3. how technologies have improved the ability of scientists to monitor and predict changes in the lithosphere.

2. Earth Materials

By the end of this course, students will learn:

1. about the exploration for and extraction of materials from below the surface of Earth;
2. how these activities have positive and negative effects on the economy, society, and the environment;
3. the origins, characteristics, and uses of different types of rocks.

3. Recording Earth's Geological History

By the end of this course, students will learn:

1. that Earth is very old;
2. that Earth's atmosphere, hydrosphere, and lithosphere have undergone many changes over time;
2. the positive and negative effects of these changes on life.

4. Astronomy (Science of the Universe) & Planetary Science (Science of the Solar System)

By the end of this course, students will learn:

1. how the understanding of the origin and evolution of the universe has been expanded by the development of technologies;
2. how scientific theories about the universe have been revised and improved by new evidence.
3. the influence of other celestial bodies of the solar system on the existence of life;
4. the positive and negative effects of space exploration on society, the economy, and the environment;
5. about the hazards of space exploration.