

Malvern Collegiate Institute
Earth and Space Science, Grade 12, University (SES4U) - Course Outline

Mr. Sasabuchi

Classroom: 210

Office: 211A

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 surface 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: Grade 10 Academic Science

Textbooks: The following textbook is recommended for reference.

- Borrero, F., Scelsi Hess, F., Hsu, J., Kunze, G., & Leslie, S. (2013). *Earth Science: Geology, The Environment and The Universe*. Glencoe McGraw-Hill.

Curriculum:

The final report card grade will be based on the evidence provided of these overall curriculum expectations:

Scientific Investigation Skills and Career Exploration

- Demonstrate scientific investigation skills in four areas: initiating and planning, performing and recording, analyzing and interpreting and communicating.
- Identify and describe a variety of careers related to the fields of science under study, and identify scientists, including Canadians, who have made contributions to those fields.

Astronomy (Science of the Universe)

- The development of more sophisticated technologies has enabled us to achieve a deeper, more thorough understanding of the origin and evolution of the universe.
- Scientific theories about the universe are refined and altered as new evidence is discovered.

Planetary Science (Science of the Solar System)

- Space exploration and the technologies that have been developed to facilitate it have had positive and negative effects on society, the economy, and the environment.
- Space exploration presents many hazards.
- Interactions among bodies within the solar system have an impact on the existence of life.

Recording Earth's Geological History

- Earth is very old, and its atmosphere, hydrosphere, and lithosphere have undergone many changes over time.
- Changing conditions on Earth over time have had positive and negative effects on life on the planet.

Earth Materials

- Exploration for and extraction and refining of materials from below the surface of Earth have positive and negative effects on the economy, society, and the environment.
- Different types of rocks have different origins, properties, characteristics, and uses.

Geological Processes

- Earth's lithosphere is constantly changing as the result of natural phenomena and human activity.
- Specialized technologies have enabled us to increase our knowledge and understanding of Earth's structure and have improved the ability of scientists to monitor and predict changes in the lithosphere.

Your Report Card Grade will be determined as follows:

<p>Term work: 90% of your grade will be based on all of the evidence you have provided. It will reflect your most consistent level of achievement with special consideration given to more recent evidence.</p>	<p>Knowledge & Understanding: subject-specific content acquired (knowledge), and the comprehension of its meaning and significance (understanding). Application: the use of knowledge and skills to make connections within and between various contexts Thinking: the use of critical and creative thinking skills and/or processes. Communication: the conveying of meaning through various forms (oral, visual, and/or written)</p>
<p>Final Evaluation: 10% of your grade will be determined at the end of the course.</p>	<p>Performance Task - consisting of an investigation or an open-ended problematic situation; completed during final weeks of the course; individual student effort; evaluated by teacher.</p>
<p>Your final grade will be calculated by combining your Term (90%) grade and your Performance Task Evaluations (10%).</p>	

Academic Standards

It is your responsibility to provide evidence of your learning within established timelines. Due dates for assignments and the scheduling of tests will be communicated well in advance to allow you to schedule your time. If you aren't going to be able to follow an agreed upon timeline you should demonstrate your responsibility and organizational skills by discussing with your teacher the challenges you're facing as far in advance of the deadline as possible.

It is your responsibility to be academically honest in all aspects of your schoolwork so that the marks you receive are a true reflection of your achievement.

Plagiarism is using the words, ideas or work of someone else without giving appropriate credit to the original creator. This is a form of cheating.

Consequences for not meeting these academic standards may include:

- Reporting the issue to your parents;
- Requiring you to complete the original or alternative work after school or during your lunch hour;
- Requiring you to complete an alternative assignment;
- Referral to the VP/Principal
- Assigning a "zero" for an assignment not completed prior to an agreed upon closure date;
- Mark deduction of 5% / day.

NOTE: The policies and administrative procedures for "Lates and Missed Assignments" and "Cheating and Plagiarism" policies may be found in your student agenda.

Learning Skills & Work Habits

These learning skills and work habits will be taught, assessed and evaluated throughout the course.

Learning Skills and Work Habits		E – Excellent G – Good S – Satisfactory N – Needs Improvement			
<p>Responsibility</p> <ul style="list-style-type: none"> ▪ Fulfills responsibilities and commitments within the learning environment. ▪ Completes and submits class work, homework, and assignments according to agreed-upon timelines. ▪ Takes responsibility for and manages own behaviour. 	<p>Organization</p> <ul style="list-style-type: none"> ▪ Devises and follows a plan and process for completing work and tasks. ▪ Establishes priorities and manages time to complete tasks and achieve goals. ▪ Identifies, gathers, evaluates, and uses information, technology, and resources to complete tasks. 				
<p>Independent Work</p> <ul style="list-style-type: none"> ▪ Independently monitors, assesses, and revises plans to complete tasks and meet goals. ▪ Uses class time appropriately to complete tasks. ▪ Follows instructions with minimal supervision. 	<p>Collaboration</p> <ul style="list-style-type: none"> ▪ Accepts various roles and an equitable share of work in a group. ▪ Responds positively to the ideas, opinions, values, and traditions of others. ▪ Builds healthy peer-to-peer relationships through personal and media-assisted interactions. ▪ Works with others to resolve conflicts and build consensus to achieve group goals. ▪ Shares information, resources, and expertise, and promotes critical thinking to solve problems and make decisions. 				
<p>Initiative</p> <ul style="list-style-type: none"> ▪ Looks for and acts on new ideas and opportunities for learning. ▪ Demonstrates the capacity for innovation and a willingness to take risks. ▪ Demonstrates curiosity and interest in learning. ▪ Approaches new tasks with a positive attitude. ▪ Recognizes and advocates appropriately for the rights of self and others. 	<p>Self-Regulation</p> <ul style="list-style-type: none"> ▪ Sets own individual goals and monitors progress towards achieving them. ▪ Seeks clarification or assistance when needed. ▪ Assesses and reflects critically on own strengths, needs, and interests. ▪ Identifies learning opportunities, choices, and strategies to meet personal needs and achieve goals. ▪ Perseveres and makes an effort when responding to challenges. 				

Course Expectations and Student Responsibilities

1. **Attendance:** Regular attendance is expected. If you are away due to illness, or for any other reason, a note is required when you return. It is **your responsibility** know what is happening in class. If you are going on a field trip or family holiday, it is your responsibility to let your teacher know ahead of time and arrange to complete the activities and/or work.
2. **Punctuality: You are expected to be in (virtual or in-person) class on time each day.** You are to bring all necessary materials to class with you or have these items ready to use at home if you are learning remotely. When the bell rings, you are expected to be seated at your desk with your notebook open, ready to begin working. *If you are late, you are responsible for all missed content. Frequent lateness or absenteeism may negatively affect your final grade.*
****If you are learning remotely, it is understood that from time to time, you may experience technical difficulties that may affect your ability to attend and or participate in online classes. If technical difficulties occur frequently, please let your teacher and the school know so that a solution can be found.***
3. **Required Materials:** Each day you are required to bring to class: a 3-ring binder containing lined paper, pencil, pen, eraser, textbook and calculator. A ruler and protractor may come in handy as well.
4. **Student Planner:** Each day, you should record homework, assignments, important due dates of assignments and test dates.
5. **Homework and Assignments:** All assignments (and homework) are to be completed on time. All questions must have been attempted. Homework may be checked periodically and the results recorded. Parents will be contacted if homework is not done regularly. You may also be required to come in during your lunch period or after school to complete work. A brief nightly review of the subject matter covered in class that day is strongly recommended. You are required to do all assignments that are missed if you are absent. Assignments submitted after the due date will receive a 5% late penalty **per day**. Assignments will receive a **grade of zero** after the assignment has been handed back and/or answers have been provided. Excessive similarities between individual assignments will be addressed and penalized. **PLAGIARISM IN ANY FORM WILL NOT BE TOLERATED!** See the student agenda for more details regarding academic honesty.
6. **Tests and Quizzes:** A scheduled major test will be given at the end of each unit. Quizzes may be given at any time. If a test is missed for a legitimate absence, the student's parent is expected to call the school and leave a message as to the reason for your absence and bring a note with an explanation on the day of return. The make-up test is to be written during the lunch period on the first day of return to the school or at a time agreed upon between the teacher and student. Consequences arising from missed assignments/tests because of an invalid absence will be dealt with according to school policy. If you have a conflict, the teacher must be notified **BEFORE** the test and arrangements must be made.
7. **Group Work:** Group work is a required course component. Students will be expected to work effectively in a group environment to optimize the performance of the group. Students will be expected to contribute equally and cooperatively to achieve the group task. Students are expected to follow all safety procedures as outlined by the teacher. Safety goggles must be worn during most lab activities. If issues arise between members of a group, please advise the teacher immediately.
8. **Extra Help:** If at any time you feel that you do not fully understand what has been taught, please do not hesitate to see me for extra help during class, or appointments may be arranged.
9. **Electronic Devices, Personal Belongings and Food:** Please refrain from bringing valuables and other personal items to class. The school is not responsible for lost and/or stolen items. Space in the classroom is extremely limited; please bring only the items that are necessary for class. **You are not permitted to store items in the classroom. MP3 players, cell phones or any other personal electronic devices are not to be brought to class; leave these items in your backpack. Food and drinks are not permitted in the classroom.**

Please keep this page at the front of your 3-ring binder.