

Geology 12

Ms. Johnston, Rm. 106N

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In Geology 12, we will study the history and structure of the earth as well as the processes that shape its surface. Students will apply their understanding of these processes to interpret geologic settings at both the local and global scale.

Activities and strategies for learning will include teacher demonstrations, student hands-on labs, virtual computer-assisted labs and activities, student presentations, reading, answering questions, making notes, general daily review and preparation for labs, tests and quizzes. Through these activities, students will develop the following **curricular competencies**:

- **Questioning and Predicting** – make observations aimed at identifying questions about the natural world, and then formulating good hypotheses and predicting outcomes
- **Planning and conducting** – collaboratively and individually plan, select and use appropriate investigation methods to collect reliable data; design and perform labs and inquiries using the scientific method, using lab equipment effectively and safely
- **Processing and analyzing data and information** – making good observations, analyzing patterns and trends in data; construct, analyze and interpret graphs, models and diagrams
- **Evaluating** – lab analysis, evaluating cause-and-effect relationships, evaluate social, ethical and environmental implications with healthy skepticism while considering the validity of sources, evaluate experimental methods and conditions, including identifying sources of error or uncertainty, possible alternative explanations and conclusions.; critically analyze the validity of information
- **Applying and Innovating** – model complex systems, implement multiple strategies to solve real-life and conceptual situations
- **Communicating** – communicate clearly and confidently in an organized manner in a variety of forms (written, verbal, mathematically, etc.) through research projects, presentations, and working collaboratively

Embedded within these curricular competencies are the **core competencies** that reach across all aspects of the British Columbia curriculum: Communication, Thinking (creative and critical) and Personal and Social Awareness (positive personal and cultural identity, personal awareness and responsibility, social responsibility). These core competencies identify the sets of intellectual, personal, and social and emotional proficiencies that all students need to develop in order to engage in deep and life-long learning.

| Unit Topic | Big idea |
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| Earth Materials | Minerals and rocks are the foundation of the rock cycle and can be used as resources that drive industry and global economies. |
| Plate Tectonic Theory | Tectonic plates are in constant motion and their interactions produce earthquakes, volcanoes, and characteristic landforms on the Earth's surface. |
| Surface Processes and the Hydrosphere | Weathering and erosion processes shape landscapes through the interaction of the geosphere and hydrosphere. |
| Geologic Time | Geologic time is preserved in Earth's rock record as fossils and reflects profound changes in the history of life on Earth. |
| Deformation and Mapping | Geologic maps and models are tools used to represent surface features and subsurface structures. |

Grading and Evaluation

First Term Mark

a) Tests and Projects (60%)

Includes quizzes and chapter/section tests. Students are responsible for completing missed assessments. Expect to write tests after school or at lunch upon the day of your return. Projects not handed in will result in a mark of zero.

b) Labs and Assignments (40%)

Labs and assignments will be a large component of this course. Homework assignments will be collected occasionally. Any labs or assignments missed due to legitimate absences are the responsibility of the student and should be completed and handed in upon your return. Assignments handed in more than one week late will receive a maximum of a 'pass' grade (50%).

Final Grade

a) Final Exam (25% of the final grade)

All students are required to write the final exam in Geology 12. The final will be comprehensive and worth 25% of the final grade.

b) End of term mark (75% of the final grade)

The end of term mark of tests and labs will consist of 80% of the final grade.

Tests (45% of the overall mark)

Labs and Assignments (30% of the overall mark)

Late Policy

Being late causes you to miss important information and disturbs the learning of others. If you are late, **wait to be admitted** into the classroom, and then quietly join in with the class's activities. You are late if you are still walking into class when the bell rings! Recurring offenses will result in a call home and possible referral to office.

Technology

Cell phones, computers, and iPads will often be used for educational purposes during this class. However, inappropriate use of cell phones (i.e., texting/gaming/watching videos during instructional time) may result in the phone being taken away for the remainder of the class. Repeated offenses will result in the cell phone being turned over to the office for pick-up at the end of the school day and contact home.

Office Hours

Students requesting additional assistance, or time to make up labs or tests may see me at lunch or after school, by appointment. To contact Ms. Johnston outside of school hours, please use email (Johnston_he@surreyschools.ca).

WEBSITE INFORMATION

Ms. Johnston maintains a website that includes links to the course notes, classroom expectations, and safety rules. A homework page is updated daily for absent students or for those unsure of their required work for the next day.

Access to the website is available through the school website; select Staff along the top button bar, and then click on Ms. Johnston's name. It can be accessed directly through the URL <http://johnstonsd36.weebly.com>