GRIMSHAW PUBLIC SCHOOL

"Inspiring Our Students Today For Tomorrow's Future"

Science 9 Course Syllabus
2021-2022
Teacher: Erin Taje

Classroom

9B - P149 - Day 1

9A - P149 - Day 2

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SCIENCE 9

Welcome to Science 9!

Science 9 is an exciting and challenging course that aims to prepare students to use critical thinking to solve problems, expand their scientific curiosity, appreciate and value the world around them, make connections between science and their everyday life and become scientifically literate adults.

Course Outline and General Outcomes

Unit A: Biological Diversity (September-October)

1. Investigate and interpret diversity among species and within species, and describe how diversity contributes to species survival.
2. Investigate the nature of reproductive processes and their role in transmitting species characteristics.
3. Describe, in general terms, the role of genetic materials in the continuity and variation of species characteristics; and investigate and interpret related technologies.
4. Identify impacts of human action on species survival and variation within species, and analyze related issues for personal and public decision making

Unit B: Matter and Chemical Change (October-December)

1. Investigate materials, and describe them in terms of their physical and chemical properties.
2. Describe and interpret patterns in chemical reactions
3. Describe ideas used in interpreting the chemical nature of matter, both in the past and present, and identify example evidence that has contributed to the development of these ideas
4. Apply simplified chemical nomenclature in describing elements, compounds and chemical reactions

Unit C: Environmental Chemistry (January-February)

1. Investigate and describe, in general terms, the role of different substances in the environment in supporting or harming humans and other living things
2. Identify processes for measuring the quantity of different substances in the environment and for monitoring air and water quality
3. Analyze and evaluate mechanisms affecting the distribution of potentially harmful substances within an environment

Unit D: Electrical Principles and Technologies (February-April)

1. Investigate and interpret the use of devices to convert various forms of energy to electrical energy, and electrical energy to other forms of energy
2. Describe technologies for transfer and control of electrical energy
3. Identify and estimate energy inputs and outputs for example devices and systems, and evaluate the efficiency of energy conversions
4. Describe and discuss the societal and environmental implications of the use of electrical energy

Unit E: Space Exploration (April-June)

1. Investigate and describe ways that human understanding of Earth and space has depended on technological development
2. Identify problems in developing technologies for space exploration, describe technologies developed for life in space, and explain the scientific principles involved
3. Describe and interpret the science of optical and radio telescopes, space probes and remote sensing technologies
4. Identify issues and opportunities arising from the application of space technology, identify alternatives involved, and analyze implications

COURSE EVALUATION

A variety of instructional and assessment strategies will be used throughout this course. The course includes a Provincial Achievement Exam worth 25% of your final grade. The 75% school mark is evaluated over the term as follows:

School Evaluation		**Individual Unit Evaluation**	
Unit A	15 %	Unit Exam	30 %
Unit B	15 %	Quizzes	20 %
Unit C	15 %	Unit Project/Lab	10 %
Unit D	15 %	Assignments, Labs & Projects	40 %
Unit E	15 %	*Unit Total*	100 %
Final Exam (PAT)	25%		
Course Total	100 %		

MISSED/LATE WORK POLICY

Circumstances may arise where students miss assignment due-dates, lab investigations, quizzes or unit exams. Missed assessments must be made up and handed in at the earliest possible time. Missed labs MUST be made up at another time outside of classroom hours. It is the responsibility of the student to arrange a time with the teacher. Chronic absences are a cause for concern. Regular student and parent monitoring of the student's progress is recommended through PowerSchool, which is accessible via the GPS website.

Assignments and Labs are a component of every unit and are to be handed in no later than the specified due-date. At the teacher's discretion, a student handing in a past-due assignment will receive a completion credit in place of a numerical grade (i.e., students will receive an "excused" once they complete a past-due assignment, which neither helps or hinders their overall grade).

Quizzes are a component of every unit and must be written on the date specified. If a chapter quiz is missed *with a valid excuse*, it must be written the following day during either Flexor after school. No retests will be permitted.

Unit Exams are comprehensive tests that cover the content from the entire unit. If a unit exam is missed *with a valid excuse*, it must be written the following day during either Flex or after school.

Final Exam: The final exam is a cumulative Provincial Achievement test at the end of the year that covers the content from the entire course.

REQUIRED RESOURCES

The **textbook** for Science 9 is *Science Focus 9 by McGraw-Hill Ryerson*. Students are required to bring their textbook to class each day. A **calculator** is also required. Cellphones cannot be used as calculators. Students will also need a ruler and other supplies may be needed throughout the course. Mrs. Taje will notify the students when different materials are required.

CELLPHONES AND MOBILE TECHNOLOGY

Mobile technology can be an effective tool for learning. When a mobile device becomes a distraction in any way, the student will be asked to turn in their device for the duration of the class. Any ongoing concerns will be addressed seriously.

PLAGIARISM

All students' work is required to be a product of their own thinking and ideas. It is encouraged that students use outside credible academic sources to further their understanding and knowledge and if those resources are used in an answer, proper citation is required. Students are not to copy from their peers. If it is found that this has occurred, both parties will either receive an incomplete for the assignment or be given the chance to redo the assignment within a deadline.

CLASSROOM EXPECTATIONS AND STRATEGIES FOR SUCCESS

1. **Come to class, every single day.** Coming to class involves more than just showing up; you must be prepared to think hard and work hard. Also, please be on time.

2. **Participate wholly in class.** Learning is not the rote memorization of facts. In-class activities provide an opportunity to make connections and gain a deep understanding of material. If you make a choice to not participate actively, you are wasting these opportunities as well as your time. Challenge yourself to think, focus and *do*.

3. **Do not let yourself get distracted.** This includes your friends and your cellphone. This is a waste of your time spent in class. Learn the material while it's being taught and discussed in-class, not the night before the exam. By the same token, do not distract the people around you; allow them to succeed.

4. **Ask questions.** Be curious, desire to learn more, and never be afraid to ask questions. Clear up any misunderstandings early and as they arise, not the night before the exam.

5. **Review material every day.** A considerable amount of learning happens during reflection. Take time every night to review your notes and reflect on what we learned in class that day. Even a few minutes every night will help. If you did not understand something that day, challenge yourself to figure it out (look at the textbook, find videos online, ask someone else in the class, and of course, come see me the next day).

Science is an exciting field with a lot of hands-on laboratory work. Students are required to listen diligently to instructions before engaging in any lab activities in order to ensure their safety. Safety will be covered before all lab activities, but know that the following rules apply to student conduct in the laboratory environment:

- Shoes are to be worn and tied at all times.
- Goggles will be provided when required.
- All equipment must be handled carefully and respectfully.
- Absolutely no unsafe behaviour will be tolerated at any time.

I have high, positive expectations of every student, and every student should have the same expectations of themselves. All work should be completed with pride and to the best of your ability. I am always available to help. I believe you can succeed.