GRIMSHAW PUBLIC SCHOOL

"Inspiring Our Students Today For Tomorrow's Future"

Science 10 Course Syllabus
2021-2022
Teacher: Erin Taje

SCIENCE 10

Lab Room P149

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Welcome to Science 10!

Science 10 is an exciting and challenging course that provides the foundations for further study in chemistry, physics, biology and global systems.

Course Outline and General Outcomes

Unit A: Chemistry - Energy & Matter in Chemical Change 1. Describe the basic particles that make up the underlying structure of matter, and investigate related technologies. 2. Explain, using the periodic table, how elements combine to form compounds, and follow IUPAC guidelines for naming ionic compounds and simple molecular compounds. 3. Identify and classify chemical changes, and write word and balanced chemical equations for significant chemical reactions, as applications of Lavoisier's law of conservation of mass.	25 % of time Sep. – Oct. Textbook A1.0 – A3.0
Unit B: Physics - Energy & Flow in Technological Systems 1. Analyze and illustrate how technologies based on thermodynamic principles were developed before the laws of thermodynamics were formulated. 2. Explain and apply concepts used in theoretical and practical measures of energy in mechanical systems. 3. Apply the principles of energy conservation and thermodynamics to investigate, describe and predict efficiency of energy transformation in technological systems.	25 % of time Oct. – Nov. Textbook B1.0 – B3.0
Unit C: Biology - Cycling of Living Matter 1. Explain the relationship between developments in imaging technology and the current understanding of the cell. 2. Describe the function of cell organelles and structures in a cell, in terms of life processes, and use models to explain these processes and their applications. 3. Analyze plants as an example of a multicellular organism with specialized structures at the cellular, tissue and system levels.	25% of time Nov. – Dec. Textbook C1.0 – C3.0
Unit D: Energy Flow in Global Systems 1. Describe how the relationships among input solar energy, output terrestrial energy and energy flow within the biosphere affect the lives of humans and other species. 2. Analyze the relationships among net solar energy, global energy transfer processes—primarily radiation, convection and hydrologic cycle—and climate. 3. Relate climate to the characteristics of the world's major biomes, and compare biomes in different regions of the world. 4. Investigate and interpret the role of environmental factors on global energy transfer and climate change.	25% of time Sept. – Jan. (ongoing) Textbook D1.0-D3.0

COURSE EVALUATION

A variety of instructional and assessment strategies will be used throughout this course. The course includes a final examination worth 30% of your final grade. The remaining 70% of the course mark is evaluated over the term as follows:

School Evaluation	
Unit A	20%
Unit B	20%
Unit C	15%
Unit D	15%
Final Exam	30%
Course Total	100%

Individual Unit Evaluation (A, B)	
Unit Exam	35 %
Quizzes	30 %
Unit Lab	5 %
Assignments	30 %
Unit Total	*100 %*

Individual Unit Evaluation (C)	
Unit Exam	45 %
Quizzes	35 %
Unit Labs	20 %
Unit Total	*100 %*

Individual Unit Evaluation (D)	
Unit Exam	35 %
Unit Project	65 %
Unit 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 or through an alternate assignment. 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 Flex or after school.

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 test at the end of the year that covers the content from the entire course.

REQUIRED RESOURCES

The **textbook** for Science 10 is *Pearson Science 10*. Students are required to bring their textbook to class each day. A **calculator** is also required. Cellphones cannot be used as calculators.

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.

GPS: The Right Direction