



GRIMSHAW PUBLIC SCHOOL
"Inspiring Our Students Today For Tomorrow's Future"
Science 8 Course Syllabus
2024-2025
Teachers: Chad Kozculab



SCIENCE 8

Classroom

8B - P147 - Block 3 - Day 1
8A - P147 - Block 3 - Day 2

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Welcome to Science 8!

Science 8 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

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| <p>Unit A: Mix & Flow of Matter (September-October)</p> <ol style="list-style-type: none"> 1. Investigate and describe fluids used in technological devices and everyday materials 2. Investigate and describe the composition of fluids, and interpret the behaviour of materials in solution 3. Investigate and compare the properties of gases and liquids; and relate variations in their viscosity, density, buoyancy and compressibility to the particle model of matter 4. Identify, interpret and apply technologies based on properties of fluids |
| <p>Unit B: Mechanical Systems (November-December)</p> <ol style="list-style-type: none"> 1. Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time 2. Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts 3. Investigate and describe the transmission of force and energy between parts of a mechanical system 4. Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices |
| <p>Unit C: Light & Optical Systems (January-February)</p> <ol style="list-style-type: none"> 1. Investigate the nature of light and vision; and describe the role of invention, explanation and inquiry in developing our current knowledge 2. Investigate the transmission of light, and describe its behaviour using a geometric ray model 3. Investigate and explain the science of image formation and vision, and interpret related technologies |
| <p>Unit D: Cells & Systems (March-April)</p> <ol style="list-style-type: none"> 1. Investigate living things; and identify and apply scientific ideas used to interpret their general structure, function and organization 2. Investigate and describe the role of cells within living things 3. Interpret the healthy function of human body systems, and illustrate ways the body reacts to internal and external stimuli 4. Describe areas of scientific investigation leading to new knowledge about body systems and to new medical applications |
| <p>Unit E: Fresh & Saltwater Systems (May-June)</p> <ol style="list-style-type: none"> 1. Describe the distribution and characteristics of water in local and global environments, and identify the significance of water supply and quality to the needs of humans and other living things 2. Investigate and interpret linkages among landforms, water and climate 3. Analyze factors affecting productivity and species distribution in marine and freshwater environments 4. Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues |

COURSE EVALUATION

This course will be taught by Mr. Kozculab. The course evaluation regardless of the teacher is on the chart that follows. A variety of instructional and assessment strategies will be used throughout this course. The course includes a final 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 | 15 % |
| Unit C | 15 % | Unit Project/Lab | 15 % |
| Unit D | 15 % | Assignments, Labs & Projects | 40 % |
| Unit E | 15 % | <i>Unit Total</i> | 100 % |
| Final Exam | 25% | | |
| <i>Course Total</i> | 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. Late assignments will still be taken in for marks. At the teacher's discretion, a student handing in a past-due assignment may 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 topic 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 8 is *Science Focus 8 by McGraw-Hill Ryerson*. Students will leave their textbook in the classroom. 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. Teachers will notify the students when different materials are required.

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 us 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.

We 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. We are always available to help. We believe you can succeed.