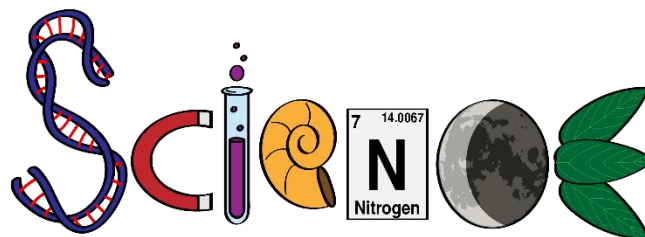


**SCIENCE 10**  
January to April 2022      Period 2

**Teacher:** Mr. Sheldon, Room 116  
**Email:** [Tobin.sheldon@pattisonhighschool.ca](mailto:Tobin.sheldon@pattisonhighschool.ca)

**About the Course:**

The goal of this course is to help you build & connect your understanding of science in the context of your daily life as well as to introduce you to the disciplines of science that you might be studying in senior courses. Please read through the information below as a guideline of what to expect for the upcoming semester. This course will touch on a variety of scientific concepts in the areas of Biology, Chemistry, Physics and Earth Science.



I'm looking forward to learning with you this semester in Science 10!

There are two textbooks that we will be using as resources in this course. They will remain in the classroom and students will be referring to them for reference.

**Textbooks:**

- (i) BC Science 10 (McGraw-Hill Ryerson, 2008)
- (ii) BC Science Connections 10 (Nelson Education, 2018)

**Course Content:**

<b>Chapter 0 - The Processes of Science</b>	<b>Week 1</b>	<b>Jan 10 - 14</b>
(i) Pages 550-590 (ii) Pages 379-411		
1. Safety		
2. What is science?		
3. Scientific Method		
<b>Chapter 1 – Biology</b>	<b>Week 2 – 4</b>	<b>Jan 17 – Feb 4</b>
<b>Genes are the foundation for the diversity of living things</b>		
(i) not in text (ii) Unit 1: Topics 1.1 to 1.4		
1. How does DNA result in biodiversity?		
2. How is the structure of DNA related to the function of DNA?		
<b>Chapter 2 – Chemistry</b>	<b>Week 5 – 7</b>	<b>Feb 7 - 25</b>
<b>Chemical processes require energy change as atoms are rearranged</b>		
(i) Unit 2: Chapters 4-6 (ii) Unit 2: Topics 2.1 to 2.4		
1. In what ways do atoms rearrange during reactions?		
2. How is energy involved in chemical processes?		
3. What chemical reactions affect your life?		
<b>Midterm Exam Feb 21 - 25</b>		

**Chapter 3 – Physics****Week 8 – 10****Feb 28 – March 18****Motion**

(i) Unit 3: Chapters 8 and 9 (ii) not in text

1. Average velocity is the rate of change of position.
2. Acceleration is the rate of change of velocity.

**Energy is conserved and its transformation can affect living things and the environment**

(i) not in text (ii) Unit 3: Topics 3.1 to 3.4

1. Where does energy come from and what happens to it?
2. How does energy in the form of radiation affect living things?
3. What is the difference between potential energy and kinetic energy?
4. How do energy transformations affect the environment?

**Nuclear energy and radiation**

(i) Unit 2: Chapter 7 (ii) Unit 3: Topic 3.2

1. Atomic theory, isotopes and radioactive decay
2. The atomic theory explains radioactivity
3. Half-life
4. Nuclear reactions

**Chapter 4 – Astronomy****Week 11 – 13****March 21 – April 8****The formation of the universe can be explained by the big bang theory**

(i) not in text (ii) Unit 4: Topics 4.1 to 4.4

1. What evidence supports the big bang theory?
2. How could you model the formation of the universe?
3. How has the advancement of technology deepened our understanding of the universe?

**Final Exam****April 11 - 13****EXPECTATIONS****Overall Expectations**

1. Your behaviour in class must not prevent the teacher from giving the lesson or interfere with anyone else's opportunity to learn. This means only one person talks at a time.
2. Be present to class on time and prepare with your supplies (full access to a computer and internet).
3. Complete and hand in your homework and assignments on time.
4. Homework and Participation will be tracked weekly. Homework marks will be taken off for late or incomplete work. Participation marks will be taken off for sleeping or using your phone in class. You can make up these marks by handing in your phone to me at the beginning of class.

**Assignment Expectations**

1. Assignments are due in class on the due date. If you feel that you have a legitimate reason why your assignment should be accepted late, explain it in writing and attach it to your assignment.
2. Please hand in assignments into the folder designated for assignments on Microsoft Teams or email.
3. Any work (tests, quizzes, labs, questions, homework assignments, etc.) submitted for marking **MUST** be complete and **YOUR OWN WORK**

4. Any student suspected of cheating on a quiz or test and who is unable to justify the action that caused the suspicion will receive an automatic grade of “zero” for that quiz or test.

**MARKS BREAKDOWN**

1. Tests (40%). The test category includes formal tests, practical tests, Midterm, and Final
2. Assignments (20%). The assignment category includes lab reports, general assignments, and project work.
3. Homework + Participation (20%)
4. Quizzes (20%)