

School Year: 2018-19

**Course Outline for:** Scimatics 8

**Teacher(s):** Ben Craigen, JD Caudle, Jane Londero, Erik Gray

**Course Description:** The Science 8 program is designed to provide students with a “hands on” type of science experience. All science classes stress the need to make accurate observations, the importance of good records, along with the ability to generalize about ideas and communicate these ideas to others. In addition, students are taught how to use equipment, follow instructions and work safely in any laboratory situation.

<b>Time Period</b>	<b>UNDERSTAND Big Idea</b>	<b>KNOW Key Content Standard</b>	<b>ASSESSMENT PIECES</b>	<b>DO Key Curricular Competencies</b>	<b>ASSESSMENT PIECES</b>
<i>Term 1</i>	Life processes are performed at the cellular level	<ul style="list-style-type: none"> <li>• Characteristics of life, cell theory and types of cells</li> <li>• Relationships of micro-organisms with living things</li> <li>• Photosynthesis</li> </ul>	Quizzes/Tests Discussions Activities Assignments Presentations	<i>Questioning and predicting</i> <i>Planning and conducting</i> <i>Processing and analyzing data and information</i> <i>Evaluating</i> <i>Applying and innovating</i> <i>Communicating</i>	Destination Immagination Science Fair Lab reports Experiments Class discussions Field trips Tests Presentations
<i>Term 2</i>	The behaviour of matter can be explained by the kinetic molecular theory and atomic theory	<ul style="list-style-type: none"> <li>• KMT, atomic theory and models</li> <li>• Protons, neutrons, electrons, quarks and leptons</li> </ul>	Quizzes/Tests Discussions Activities Assignments Presentations		

<i>Term 3</i>	Energy can be transferred as both a particle and a wave	<ul style="list-style-type: none"> <li>• Electromagnetic radiation</li> <li>• Light</li> </ul>	Quizzes/Tests Discussions Activities Assignments Presentations		
<i>Term 4</i>	The theory of plate tectonics is the unifying theory that explains Earth's geological processes	<ul style="list-style-type: none"> <li>• Plate tectonic movement</li> <li>• First Peoples knowledge of local geological formations and events</li> <li>• Layers of Earth</li> </ul>	Quizzes/Tests Discussions Activities Assignments Presentations		

**Assessment and Unit Overview:**

*We are creating the gradebook in Aspen and reporting on standards-based grading of curricular competencies and content.*

**Resources required:** *Course textbook and workbook*

**Connections to Yukon First Nation Ways of Knowing and Doing:** Within this course, teaching style will reflect on the traditional teaching practices of Yukon First Nation: The ones specifically identified are:

- *Emphasis on mastery*
- *Engaging community resources and learning*
- *Emphasis on formative feedback*
- *Starting with modelling of expected learning; gradual shift to autonomy of tasks*

- *Making next steps clear*
- *Clarification of the learning focus*
- *Connections to student lives and place*
- *Have well defined and consistent behaviour expectations*
- *Communicate to students that we care for them*

When possible, classroom teaching will incorporate aspects of first nation knowledge and culture when the curriculum allows.

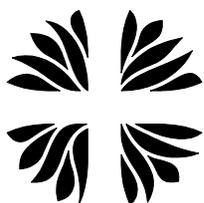
### Evaluation and Reporting Plan:

Use of Aspen Gradebook to record evidence of student performance.

We are required to report on the **learning standards**. A learning standard refers to both content and curricular competencies. At the end of a learning cycle, the teacher will determine a final performance indicator/percentage based on the trend of student achievement on summative tasks that include both content and curricular competencies.

Linear Dates	Semester 1 Courses	Semester 2 Courses	Type of Report	Communication
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**Re-assessment Policy:** Students have the opportunity to try again to demonstrate improved knowledge of the particular concept. Students must show that they have made efforts to learn the concept before getting the opportunity to be re-assessed. Note that this is subject to time constraints of the course and is not guaranteed as the end of a course approaches for students requiring *multiple* areas of re-assessment.



School Year: 2018-19

**Course Outline for:** Science 9

**Teacher(s):** Caudle, Craigen, Gray, Londero

**Course Description:** This course is designed to introduce the students to 4 of the main sections of Science so they can be introduced to some of the concepts/ vocabulary/ methods/ discoveries and uses in today’s world that each discipline has contributed to Science research and application.

**Assessment and Unit Overview:**

<b>Time Period</b>	<b>UNDERSTAND Big Idea</b>	<b>KNOW Key Content Standard</b>	<b>ASSESSMENT PIECES</b>	<b>DO Key Curricular Competencies</b>	<b>ASSESSMENT PIECES</b>
<i>Term 1</i>	Cells are derived from cells	Asexual Reproduction - Types and examples	Quizzes, explanation diagrams of phases of Mitosis	<i>Explanation of these processes and ability to give examples in the natural world</i> - <i>Identify in prepared slides some of these stages</i>	Test , Lab report and drawings
		Sexual Reproduction - Types - Human Reproduction	Quizzes explanation diagrams of phases of Meiosis	Distinguish between Asexual and Sexual Reproduction Give examples and benefits of each. Link to Salmon populations in the Yukon and First Nations food chain	Test, Vocabulary Quiz,

Term 2	Electron Arrangement of Atoms impacts their chemical nature	Elements and arrangement on the Periodic Table Determining the compounds formed by the elements	Sheets on components of atoms, drawing out the electron arrangement of elements		Determining electrons, protons, neutrons and their arrangement in the elements, identify Families on the Periodic Table and discussing their reactivity	Identifying elements by Atomic number, mass and family on the Periodic Table
Term 3	Electric Current is the Flow of Electric charge.	Ideas about how Atomic Theory was developed  Discuss the EM Spectrum.	Lewis and Bohr Model Diagrams  Draw and explain the different forms of Light.		Complete sheets on Balancing and combining compounds  Describe the different levels of energy in Light. Do problems involving volts, current, amperes and describe the relationship between them.	Lab work on Chemical Reactions.  Test with Voltage, Current and Ampere problems.
Term 4	Connecting Biosphere, Geosphere, Hydrosphere and Atmosphere.	Describe what each sphere is made up of and the inter-relationship between them.	Give examples of the organisms and the cycles that act upon each of the spheres.		Describe how they are being affected by the influence of humans and other organisms - past, present and future. Describe ways to keep them in balance.	Report on some of the changes to these spheres over the last 10,000 years.

*Discuss how we are creating the gradebook in aspen and reporting on standards-based grading of curricular competencies and content*

**Resources required:** *textbooks/workbooks etc*

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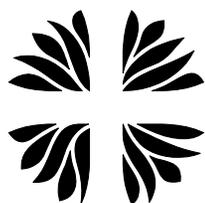
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School Year: 2018-19

**Course Outline for:** Mathematics 8      **Teacher(s):** James Caudle, Ben Craigen, Jane Londero

**Course Description:**

Generally speaking, mathematics 8 consolidates students’ knowledge and understanding of number concepts in preparation for the increasingly abstract and algebraic concepts in secondary mathematics. Fluency with number operations is a goal, introducing exponentiation and extending operations to fractions and negative numbers. Proportionality is presented as a unifying concept across fractions, ratios, and percents. The curricular competencies for math 8 are virtually the same as for math 7 or math 9; students develop their capacities for reasoning and analysis – most directly through the solving of rich problems. Reflection on mathematics and making connections are another area of development. Finally, students will practice communicating and representing mathematics in ways that are effective and efficient.

**Assessment and Unit Overview:**

Time Period	<i>UNDERSTAND</i> Big Idea	<i>KNOW</i> Key Content Standard	ASSESSMENT PIECES	<i>DO</i> Key Curricular Competencies	ASSESSMENT PIECES
	Number: proportionality	Percents, proportional reasoning, squares, cubes, roots		<i>Reasoning and Analyzing</i>	Problem solving journals, challenge tasks
	Fraction	Fraction operations		Understanding and Solving	Unit tests,

	operations				formative quizzes, assignments
	Linear relationships	Linear relations, expressions, 2-step equations		Communicating and Representing	Projects, presentation problems
	Area & volume relationships	Surface area & volume, Pythagorean theorem, views & nets		Connecting and Reflecting	Problem solving journals, projects, math labs
	Analyzing data				

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**Resources required:** *textbooks/workbooks etc*

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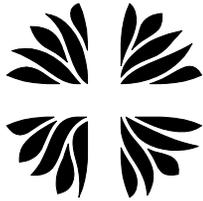
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School Year: 2018-19

Course Outline for: Scimatics (Math 9)

Teacher(s): Craigen/Londero/Caudle/Gray

**Course Description:**

The goal of Scimatics Math 9 is to give students a chance to practice math skills everyday in a linear school year. By combining the two courses together, not only do students receive consistent re-enforcement of math skills on a regular basis, but it also allows the integration of math into scientific analysis whenever possible. *The link that connects math to science is crucial in developing an appreciation for the importance of math in our lives and the world around us.*

**Assessment and Unit Overview:**

Time Period	<b>UNDERSTAND</b> Big Idea	<b>KNOW</b> Key Content Standard	<b>ASSESSMENT</b> PIECES	<b>DO</b> Key Curricular Competencies	<b>ASSESSMENT</b> PIECES
Term 1	<b>Number Representation</b> <ul style="list-style-type: none"> <li>Number operations apply equally to algebraic situations and can be described and analyzed</li> </ul>	<ul style="list-style-type: none"> <li>perfect squares and cubes</li> <li>square and cube roots</li> <li>percents less than 1 and greater than 100 (decimal and fractional percents)</li> </ul>	-Assignments -Quizzes -Tests -Projects	The following apply to all Big Ideas <ul style="list-style-type: none"> <li>Reasoning and Analyzing</li> <li>Understanding and Solving</li> <li>Communicating and Representing</li> <li>Connecting and Reflecting</li> </ul>	-Assignments -Quizzes -Tests -Projects
	<b>Computational Fluency and</b>	<ul style="list-style-type: none"> <li>numerical proportional</li> </ul>	-Assignments	<ul style="list-style-type: none"> <li>Reasoning and Analyzing</li> </ul>	-Assignments

Term 2	<b>Flexibility</b> <ul style="list-style-type: none"> <li>Calculations using all operations including rational numbers</li> <li>Fraction Operations</li> </ul>	reasoning (rates, ratio, proportions, and percent) <ul style="list-style-type: none"> <li>operations with fractions (addition, subtraction, multiplication, division, and order of operations)</li> </ul>	-Quizzes -Tests -Projects	<ul style="list-style-type: none"> <li>Understanding and Solving</li> <li>Communicating and Representing</li> <li>Connecting and Reflecting</li> </ul>	-Quizzes -Tests -Projects
Term 3	<b>Discrete Linear Relationships</b> <ul style="list-style-type: none"> <li>Graphing</li> <li>Identifying regularities and making generalizations</li> </ul>	<ul style="list-style-type: none"> <li>discrete linear relations (extended to larger numbers, limited to integers)</li> <li>expressions- writing and evaluating using substitution</li> <li>two-step equations with integer coefficients, constants, and solutions</li> </ul>	-Assignments -Quizzes -Tests -Projects		
Term 4	<b>Shapes</b> <ul style="list-style-type: none"> <li>Similar shapes have proportional relationships that can be described, measured and compared</li> </ul> <b>Analyzing Data</b> <ul style="list-style-type: none"> <li>Determining validity and reliability of data</li> </ul>	<ul style="list-style-type: none"> <li>Pythagorean theorem</li> <li>construction, views, and nets of 3D objects</li> <li>surface area and volume of regular solids, including triangular and other right prisms and cylinders</li> <li>central tendency</li> <li>theoretical probability with two independent events</li> <li>financial literacy — best buys</li> </ul>	-Assignments -Quizzes -Tests -Projects		

Grades will be recorded in Aspen using a combination of content and curricular competencies to track performance.

**Resources required:**

Mickleson Math 9 Workbook

**Connections to Yukon First Nation Ways of Knowing and Doing:**

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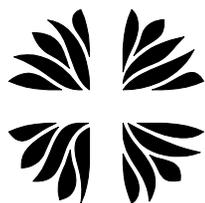
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## Vanier Catholic Secondary

16 Duke Road, Whitehorse, YT Y1A 4M2  
Phone: (867) 667-5901 Fax: (867) 393-6370  
www.vcss.ca

School Year: 2018-19

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**Course Outline for:** Religion 12

**Teacher(s):** J.D. Caudle

**Course Description:**

The end goal of Catholic education is to lead students to “encounter the living God who in Jesus Christ reveals his transforming love and truth” (Benedict XVI) so that they might choose love, truth, and ultimately salvation. In other words, it seeks to help form them into better people and find truly fulfilling happiness – to point them towards sainthood. Religion 12 follows this aim by preparing students to be competent and confident moral/ethical decision makers in a confused and confusing world.

**Assessment and Unit Overview:**

<b>Time Period</b>	<b>Learning Goal</b>	<b>FORMATIVE PIECES</b>	<b>SUMMATIVE PIECES</b>
September	Understand the purpose and function of ethics and morality as the pursuit of the good.	Class discussions, movie response, informal surveys/quizzes, journal entries, debates, Socratic dialogues, various written exercises, ticket out door, group presentations, symbolic media.	“Happiness in my life” assignment. Moral reasoning and belief analysis.
October	Describe the role of conscience and the importance of its formation.		Person of conscience written letters
November	Trace the inherent links between freedom, rights, and duties.		Contemporary slavery research and presentation
September-January	Explore and apply the Catholic moral-ethical framework.		Catholic teaching on a moral issue “for dummies”
September-January	Analyze and apply moral-ethical reasoning to complex issues, especially contemporary ones.		Final research and application project

**Resources required:**

A wide variety of films and other video media of moral-ethical significance.

**Connections to Yukon First Nation Ways of Knowing and Doing:**

- Communicate to students that you care about each student equally.
- Connect learning to students’ lives, with special emphasis on those cultural/ community elements that affirm local culture/community.
- Make the learning focus crystal clear. Re-emphasize this focus through the lesson and at the end.
- Make clear next steps in learning.

- Also, allow students to peer-monitor learning by working together and seek/provide assistance.
- Learning tasks that are “working to end” type examples—working through processes as we work towards products.

**Evaluation and Reporting Plan:**

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**Specific policies/procedures for this course:**

- Authentic sharing and learning in a course like this requires safety and respect - more so than generally required for other courses. Expectations surrounding student responsibility for classroom culture and atmosphere are high and stressed throughout.
- Reassessment of any learning goal is always an option, subject to reasonable constraints of time and workload.