



Science Foundations 10F Syllabus

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Course description

The grade 9 course follows the guideline of the Manitoba Curriculum by reinforcing the five goals. These five goals are Naturing Science and Technology, the use of Science, Technology towards our Society and Environment, The Scientific and Technology skills built, Understanding Science as a language and skill, unifying these concepts to produce products.

Course Expectations

Students should:

- Be prepared for class and have all their learning supplies (calculator, pencil, paper, notes)
- Be respectful of others comments and belongings
- Be responsible for their own learning (not on your cell phone or distracting others)
- Be prepared to make mistakes and ask for help



Digital Citizenship

SVSD AP 203 Digital Citizenship and AP 230 Cell Phone Use

“The Swan Valley School Division is committed to providing an engaging and safe learning environment where the potentially harmful impacts of online platforms and cell phone use is minimized. To support this positive environment, the following personal device or cell phone guidelines will be in place.”

“Grade 9 to 12 students: banned from cell phone use during class time on campus and off campus but are permitted to responsible use of cell phones during break times and lunch.”

“Student with medical or diverse learning needs may qualify for exceptions to the Administrative Procedure, however a Student Specific Plan will need to be created to accompany such an exception.” If this applies to you and you have not completed this plan, please see me, so we can make arrangements for it to be done.

“Teachers may direct Grade 9 to 12 students...to use cell phones for educational purposes.”

“The SVSD is not responsible for loss/theft/damages incurred to personal ICT devices including physical or data damage.”

The term “cell phone” includes tablets, e-readers, smart phones, MP3 players, smart watches, electronic toys or any other personal technology devices.

Classroom Implementation of ICT

- All devices will be handed into the bucket or placed on the teacher's desk. If any staff member requests you to hand in your device, you are required to do so according to the SVRSS School Code of Conduct
- At times, technology will be used in the classroom to enhance learning in which laptops will be provided to each student.
- If a student is leaving class to go to the washroom or other tasks, the device will remain in the classroom.
- Parents/Guardian should be aware that their child will not be able to respond to message/calls received during class time.

Assessment

Formative

This type of assessment gives the student opportunity to make mistakes and learn from those mistakes. Some kinds of formative assessment that I will be using are practice questions with solutions, interviewing, and observation.

Summative

This type of assessment will give students ownership of how well they are doing in the course. Although students should know how well they are doing in the course by their formative assessment these assessments will be used for your mark. Some types of this assessment will be Rich Performance Tasks (Homework and Assignments), Tests, and Final Exam.

Evaluation Plan

1. Rich Performance Tasks (Assignments, Labs, and Quizzes)	45%
2. Tests	40%
3. Final Exam	15%



Topics:

Introduction Senior Science

- Introduction to labs (Lab reports, Lab Safety, WHMIS, Lab Equipment)
- Conversions

Chemistry

- History of the Periodic Table
- Physical and Chemical Properties
- Bohr Models
- Formation of Ionic compounds, Naming, Formulas

Reproduction and Cell Division

- Cell Division (Mitosis, Mitosis, Cell Mutation)
- Reproduction (Asexual vs Sexual, Plant Reproduction, Human Reproduction)
- Genes and Traits (Dominant, Recessive, Inheritance)

Electricity

- Intro to Static Electricity (Charges, Conduction, Induction, Insulators, and Grounding)
- Series and Parallel Circuits (Voltage, Resistance, Current, Voltmeter, Ammeter.)
- Energy Consumption

Space

- Intro to Solar Systems (Planets, Moons, Stars, Comets, and Asteroids, etc.)
- History and Technology improvements to Space Exploration (Space X vs NASA)

Important Notes

- **Missing Tests:**
Any student missing an important summative assessment like a test may be required to be assessed with an alternate and possibly more challenging assessment once a zero and missing is placed in PowerSchool. (Rationale: student has created an advantage by having more time to prepare and/or discuss assessment items). Missing an assessment with parental permission, illness, field trip, court appearance, etc. may still warrant an alternate assessment as per the instructor.

Exam:

- There are **EXEMPTIONS** in this course. Students may qualify for an exemption if they have a grade of 85% or higher and have met all class expectations. A grade of 84% does not qualify as there is an entire semester to earn 85%. Truants and missed or incomplete assignments will void any exemptions. For exam writers, a minimum mark of 50% overall in the course, is necessary to receive a credit for the course. Low exam scores may indicate that a student may need to rewrite the exam, and this will be addressed during exam week. I encourage all students to strive for excellence to avoid any possibility of credit loss!
- **Final Examination:**
If a student's final exam mark is higher than their term mark, the final exam weighting will be considered at 100%. That is, if a student scores higher on the final exam than their term mark, the final exam score becomes their final course grade. This will NOT be considered in reverse (i.e. the final exam will hold a minimum respective weight as per the course outline).

Course Structure

	Unit	Outcomes	Assessment
Feb 5 to Feb 12	Intro to Senior Science (Safety and Lab Skills)	S1-0 (1-9)	Observation/Interview (F) Practice Questions (F) Quiz (S) Assignment (S) Labs (S) Project (S)
Feb 13 to March 13	Electricity	S1-3 (1-22)	Observation/Interview (F) Practice Questions (F) Assignment (S) Labs (S) Project/Quiz (S)
March 17 to April 21	Chemistry	S1-2 (1-14)	Observation/Interview (F) Practice Questions (F) Quiz (S) Assignment (S) Labs (S) Project (S)
April 22 to May 30	Reproduction and Cell Division	S1-1 (1-18)	Observation/Interview (F) Practice Questions (F) Quiz (S) Assignment (S) Project (S)
June 2 to June 12	Space	S1-4 (1-11)	Observation/Interview (F) Practice Questions (F) Assignment (S) Project (S)
June 13 to 27	Review and Exam		Practice Questions (F) Test(S) Homework/Assignment (S)