



Science 20F
SCI20F.31
Room: 217

Course Outline

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Course Description:

Grade 10 Science has four large topics including “Chemical Processes”, “Motion”, “Sustaining Ecosystems”, et “Weather Dynamics”. Most of these topics set the basis or connect to Biology, Chemistry, and Physics once the student gets to the higher grade levels.

Textbook:

Anderson, A., Bocknek, J., Goodchild, S., Hamilton, K., Smith, T., Stewart, K. and Weber, C. (2014). *Science 10*. McGraw-Hill Ryerson.

Essential Learning Outcomes:

1. Chemical Processes

Students will use the Periodic Table to determine the following:

- ☒ Bonding, Lewis Dot Diagrams, and combining capacities
- ☒ Naming of compounds and creating formulas

Students will investigate chemical reactions (synthesis, decomposition, single/double displacements, combustion)

- ☒ Law of Conservation of Mass, balancing equations

Students will classify and characterize acids and bases including:

- ☒ pH scale, industry use, neutralization, and environmental impact

2. Motion

Students will outline historical developments in force and motion including:

- ☒ Newton’s Laws, Aristotle, Galileo

Students will investigate how force relates to motion including:

- ☒ Inertia, friction and momentum (weather, surface, size of vehicle)
- ☒ Potential energy converted into kinetic, sound and thermal energy (car collisions)
- ☒ Braking distances (displacements and velocities)

3. Sustaining Ecosystems

Students will investigate and explain ecosystems including:

- ☒ Carrying capacities (biodiversity), limiting factors
- ☒ Populations (open/closed population)
- ☒ Species Interactions

Students will understand and interpret nutrient cycles including:

- ☒ Carbon, nitrogen, and oxygen
- ☒ Biogeochemical cycles
- ☒ Bioaccumulation

Students will investigate human impact and shifting perspectives on ecosystems including:

- ☒ Ecosystem services
- ☒ Connectivity and disruptions
- ☒ Alien species and invasive species

4. Weather Dynamics

Students will explore and illustrate weather patterns and factors including:

- ☑ Hydrosphere, atmosphere,
- ☑ Transfer of energy within the environment (wind/ocean currents)
- ☑ Severe weather phenomenon

Students will investigate and evaluate human impact on climate including:

- ☑ climate change (global warming)
- ☑ use of technology to gather and interpret data

***NOTE:** Likely sections that we will only briefly cover or skip over later in the term

What you need:

Binder

Paper

Highlighter

Calculator

Pencils

Pencil sharpener

Course Evaluation:

Formative Assessments (Homework, daily work, attendance, participation, etc.)	0%
Summative Assessment (Rich Performance Tasks – Assignments)	25%
Summative Assessment (Labs / Projects)	20%
Summative Assessment (Tests)	35%
Final Examination	20%

Classroom Expectations:

- ✓ It is YOUR responsibility to complete the notes and activities if you have missed a class. It is expected that you will complete these steps, so you are not behind in the class. If anything is unclear, clarify with another student in the class or with the teacher.
- ✓ Communication will be via Teams in the form of Posts to all the students in the class or individually to students when needed. Ensure that notifications are enabled on your Team for this class, so you can check for any updates during breaks or at lunch. School email may also be used for communication. If class is cancelled due to weather, students are expected to check the Team for information regarding the expectations for the day.
- ✓ Please come to class prepared! Once seated in the classroom, students should open their books to the previous day's assignment, have their booklet ready and their textbook turned to the assignment page from the day before.

- ✓ Only 1 student is permitted to leave the classroom at a time with the TEACHER'S PERMISSION and must use the sign out form by the door when leaving and again upon their return.
- ✓ Students will be dismissed by the teacher, not the school's bell system. Students are required to remain seated prior to dismissal.

*** Late assignments may not be accepted if a valid reason is not provided. Reasonable timelines will be set for all work. All efforts to complete assignments must be made.**

*** Any additional re-do opportunities exist only at the discretion of the instructor.**

*** A comprehensive exam based on the essential outcomes will be administered at the end of the course.**

Missing Tests:

Any student missing an important assessment like a test may be required to be assessed with an alternate and possibly more challenging assessment. Missing an assessment with parental permission, illness, field trip, etc. may still result in an alternate assessment.

Final Examination:

There will be a final exam for all Grade 10 students.

Credit Acquisition:

A final overall mark of 50% in the course must be earned to receive a credit in the course. There are mandatory projects/assignments that must also be completed before the credit is granted. Be sure to complete those in a timely manner. I encourage all students to strive for excellence to avoid any possibility of credit loss!

Course Policies & Procedures:

See separate document.

DIGITAL CITIZENSHIP:

General Guidelines

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."

"Students 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 (for proper digital citizenship)

- Use of personal devices is **not allowed during direct class instruction**.
- Devices or distractions will be out of sight while class is in session.
- Before class begins, you are instructed to place your device in the safe location at the front of the room.
- The use of technology is encouraged and can be a very useful tool.
- To be clear, devices are not to be used during class time for any personal reasons. When required, students may be given the opportunity to use their device for research purposes.
- At times, technology will be used in the classroom to enhance learning. Stream books will be provided for this purpose.
- Use of technology devices, when allowed, must be in the full view of the teacher.
- Phones/personal devices will be stored in a common location determined by the teacher.
- Earbuds must be removed during class time.
- Personal devices are to be left in the classroom when a student leaves the room during class time.
- Parents/Guardians should be aware that their child will NOT be able to respond to messages/calls received during class time.
- Any audio recording, video recording or still photography within the learning environment is only permitted with the TEACHER’S PERMISSION.
- IF ANY STAFF MEMBER REQUESTS YOU TO RELINQUISH YOUR DEVICE, YOU ARE REQUIRED TO DO SO ACCORDING TO THE SVRSS SCHOOL CODE OF CONDUCT.
- *****Absolutely no electronic devices are permitted during quizzes, tests, or exams. Students who are caught with electronic devices will receive an automatic zero without debate*****

Welcome to ‘Grade 10 Science – Foundation 20F’, I look forward to learning with you!