

# Science 10F (SCI10F)

Instructor: **Mrs. E. Brown**

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Room: \_\_\_200\_\_\_ **SVRSS**

**Text:** Pearson – Science 9 Red Text (Media Resource Centre)

**Welcome to Grade 9 Science!** The purpose of this outline is to identify the course outcomes, evaluations and to help you adapt to the procedures, routines and class expectations. This course is set up to address wonders and curiosities about the nature of science. Through scientific inquiry, technological problem-solving and decision making, students can discover the significance of science in their lives.

## Essential Learning Outcomes:

### i. Chemistry

Analyze and use the Periodic Table and its components

- ☒ Organization (periods, groups, families)
- ☒ Rutherford-Bohr models (atomic structure, mass, number, valence number, etc.)
- ☒ Formation of ionic compounds, naming, formulas

Investigate physical and chemical properties of matter

- ☒ Identify the different types of physical and chemical changes
- ☒ Indicators of physical and chemical change

### ii. Reproduction

Illustrate and explain the processes involved in human development.

- ☒ mitosis/meiosis
- ☒ cell cycle
- ☒ male and female reproductive systems (anatomy, physiology, embryology)

Describe the role of genetics.

- ☒ DNA
- ☒ Genetic mutations
- ☒ Dominant/recessive genes
- ☒ Inheritance of sex-linked traits

### iii. Electricity

Identify electrical particles and demonstrate how electrostatics works

- ☒ Charges, conduction, induction, insulators, and grounding

Demonstrate and explain the nature of current electricity

- ☒ Series and parallel circuits (voltage, resistance, current, voltmeter, ammeter)

Recognize daily consumption and efficiencies of electricity in everyday life

### iv. Space

Observe and locate visible and celestial objects

- ☒ Planets, moons, stars, comets, and asteroids, etc.

Investigate ways in which Canada contributes to space research

- ☒ Technological advancements (Canadian Space Station and Canadarm)
- ☒ Effects of space travel (health and body)

**Learning, respect, responsibility and safety** are our guiding principles. If any of these four values are compromised the issue will be addressed. Students are expected to put forth an honest **effort, attend** class on time, daily **with materials** and display a **respective, cooperative, responsible attitude and behaviour** towards other class members, EA's and substitute teachers.

#### **Attendance:**

Attendance is checked daily. If a student knows ahead of time that they will be away, they are to request any assignments that will be missed before leaving.

#### **Class Routines:**

Please remain seated at your tables until the classroom teacher has dismissed you. The bell does not dismiss you, as instructions and / or lab clean up needs to be completed before leaving. Students may bring water to class. Please no food or other beverages.

#### **Materials:**

Pens, pencils, ruler, protractor, loose leaf, binder, 2 notebooks, and a calculator. All students must bring required material to class. Students who continually do not bring materials will not be allowed to retrieve them during class time. Protective eyewear must be worn during labs in Grade 9 science. A personal pair of safety glasses will be required – they will not be provided by the school. Safety glass can be purchased at the Tigers Den for \$5.00.

#### **Digital Citizenship:**

Use of personal devices is **not allowed during direct instruction or in class activities**. A hand in bin is available as are plugs for charging devices during class time. Use of personal electronic devices is encouraged in some instances such as for projects or media related assignments. Students may listen to music (1 ear bud) during work blocks. Students are expected to manage their distraction and use of personal devices. When the use is a distraction for the student, class or teacher the student will be asked to turn it off and hand the device in.

*“All members of the Swan Valley School Division community are expected to use digital technology in a safe, respectful, responsible and ethical manner. SVSD devices are to be used in the classroom for learning. Students are encouraged to use personal devices **as supported by the classroom teacher for positive education benefits and guided classroom instruction.**”*

#### **Assessment and Evaluation:**

PowerSchool's app can be a valuable tool as you track your assignments and progress in class. Please keep in mind that once the formative assessments are completed and recorded (to show how you are doing as you learn) they will be replaced / assessed by a summative assessment mark that will be part of your final grade.

PowerSchool allows for a late symbol, a missing symbol and a checkmark to show completion in place of formal marking. The check mark is to show formative practice has been completed and that you are doing what you need to do in order to prepare for the summative evaluations and projects.

**FORMATIVE ASSESSMENT** is everyday work that is monitored, but does not count towards a final grade. It is an indicator of curriculum outcome comprehension that students have from completing work during class time or for homework. Observations, conversations with students and daily work will be used in this form of assessment.

**\*\*Students, who do not complete formative work, may find summative work difficult.**

**SUMMATIVE ASSESSMENT** includes assignments, quizzes, tests (accumulated assessments) and the exam (final assessment). All summative assessments count towards a student's final grade.

Reasonable timelines will be set for all summative work. All efforts to complete assignments must be made. Students who know that they will not complete the work in the timeline set must communicate that with the teacher and determine how/when the work will get completed.

*The Provincial Assessment Policy K to Grade 12 (2011) states “...students are ultimately responsible for the timely completion of their assignments and for knowing that there are consequences for failure to adhere to the parameters.”*

<b>Rich Performance Tasks: Assignments and Quizzes</b>	<b>30%</b>
<b>Demonstrations: Labs</b>	<b>10%</b>
<b>Tests and Quizzes</b>	<b>30%</b>
<b>Projects</b>	<b>10%</b>
<b>Final Exam</b>	<b>20%</b>

Also included in your report is a record of learning behaviors. (Personal management skills, active participation and social responsibility) These essential skills are important factors that contribute to success in the classroom and the workplace. They are not used in determining grades; however these behaviors are often indicators of personal motivation and engagement.

Students will be given a minimum of 3 school days’ notice for tests. Quizzes can be given at random. All questions for testing will come from materials covered in class and from handouts. If a test is missed with a valid reason, it is the **student’s** responsibility to make sure to write at the earliest opportunity such as the following noon hour.

**\*\*Absolutely no electronic devices are permitted during quizzes, tests or the exam.** Students with electronic devices will have their device removed from them and it will remain in the office where a parent/guardian will be asked to retrieve it.

#### **Exam:**

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 the 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 in order 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. Strive for excellence to avoid any possibility of credit loss.

#### **Instructional Approaches**

The topics and issues covered in Science 10F are to develop skills and promote reflective learning. There is no single way to teach or learn. The nature of science courses calls for a variety of instructional approaches to support learning of students. Teachers use their professional judgement to decide which instructional methods will be most effective in promoting the learning of knowledge and skills.