

Science 10 Course Outline (2017/2018)

Textbook: Science 10 - McGraw Hill Ryerson

Students are responsible for all textbooks issued to them during the school year and may be charged a repair or replacement fee for any textbook which is damaged or lost.

Student Evaluation: students will be evaluated using the following:

(a) Quizzes	50 %
(b) Assignments / projects	20 %
(c) Midterm Exam	15 %
(c) Final Exam	15 %
Total	100 %

- The Science 10 course is designed to provide students with the base knowledge they will need to pursue various science courses at the grade 11 level. Students should **attend** class on a **regular basis** and ensure that their notes are up to date and complete. Students who are absent from class will need to catch up with any work (notes, assignments, etc.), from their classmates; that may have been missed during their absence.

- Assignments form an important part of the Science 10 course and they will be assigned to allow students ample time for their completion. Students should complete assignments to the best of their ability and have them ready to be handed in on their due date, **at the beginning of the class, not to be completed during that class period**. Assignments not handed in on the due date will be reduced in value by 10 % per day. Once assignments have been corrected and handed back to students no further assignments will be accepted and will receive a grade of zero unless extenuating circumstances exist (i.e. serious illness, family emergency, etc.) **Plagiarism / copying of student work will result in a grade of zero for all students involved.**

- Students require a scientific calculator but not necessarily a graphing calculator.

- In the event that a student is **excused absent** during the writing of a quiz, he/she will write it during the first class upon their return, in the school learning centre.

- In the event that a student is **unexcused absent** during the writing of a quiz, he/she **will not** be given the opportunity to write the quiz and receives a grade of zero for that quiz.

Please note: An unexcused absence is one in which parent notification is not provided. Some examples of unexcused absences are listed below:

- (i) In school but not in class (i.e. skipping class)
- (ii) Vacations taken outside of scheduled school holidays
- (iii) Participation in activities not authorized or organized by the school (ex: external sporting events).

- Extra help for students will be provided before and after school hours. Students are encouraged to seek help with curriculum areas of difficulty before new material is covered.

**** Students are reminded that extra help will not be available the day of a scheduled quiz or assignment due date.**

Contact information: dion.samson@srsb.ca

(1) Ecosystems

- (i) What is an ecosystem?
- (ii) Sustainable ecosystem
- (iii) Biotic and Abiotic factors
- (iv) Population
- (v) Population growth
 - exponential
 - limiting factors
- (vi) Density dependent / independent factors
- (vii) Human effects on sustainability
- (viii) Carrying capacity
- (ix) Eutrophication
- (x) Greenhouse gases / Greenhouse Effect
- (xi) Trophic levels (producers and consumers)
- (xii) Pollution and Bioaccumulation
- (xiii) Ecosystem services
 - forests and wetlands
- (xiv) Ecotourism
- (xv) Ecosystem threats
- (xvi) Remediation and protection

(2) Chemistry

- (i) Physical / chemical changes
- (ii) Atomic structure
- (iii) Charged particles (cations and anions)
- (iv) Bond types (ionic and covalent)
- (v) Ionic and molecular compounds / properties
- (vi) Binary ionic compounds
- (vii) Compounds having polyatomic ions
- (viii) Binary molecular compounds
- (ix) Chemical equations (writing / balancing)
- (x) Exo and Endothermic reactions
- (xi) Combination and decomposition reactions
- (xii) Single and double replacement reactions
- (xiii) Combustion reactions
- (xiv) Acids and bases
- (xv) pH scale and Indicators
- (xvi) Strong vs weak acids and bases

- (xvii) Naming acids and bases
- (xviii) Neutralization reactions
- (xix) Reactant rates
 - temperature
 - surface area
 - concentration
 - catalysts

(3) Physics of Motion

- (i) Conventions of motion
- (ii) Distance vs displacement
- (iii) Velocity vs speed
- (iv) Scalar vs vector quantities
- (v) Position time graphs
- (vi) Velocity time graphs
- (vii) Slope (velocity and acceleration)
- (viii) Gravitational acceleration

(4) Weather (time permitting)

- (i) Solar radiation
- (ii) Water and light
- (iii) Water cycle
- (iv) Atmosphere layers
- (v) Seasons
- (vi) Earth's zones
- (vii) Weather systems
- (viii) Cloud types
- (ix) Highs and lows
- (x) Cyclones, tornadoes and hurricanes