



Standards and Procedures for the 2025-2026 School Year Science and the Environment, Secondary 4

VIRTUAL CAMPUS

Evaluation and Weighting of Subject Competencies:

	Term 1 (20%)	Term 2 (20%)	Term 3 (60%)
Practical <ul style="list-style-type: none"> • Seeks answers or solutions to scientific problems • Communicates using scientific language <p style="text-align: right;">(40%)</p>	Hands-on and Virtual Labs (100%)	Hands-on and Virtual Labs (100%)	Hands-on and Virtual Labs (100%)
Theory <ul style="list-style-type: none"> • Makes the most of his/her scientific knowledge • Communicates using scientific knowledge <p style="text-align: right;">(60%)</p>	Unit Tests Assignments Practice Activities See percentage breakdown below.*	Unit Tests Assignments Practice Activities See percentage breakdown below.*	Unit Tests Assignments Practice Activities Final Exam (30% of term mark)

General Information regarding evaluation:

***Competency of each concept will count as approximately 14% of the theory grade for each term. Refer to concepts covered by term in chart on next page.**

Students will be given multiple opportunities to show growth on each concept throughout the term through formal evaluations (submitted assignments/labs and unit tests) as well as informal evaluations (practice activities, group work during class, posting/commenting in our class discussion area, etc.).

- WQSB Virtual Campus teachers provide instruction and evaluation for this course.
- The Virtual Campus respects the timetable for report cards identified by each school.
- Online students will complete a final theory exam at the end of the school year where required by the local school.
- Supervision of tests is required at schools.
- Students must complete their own work and complete evaluations independently. Supervision In cases of cheating:
 - First time, students involved will be given zero on the assignment/test with the opportunity to re-do assignment for maximum of 60%. School/family will be informed.
 - Second time, students involved will be given zero and additional consequences.

Online Context: Real-Time Online Classes – 2 50-minute classes per week

PROGRESSION OF LEARNING (Compulsory Concepts) – Science and the Environment	
<p>Physical properties of solutions</p> <ul style="list-style-type: none"> – Solubility ² – Concentration (g/L, ppm, %, mole/L) ² – Electrolytes ² – pH scale ² – Ions ¹ – Electrical conductivity ² 	<p>Transformation of energy ³</p> <ul style="list-style-type: none"> – Relationship between work, force and travel – Effective force – Relationship between work and energy – Relationship between potential energy, mass, acceleration and travel – Relationship between kinetic energy, mass and velocity – Relationship between heat energy, specific heat capacity, mass and temperature variations
<p>Chemical changes</p> <ul style="list-style-type: none"> – Precipitation ³ – Decomposition and synthesis ³ – Photosynthesis and respiration ³ – Acid-base neutralization reaction ³ – Salts ³ – Balancing chemical equations ² – Law of conservation of mass ² – Stoichiometry ² – Types of bonds ¹ <ul style="list-style-type: none"> • Covalent • Ionic – Endothermic and exothermic reactions ³ 	<p>Ecology</p> <ul style="list-style-type: none"> – Ecotoxicology ³ <ul style="list-style-type: none"> • Contaminant • Bioconcentration • Bioaccumulation • Toxicity level
<p>Organization of matter ¹</p> <ul style="list-style-type: none"> – Lewis notation – Elementary particles (proton, electron, neutron) – Simplified atomic model – Relative atomic mass and isotopes – Nomenclature and notation rules – Polyatomic ions – Concept of mole 	<p>Lithosphere ²</p> <ul style="list-style-type: none"> – Soil profile(horizons) – Buffering capacity of the soil – Contamination <p>Hydrosphere ³</p> <ul style="list-style-type: none"> – Contamination – Eutrophication <p>Atmosphere ³</p> <ul style="list-style-type: none"> – Greenhouse effect – Atmospheric circulation <ul style="list-style-type: none"> • Prevailing winds – Contamination
<p>Physical changes ²</p> <ul style="list-style-type: none"> – Dissolution – Dilution 	

¹ = evaluated in Term 1 ² = evaluated in Term 2 ³ = evaluated in Term 3