



Standards and Procedures for the 2024-2025 School Year

Environmental Science and Technology, Secondary 4

Evaluation and Weighting of Competencies:

Subject Competencies	Term 1 (20%)	Term 2 (20%)	Term 3 (60%)
Practical: Seeks answers or solutions to scientific or technological problems (40%)	Practical exercises/labs (100%)	Practical exercise/labs (100%)	Practical exercises/labs (100%)
Theory: Makes the most of his/her knowledge of science and technology (60%)	Unit tests /exams (40%) Assignments (60%)	Unit tests /exams (40%) Assignments (60%)	Unit tests /exams (30%) Assignments (40%) Final exam (30%)

General Information regarding evaluation:

In addition to submitted assignments, there will be ongoing formative assessments in the form of online assignments, class discussions, assignments that will be completed using various online platforms, and group assignments completed during class.

Textbook: Observatory – The Environment

- 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.
- Students must complete their own work and complete evaluations independently. Supervision of tests is required at schools.
- 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 – 4 x 50-minute periods per week

PROGRESSION OF LEARNING (Compulsory Concepts) – Secondary IV EST			
	Term 1	Term 2	Term 3
Living World	Genetics <ul style="list-style-type: none"> Genes (heredity, character traits, alleles) Genotype and phenotype Protein synthesis 		Ecology <ul style="list-style-type: none"> Ecological footprint Ecotoxicology
Material World	Changes <ul style="list-style-type: none"> Motion, forces and work 	Organization <ul style="list-style-type: none"> Simplified atomic model Nomenclature and notation polyatomic ions The mole Periodic classification (atomic number, atomic mass, periodicity of properties) Isotopes 	Changes <ul style="list-style-type: none"> Oxidation Salts Types of bonds (covalent, ionic) Stoichiometry Nuclear changes Energy (thermal, potential, kinetic)
		Properties <ul style="list-style-type: none"> Concentration of aqueous solutions (g/L, percentage, ppm, mol/L) Strength of electrolytes 	Electricity and Magnetism <ul style="list-style-type: none"> Kirchhoff's laws Electrical Fields Magnetic field of a solenoid
Earth and Space			Characteristics of the Earth <ul style="list-style-type: none"> Contamination (lithosphere, hydrosphere, atmosphere) Biogeochemical cycles (Phosphorous)
			Biotechnology <ul style="list-style-type: none"> Processes (cloning, wastewater treatment, biodegradation)
			Graphical language <ul style="list-style-type: none"> Interpreting diagrams (orthogonal projection, axonometric projection) Dimensional tolerances
			Electrical Engineering <ul style="list-style-type: none"> Conduction, insulation and protection Switches
			Manufacturing <ul style="list-style-type: none"> Shaping using machines and tools Drilling, tapping and threading Measurement