

Life Sciences 11 Course Outline
Mr. Romswinckel
romswinckel_b@surreyschools.ca

Fall Semester 2024
Room C223
mrrromswinckel.com

There are some curricular competencies that students will be expected to carry out in order to earn a passing grade for Life Sciences 11.

(Curricular Competencies listed below)

- *Questioning and predicting
- *Planning and conducting
- *Applying and innovating
- *Processing and analyzing data and information
- *Evaluating
- *Communicating

There are three Core Concepts for this course. (Core Concepts listed here are explained below)

- 1) **Life**- is a result of interactions at the molecular and cellular levels
- 2) **Process of Evolution**- Living things evolve which happens at the population level
- 3) **Taxonomy**- Organisms are grouped on the basis of identifiable similarities

Grading Criteria

2 Mid-Terms	25% each	Lab Activities	10%
Weekly Vocabulary Quizzes	10%	Cumulative Final	20%

Cell Phone Policy

Due to the new ministry guidelines on a "bell to bell" ban on cell phone usage. Students are no longer able to use or have cellphones, headphones or earbuds out in this class. It doesn't matter if you are using them or not, I should never see them. For the first offense you will serve 15 minutes of detention at 2:45 pm that day. If you don't show up, a referral will be written to your VP and the punishment is much worse. For the 2nd offense you will serve a 30 minute detention at 2:45 pm that day. Subsequent violations will include calling parents or guardians for a meeting

Attendance Policy

- *Understand that some Lab Activities cannot be "made-up" (**ie:Plan Ahead**)
- *It is your responsibility to find out what notes, handouts or assignments you have missed.
- *I will not "chase you" to hand in your assignments
- *If you are absent the day a Lab Activity is due I will only accept the project the very 1st day you return if your parents/guardian called in to record your absence with the school secretary **on the day of your absence.**

*If you are absent the day of either of the Mid-Term exams and your parents or guardian have called in to report your absence **the day of your absence**, your scheduled make-up is at 9:00am on January, 27th 2025 in room C223.

You will not be admitted to the classroom if you show up late on the Make-up Day

Life Science 11 Core Concepts Explained

Characteristics of Living Things

- **cells are the basic unit of life:**
 - comparing cell structures
 - prokaryotic and eukaryotic
 - unicellular and multicellular
 - cell specialization
 - sexual and asexual reproduction
 - cellular respiration and photosynthesis
- **viruses:**
 - basic structure and function of a virus
 - lytic and lysogenic cycles
 - effects of viruses on organisms

Process of Evolution

- **evolutionary change**
 - role of DNA in evolution as a hereditary material
 - five agents of evolutionary change
- **development of the theory of evolution**
- **models of evolution**
- **speciation**
 - divergent evolution
 - convergent evolution
 - co-evolution
- **trends in complexity**
- **artificial selection and genetic modifications**

Taxonomy

- **taxonomy principles for classifying organisms:**
 - taxons
 - phylogenetic tree and cladogram
 - dichotomous key
 - First Peoples understandings of animal body plans
 - First Peoples uses of local plants
- **binomial nomenclature**
- **unifying characteristics of the evolutionary continuum across the kingdoms:**
 - three domains
 - six kingdoms