



Cardinal Leger Secondary School

Science Department



Course Name: Grade 11 Biology
Course Code: SBI3U1
Level: University
Textbook: McGraw-Hill Ryerson Biology 11

Ministry Guidelines: Science, 2008
Replacement Cost: \$100 **Number:**

Course Overview:

This course furthers students' understanding of the processes that occur in biological systems. Students will study theory and conduct investigations in the areas of biodiversity; evolution; genetic processes; the structure and function of animals; and the anatomy, growth, and function of plants. The course focuses on the theoretical aspects of the topics under study and helps students refine skills related to scientific investigation.

Prerequisite: Science, Grade 10, Academic

Curriculum Strands and Overall Expectations:

Scientific Investigation Skills and Career Exploration

- Demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analyzing and interpreting, and communicating)
- Identify and describe a variety of careers related to the fields of science under study, and identify scientists, including Canadians, who have made contributions to those fields

Diversity of Living Things

- Analyse the effects of various human activities on the diversity of living things
- Investigate, through laboratory and/or field activities or through simulations, the principles of scientific classification, using appropriate sampling and classification techniques
- Demonstrate an understanding of the diversity of living organisms in terms of the principles of taxonomy and phylogeny

Evolution

- Analyse the economic and environmental advantages and disadvantages of an artificial selection technology, and evaluate the impact of environmental changes on natural selection and endangered species
- Investigate the evolutionary processes, and analyse scientific evidence that supports the theory of evolution
- Demonstrate an understanding of the theory of evolution, the evidence that supports it, and some of the mechanisms by which it occurs

Genetic Processes

- Evaluate the importance of some recent contributions to our knowledge of genetic processes, and analyse social and ethical implications of genetic and genomic research
- Investigate genetic processes, including those that occur during meiosis, and analyse data to solve basic genetics problems involving monohybrid and dihybrid crosses
- Demonstrate an understanding of concepts, processes, and technologies related to the transmission of hereditary characteristics

Animals: Structure and Function

- Analyse the relationships between changing societal needs, technological advances, and our understanding of internal systems of humans
- Investigate, through laboratory inquiry or computer simulation, the functional responses of the respiratory and circulatory systems of animals, and the relationships between their respiratory, circulatory, and digestive systems
- Demonstrate an understanding of animal anatomy and physiology, and describe disorders of the respiratory, circulatory, and digestive systems

Plants: Anatomy, Growth, and Function

- Evaluate the importance of sustainable use of plants to Canadian society and other cultures
- Investigate the structures and functions of plant tissues, and factors affecting plant growth
- Demonstrate an understanding of the diversity of vascular plants, including their structures, internal transport systems, and their role in maintaining biodiversity



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Evaluation:

Term Work	70%
Knowledge and Understanding	25%
Thinking	35%
Communication	15%
Application	25%
Final Assessment	30%
Formal Examination	25%
Culminating Task	5%
Course Total	100%

Learning Skills and Work Habits

E= Excellent G=Good S=Satisfactory N= Needs Improvement

Responsibility	<ul style="list-style-type: none"> Fulfills responsibility and commitments Takes responsibility for and manages own behavior
Organization	<ul style="list-style-type: none"> Devises and follows a plan and process for completing tasks Establishes priorities and manages time
Independent Work	<ul style="list-style-type: none"> Independently monitors, assesses, revises plans to complete tasks and meet goals Uses class time to complete tasks
Collaboration	<ul style="list-style-type: none"> Accepts various roles and an equitable share of work in a group Builds healthy peer-to-peer relationships
Initiative	<ul style="list-style-type: none"> Looks for and acts on new ideas and opportunities Approaches new tasks with a positive attitude
Self-Regulation	<ul style="list-style-type: none"> Sets own goals and monitors progress towards achieving them Seeks clarification or assistance when needed

Missed/Late/Incomplete Assignments

It is the student's responsibility to address missed, late, or incomplete assignments. Students are expected to complete assignments and to adhere to assignment deadlines as follows:

Due Date	10% Penalty Zone	Closure Date
A due date is set by the teacher.	1 school day late – 3% 2 school days late – 6% 3 school days late – 10% Maximum penalty of 10%	Once the closure date has passed, work is considered incomplete and a mark of zero applies.

Missed Quiz/Test/Lab Procedures

If a student is absent on the day of a quiz, a 'no mark' will be assigned. Quizzes will not be re-written on any other day. The 'no mark' will not affect a student's grade. Students will only be granted a maximum of two 'no mark' evaluations. A third missed quiz will result in a mark of zero. If a student is absent on the day of a test, the student will receive a mark of zero unless a doctor's note is provided and they will write the test at a later date as determined by the teacher. If a student is absent on the day of a lab, a mark of zero for the performance of the lab may result due to the specific timing, preparation and availability of materials. Students are responsible for obtaining data from the lab and completing the written portion on their own time.

Parent Signature: _____ Student Signature: _____