



R. H. King Academy

SBI3U

Course Outline & Assessment/Evaluation Plan **Grade 11 University Prep Biology**

Department: Science

Teacher: Mr. S. Lloyd

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Pre-requisite: Grade 10 Academic Science, *SNC2D*

Credit Value: 1.0

Google Class Code: **aiociz**

Course Description

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.

Course Overview

Grade 11 University Biology is organized into the following units:

1. Genetic Processes
2. Evolution
3. Diversity of Living Things
4. Quantities in Chemical Reactions
5. Plants: Anatomy, Growth and Function
6. Animals: Structure and Function

Course Textbook:

McGraw-Hill Biology 11

(Replacement Cost: \$95.00)

Materials Required:

binder, binder paper, pens, pencils, coloured pencils or markers, eraser, ruler, graph paper, splash proof goggles, scientific calculator,

Overall Expectations

By the end of the course, students will:

- Demonstrate scientific investigation skills with initiating and planning, performing and recording, analysing and interpreting, and communicating;
- Identify and describe careers related to biology;
- Evaluate the importance of some recent contributions to our knowledge of genetic processes, and analyse social and ethical implications of genetic/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.

- 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 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.
- Analyse the effects of various human activities on the diversity of living things;
- Investigate, through lab 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.
- Evaluate the importance of sustainable use of plants to Canadian society and other cultures;
- Investigate the structures & 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.
- 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, and the relationships between, the respiratory, circulatory and digestive systems of animals;
- demonstrate an understanding of animal anatomy and physiology, and describe disorders of the respiratory, circulatory, and digestive systems.

For more detail on the provincial curriculum expectations for this course go to:

<http://www.edu.gov.on.ca/eng/curriculum/secondary/science.html>

Clinic

All students can benefit from signing up for clinic when they feel they need extra help, but you may have mandatory clinic periods with your science teacher for work completion or if you are not meeting course expectations (<70%).

Assessment and Evaluation

Assessment is ongoing throughout the semester and includes:

Assessment **as** Learning:

Student reflection on how well they did on a task and where they are on the road to academic success. This is not counted towards the students mark.

Assessment **for** Learning:

i) Diagnostic assessment - to determine outcomes already met from previous learning, to determine where more time is needed for the class in general, and to identify gaps in learning that individual students have that require remediation.

ii) Formative assessment - to give students descriptive feedback on their progress towards curriculum expectations. These are not normally included in the student's mark unless the summative evaluation is missed.

Assessment **of** Learning:

Activities and tests given after a section of study that are used to determine a student's mark. These assessments are also called summative evaluations.

All assessment of learning (evaluations) will be assigned to academic skill categories based on:

- **K**nowledge and Understanding of facts and concepts
- Thinking and **I**nquiry
- **C**ommunication skills
- **A**pplication of skills acquired

Knowledge and Understanding – Subject-specific content acquired in each course, and the comprehension of its meaning and significance

Thinking and **I**nvestigation – The use of critical and creative thinking skills and inquiry, research, and problem-solving skills and/or processes

Communication – The conveying of meaning through various forms

Application – The use of knowledge and skills to make connections within and between various contexts

Cheating and Plagiarism

It is expected that all students at R.H. King Academy will practice academic honesty and build this into their career philosophies. They must acknowledge any input from peers, parents and secondary sources. Information gathered from the Internet is considered a secondary source. To submit any work that is not completely their own is considered plagiarism. "Loaning" completed work to other students is considered to be cheating.

Cheating will result in a mark of zero and may result in suspension and/or loss of credit.

How your Mark is Determined:

	CATEGORY	WEIGHTING (%)
Term Evaluation 70%	Knowledge/Understanding	18%
	Thinking/Inquiry	18%
	Communication	12%
	Application	12%
	Major Project/ISU	10%
Final Evaluation 30%	Final Exam	30%

For more information on assessment, classroom expectations and rules see:

TDSB Science Safety Rules, RH King Science Dept. Policies and Student Evaluations, and Growing Success documents.