LISGAR COLLEGIATE INSTITUTE

DEPARTMENT: Science

COURSE NAME: Biology, Grade 11, College Preparation

COURSE CODE: SBI 3C

OVERVIEW

This course focuses on the processes involved in biological systems. Students will learn concepts and theories as they conduct investigations in the areas of cellular biology, microbiology, animal anatomy and physiology, plant structure, and environmental science. Emphasis will be placed on the practical application of concepts, and on the skills needed for further study in various branches of the life sciences and related fields.

COURSE CONTENT

Cellular Biology
Microbiology
Animal Anatomy and Physiology
Plant Structure and Physiology
Environmental Science

OVERALL CURRICULUM EXPECTATIONS

By the end of this course, students will:

- demonstrate an understanding of the basic processes of cellular biology, including membrane transport, cellular respiration, photosynthesis, and enzyme activity;
- investigate the factors that influence cellular activity using appropriate laboratory equipment and techniques;
- demonstrate an understanding of the importance of cellular processes in their personal lives, as well as in the development and application of biotechnology.
- demonstrate an understanding of the characteristics of various micro-organisms, of their role in the environment, and of their influences on other organisms, including humans;
- analyse the development and physical characteristics of micro-organisms, using appropriate laboratory equipment and techniques;
- explain the role of micro-organisms with respect to human health and in technological applications in medicine, industry, and the environment.
- demonstrate an understanding of the structure, function, and interactions of the main internal systems of humans and other animals;
- investigate, with the aid of laboratory procedures, the physiological mechanisms of animal systems that are responsible for the physical health of the individual;
- demonstrate an understanding of the connections among health, preventive measures, and treatment, and of their social and economic implications.
- demonstrate an understanding of the diversity of plants, and of their internal transport systems, reproduction, and growth;
- analyse the factors influencing the growth and maintenance of plants, using appropriate laboratory equipment and techniques;
- evaluate the roles of plants in the urban community, in various technologies and industries, and in natural ecosystems.
- demonstrate an understanding of factors that influence the sustainability of the natural environment and evaluate their importance;

- analyse how various factors influence the relationships between organisms and the natural environment;
- explain why it is important to be aware of the impact of human activities on the natural environment.

LEARNING SKILLS

The development of sound learning skills is essential to the success of our students. Teachers and students will work together to understand and further the development of student learning skills in the areas of initiative, work habits, organization, team work, and independent work. Teachers report on learning skills on the midterm and final report cards.

ASSESSMENT METHODS

Students' understanding of the course material will be assessed and evaluated using tests, quizzes, in-class and take-home assignments, lab activities, a summative report, and a final exam. Marks from the various assignments will be broken down and recorded in the following categories. Please refer to the Lisgar Assessment and Evaluation Policy.

EVALUATION

Course Work (70%)

1. Application	15 %
2. Knowledge/Understanding	30 %
3. Communication	10 %
4. Thinking/Inquiry/Problem Solving	15 %

Summative (10%)

Summative Due Date(s): 2009/2010

Exam (20%)

The final exam will cover the entire course.

ATTENDANCE

If you are absent from class, you are expected to catch up what you missed and complete any relevant homework. When you return to class, you must show your teacher an Absence Verification Form.

If you know in advance that you will be absent for a test, please see your teacher **before** the scheduled test date to arrange an alternate time to write it.

If you are unexpectedly absent for a valid reason on the day of a scheduled test, please let your teacher know why. When you return to class, remember to show an Absence Verification Form from your homeroom teacher and a note from your parents indicating that they are aware you missed the test. An **unjustified absence** for a test may result in a **mark of zero.**

SUPPLEMENTARY NOTES

Text: Nelson Biology 11 College Preparation (Thomson Nelson)

Each Student will be assigned a textbook. If it is lost or damaged, the replacement cost is $83.95. Texts are to be covered with sturdy paper.

Prerequisite: Science, Grade 10, Academic or Applied

Homework:

The importance of regular completion of homework cannot be overemphasized.

* Record homework assignments in your agenda at the end of each class.

*Homework must be completed before the end of next day's class.

Extra help: See your teacher about arranging a mutually convenient time for extra help.

Please see page 25 in the Lisgar Student Planner under the heading "Extra help In A Subject".