**Notre Dame Catholic High School**

**Catholic District School Board of Eastern Ontario**

**Course Title: Biology, Grade 11 University Preparation**

**Course Code: SBI 3U**

**Level of Difficulty: Academic**

**Area of Study: Senior Science**

**Prerequisite: Science, Grade 10, Academic**

**Scheduled hours: 110 hours**

**Instructor: Jason Ball, Tanya Peden**

**Ministry Guidelines: The Ontario Curriculum, Grades 11 and 12, Science**

**Text: Nelson, Biology 11**

**Course Description:**

This course furthers students' understandings of the processes involved in biological systems. Students will study cellular functions, genetic continuity, internal systems and regulation, the diversity of living things, and the anatomy growth, and functions of plants. The course focuses on the theoretical aspects of the topics under study, and helps students refine skills related to scientific investigation. University preparation courses are designed to equip students with the knowledge and skills they need to meet the entrance requirements for university programs. Teaching and learning will emphasize theoretical aspects of the course content and will also include concrete applications. Emphasis is also placed on the development and demonstration of both independent research skills and independent learning skills by students.

**How this course supports the Ontario Catholic School Graduate Expectations:**

This course seeks to further the achievement of Catholic Graduate expectations through integrating Scripture, Catholic Church teaching, and moral and ethical reflection into the curriculum. Biology becomes authentic when it acknowledges both the material and spiritual dimensions of life. In addition to the informative role that the curriculum plays, there is the formative role of the community within the classroom. When Gospel values are actively witnessed within the classroom community they reveal the deeper spiritual truth of our creation and are seen as something 'reasonable and worthy of being lived'.

# **Essential Strategies used to Support Comprehension**

Over the duration of the course 3 different types of comprehension support will be used:

1. **Predicting**: Predicting is making guesses based on evidence in the text about what information will be presented next. Predictions help a reader become mentally prepared to understand ideas in a text.

2. **Visualizing**: Visualizing is the ability to create mental images in order to see the action of the text. Visualizing can help students to focus, remember and apply their learning in new and creative situations.

3. **Summarizing**: In summarizing text, students are asked to apply a number of thinking processes in order to combine meanings, delete less important details and, and condense the key messages to arrive at the essence of the meaning.

\*\* Taken from “The Essential 10 Strategies to Support Comprehension”

**Strands:**

1. Cellular Functions (3 weeks)

2. Genetic Processes (3-4 weeks)

3. Evolution (3-4 weeks)

4. Animals: Structure and Function (3-4 weeks)

5. Diversity of Living Things (3 weeks)

6. Plants: Anatomy, Growth, and Functions (2 weeks)

**Learning Expectations:**

Throughout this course students will:

-demonstrate an understanding of safety practices consistent with Workplace Hazardous Materials Information System (WHIS) legislation by selecting and applying appropriate techniques for handling, storing, and disposing of laboratory materials

-select appropriate instruments and use them effectively and accurately in collecting observations and data

-demonstrate the skills required to plan and carry out investigations

-select and use appropriate numeric, symbolic, graphical, and linguistic modes of representation to communicate scientific ideas, plans, and experimental results

-locate, select analyze, and integrate information on topics under study, working independently and as part of a team, and using appropriate library and electronic research tools

-compile, organize and interpret data using appropriate formats and treatments, including tables, graphs, and diagrams

-communicate the procedures and results of investigations and research for specific purposes using data tables and laboratory reports

-express the result of any calculation involving experimental data to the appropriate number of decimal places or significant figures

-select and use appropriate SI units

-identify and describe science-based and technology-based careers related to the subject area under study

**Course Evaluation:**

Student achievement will be based on an individual demonstration of the specific expectations. All major assignments will be evaluated by levels and/or marks. Overall grades will be determined using the students’ most consistent and in some areas most recent levels of achievements. For purposes of reporting, the percentage grade range will correspond to the following levels as defined by the board.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Level | Mark Code | Level  | Mark Code | Level | MarkCode | Level | Mark Code |
| 4+44- | 95-10087-9480-86 | 3+33- | 77-7973-7670-72 | 2+22- | 67-6963-6660-62 | 1+11- | 57-5953-5650-52 |

**Determining the Grade**

A student’s overall grade will be obtained from the following:

 70% Summative Evaluation 10% Culminating activity, 20% Exam

 (Labs, tests, assignments) (lab based)

**Formative Evaluation:**

Formative evaluation is used to measure student's learning skills and as a means of diagnostic assessment to improve learning. Learning skills will include: works independently, teamwork, organization, work habits/homework, and initiative.

**Achievement Chart Category Descriptions:**

***Knowledge/Understanding-***the degree to which the student demonstrates understanding of the concepts

***Inquiry-***application of the skills and strategies of scientific inquiry

***Communication-***the student communicates information and ideas properly: written, graphical, table, numerical and symbolic forms. Effective communication implies timeliness, presentation and completeness.

***Making Connections-***understanding connections among science, technology, society, and the environment.

Class Expectations:

Each student in this biology course is expected to:

1. Come to class with a notebook, textbook, pen, paper, and calculator.

2. Be on time for class. Three lates merit a detention.

3. Keep the classroom in order; i.e. no writing on desks, no food, no school bags or jackets, and no interference with possessions of others.

4. Maintain a notebook in a three ring binder, all notes should be dated, you should keep sections for tests, quizzes and assignments.

5. You must complete all homework before coming to class, expect spontaneous homework checks.

6. It is your responsibility to catch up on all missed work due to absence. Missed labs/activities will be made up on the students' time the day of students' return or at a time convenient for the teacher.

7. There is no talking during a test or quiz. Talking during this time period, even if you are finished will result in a zero.

8. Test days are important. There are no chances to re-write a test for illegitimate absences. If you'll be missing a scheduled test day for a school approved activity, arrangements must be made in advance to schedule an alternate time to write the test.

9. Assignments are due right at the beginning of class of the established due date.

\* \* \* \* \* \*Please review Notre Dame's policy for late or missing assignments, as well as

Culminating activity/exam requirements.

 10 Computer printing problems is not acceptable as a legitimate reason for late assignments.

11. Extra help is available daily at lunch for students striving to achieve in class. It is your responsibility to seek this out.