



DEPARTMENT OF SCIENCE
Cardinal Leger Secondary School

Course Code: SNC 2P1
Course Name: Grade 10 Applied Science
Instructor: Mr. Willson
Period: 3bc
Room: 221
Prerequisite: Gr. 9 Applied

Course Overview:

This course enables students to develop a deeper understanding of concepts in biology, chemistry, earth and space science, and physics; to develop further their practical skills in scientific investigation; and to apply their knowledge of science to real-world situations. Students will design and conduct investigations into everyday problems and issues related to ecological sustainability, chemical reactions, weather systems, and motion.

Specific Strands of Study and Expectations include:

Strand 1: Chemistry - Chemical Processes

In this unit students will:

- Demonstrate an understanding of chemical reactions and the factors affecting their rates;
- Design and conduct investigations of chemical reactions and;
- Apply their knowledge of chemical reactions to the development of consumer products and industrial processes.

Strand 2: Physics: Light and Geometric Optics

In this unit students will:

- Evaluate the effectiveness of technological devices and procedures designed to make use of light;
- Investigate, through inquiry, the properties of light, and predict its behavior;
- Demonstrate an understanding of various characteristics and properties of lights.

Strand 3: Biology – The Sustainability of Ecosystems

In this unit students will:

- Develop an understanding of the dynamic nature of ecosystems, including the interactions that occur among plants, animals, humans, and the environment;
- Investigate factors that affect the survival and balance of life in an ecosystem and the consequences that occur when the system is influenced by changes and;
- Explore how human influence and technology have impacted ecosystems.

Strand 4: Earth and Space Science – Weather Dynamics

In this unit students will:

- Identify the principle characteristics of the hydrosphere and atmosphere, with a focus on the transfer of heat and its effects on the general circulation in the atmosphere;
- Investigate how weather systems form and their affect on the local weather and;
- Learn about techniques that can be used to predict weather, and why weather forecasting remains an inexact science.

Course Breakdown (approximate timelines)

- Unit 1 Chemistry: Chemical Reactions
- Unit 2 Physics: Light and Geometric Optics
- Unit 3 Biology: The Sustainability of Ecosystems

- Unit 4 Earth and Space Science: Weather Systems

- Unit 5 Culminating Task

Resources:

- Catholic Board Course Profile
- Various video, CD-ROM, print and internet resources

Evaluation Structure:

Knowledge/Understanding	25%
Thinking/Inquiry	35%
Communication	15%
Making Connections	25%

The above is reflected both in the term work (worth 70% of the final mark) and the summative work (worth 30% of the final mark). Summative work consists of the Final Exam (15%) and a Culminating Activity (15%).

Evaluation Policy

Students will be assessed & evaluated according to the work produced & skills displayed. Methods of providing feedback will include assessing work in process & evaluating completed assignments, tests, co-operative learning activities, simulations and presentations. Peer & self-evaluations will also be utilized.

Student marks will be determined by evaluating process & product according to 4 categories & 4 levels. Please see the chart below for specific skills and key words used to determine student competency in the different categories.

Level	Level 1: 50-59%	Level 2: 60-69%	Level 3: 70-79%	Level 4: 80-100%
Category				
Knowledge/Understanding • Knowledge of facts & terms • Understanding of concepts & relationships	-Limited display of knowledge, skills and ability to apply concepts	-Some success in displaying knowledge, skills and application of concepts	-Considerable display of knowledge skills and ability to apply concepts	-Thorough understanding of concepts and ability to communicate, think creatively and apply concepts
Thinking/Inquiry • Critical thinking skills • Multiple problem solving skills • Inquiry Skills				
Communication • Communication of ideas and information • Use of symbols & visuals • Oral & written communication				
Making Connections • Applications in familiar contexts • Transfer of concepts to new contexts • Making logical conclusions and predictions • Use of technology				

Feedback will also be provided for student learning skills. Skills like working independently, team work, organization, work habits

Other Evaluation Issues

Students are responsible for any work missed during an absence. It is your responsibility to find out what was missed and complete it before returning to school.

- **LABS/ASSIGNMENTS**. All work is to be handed in at the BEGINNING of class. Assignments submitted after the *Primary Due Date* established by the teacher will be accepted with a penalty of 5% off for the first day late and 10% for the second day late to a maximum of 10%. This two day *Penalty Zone* is the maximum time allowed for submissions. The 2nd day after the assignment is due is considered the *Closure Date* upon which no further assignments will be accepted. If the teacher returns the marked assignments within the two day penalty zone, the date of return is considered the closure date. Repeated lateness in submissions indicates poor organization skills and may result in parental contact and will be reflected in the learning skills section of the report card.
- **Plagiarism** in any form reflects academic dishonesty and will result in a mark of zero for the assignment in question
- **INCOMPLETE ASSIGNMENTS** Assignments will be graded according to the extent with which they meet the criteria established in the rubric or evaluation structure.
- **MISSED TESTS** A test missed with a legitimate reason will be written within a few days of the student returning from the absence. Student eligibility to write the test and the date of writing will be at the discretion of the teacher in consultation with the department head. ***Sickness:*** The test will be written on the **first** day back without penalty, **providing** the parent or guardian has phoned the teacher that morning (**before 8 am**) of the missed test. (905-453-2232 Ext 62288 Science Department)
School Activity: The teacher must be **aware** of the absence **before** the day of the test to make arrangements to write the test before the absence.

Classroom Expectations

- Be on time. **Lates cause distractions to classroom routines.**
- Be prepared. **Bring your notebook, textbook, pen, paper, calculator, ruler and eraser to class everyday.**
- Do not speak when someone else is speaking. **This is rude! If you have something to say raise your hand.**
- Treat everyone and everything around you with respect.
- Lab work is to be done **safely in groups**. Any broken or damaged equipment must be paid for. Work area must be left **tidy and clean** after class.
- Safety procedures **MUST be followed at all times**. Any safety violations will dismiss you from class and a **mark of zero** will be assigned. Any further lab work may be forfeited.
- No eating or drinking. This is a **serious safety issue** due to the use of chemicals in classroom before or during our class.
- Any damage to textbooks, desks or other classroom material is **not acceptable** and you will be asked to pay for the damages.
- **ABSOLUTELY NO CELL PHONES AND/OR ANY OTHER PERSONAL ELECTRONIC DEVICES ALLOWED IN CLASS**
- I dismiss the class, not the bell. **Allow me to wish you a nice day before leaving.**
- Homework will be given daily. It must be done every night to succeed in this class If you are absent, phone a classmate to find out what was missed and have it ready upon your return to school
- Extra help is available. The student must be prepared for this extra help. If work and notes are not up to date and homework has not been attempted, it is not possible to help you. If you are willing to learn and work hard, anything is possible.
- ANY QUESTIONS... JUST ASK!

LEARNING PARTNER: _____

PHONE #: _____

Please sign below and return to indicate that you have read this document, including the Evaluation Policies, for the Science course stated below

STUDENT'S NAME: _____

STUDENT'S SCIENCE TEACHER: _____

Course:

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Parent's/Guardian's Signature: _____