École Secondaire LAURIER MACDONALD High School
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COURSE STANDARDS AND PROCEDURES

COURSE:

Secondary 4 Science and Technology, 555-446

CLASS RESOURCES: Practical Guide, Study Guide and Observatory: The Environment

COURSE DESCRIPTION: Secondary 4 Science and Technology is a course that all Secondary 4 students must pass to obtain a high school diploma. The course involves hands-on, inquiry-based learning to develop problem-solving skills, emphasizes the application of scientific knowledge, and communicate using scientific and technological language. Some examples of projects are building a snowman using a mechanism taught in class to move the snowman's hat up and down. Students will design and build a soccer net using their woodworking skills. The students must also incorporate their knowledge of electricity to make sure the light turns on when a goal is scored.

In this course, students will also become familiar with standard laboratory practices and be encouraged to apply theoretical concepts in a practical way through lab work.

MYP AIMS ADDRESSED BY THE COURSE:

MYP Course Aims	MEES Course Objectives
Develops skills to design and perform investigations, evaluate evidence, and reach conclusions.	Competency 1: Seeks answer or solutions to scientific or technological problems.
Cultivate analytical inquiry and flexible minds that pose questions, solve problems, construct explanations, and judge arguments.	Competency 2: Makes the most of his/her knowledge of science and technology.

FUNDAMENTAL IB CONCEPTS:

- Holistic learning: While teaching climate change, we look at different facets such as historical and ethical issues. Mathematics is also incorporated into different topics such as concentration, power, energy efficiency, and much more.

- Communication: Students will conduct labs and complete hands-on activities and assignments in which they will have to use the appropriate scientific language.

KEY INSTRUCTIONAL STRATEGIES/APPROACHES TO LEARNING: - The ATLs that will be focused on is critical thinking. Students will analyze and evaluate issues and ideas by gathering and organizing relevant information to formulate an argument and interpret data to draw reasonable conclusions and generalizations. This will be achieved by incorporating various inquiry-based activities throughout the year.

IB MYP LEARNER PROFILE:

- Knowledgeable: During the inquiry-based activities, students will be asked to use their previous knowledge of different scientific concepts in order to solve a new problem.

- Inquirers: Students will develop their skills for inquiry.

FORMATIVE & SUMMATIVE ASSESSMENT INCLUDING MYP ASSESSMENT:

<table>
<tr><th colspan="3">Term 1</th></tr>
<tr><td>Competencies targeted</td><td>Evaluation methods</td><td>Timeline</td></tr>
<tr><td>Competency 1: Theory; 60%

Competency 2: Practical; (Labs) 40%</td><td>May include, but not limited to:
-Quizzes
-Tests
-Lab reports
-Assignments
-Homework</td><td>To finish by:
November 3rd</td></tr>
<tr><td>Communication to students and parents</td><td colspan="2">Materials required</td></tr>
<tr><td>Curriculum Night

Progress report

Report card

Verbal/Written communication, telephone/email may be on an as-needed basis</td><td colspan="2">-Pens/Pencils/Highlighters
-Notebook/Loose leaf and binder
-Scientific calculator
-Study Guide
-Practical Guide</td></tr>
<tr><td>IB MYP Criterion</td><td colspan="2">Examples of assessment/feedback both formative and/or summative</td></tr>
<tr><td>• A: Knowing and understanding

• B: Inquiring and designing

• C: Processing and evaluating

• D: Reflecting on the impacts of science</td><td colspan="2">Labs
Test
Assignments</td></tr>
</table>

Term 2		
Competencies targeted	*Evaluation methods*	*Timeline*
Competency 1: Theory; 60% Competency 2: Practical; (Labs) 40%	May include, but not limited to: -Quizzes -Tests -Lab reports -Assignments -Homework -Midterm lab exam (TBD) -Midterm theory exam	To finish by January 26th
Communication to students and parents	*Materials required*	
Report card in February Verbal/Written communication, telephone/e-mail may be on an as-needed basis	-Pens/Pencils/Highlighters -Notebook/Loose leaf and binder -Scientific calculator -Study Guide -Practical Guide	
IB MYP Criterion	*Examples of assessment/feedback both formative and/or summative*	
• *A: Knowing and understanding* • *B: Inquiring and designing* • *C: Processing and evaluating* • *D: Reflecting on the impacts of science*	Tech project Lab exam (TBD) Theory Midyear exam	

Term 3		
Competencies targeted	*Evaluation methods*	*Timeline*
Competency 1: Theory; 60% Competency 2: Practical; (Labs and Design cycle) 40%	May include, but not limited to: -Quizzes -Tests -Lab reports -Assignments -Homework -Fina lab exam -Final theory exam	To finish by: June 21st

Communication to students and parents	*Materials required*
Report card in February Verbal/Written communication, telephone/e-mail may be on an as needed basis	-Pens/Pencils/Highlighters -Notebook/Loose leaf and binder -Scientific calculator -Study Guide -Practical Guide -Textbook
IB MYP Criterion	*Examples of assessment/feedback both formative and/or summative*
• *A: Knowing and understanding* • *B: Inquiring and designing* • *C: Processing and evaluating* • *D: Reflecting on the impacts of science*	Electricity lab Soccer net Lab exam June theory exam

Additional Information/Specifications
☐ This course does not have a final exam. The final course grade comes entirely from the school course grade. ☐ This course has a final exam administered by the English Montreal School Board. The final course grade is determined by taking 70% of the school course grade and 30% of the school board exam. ☐ This course has a final exam administered by the *Ministère de l'Éducation et de l'Enseignement Supérieur* (MEES). The final course grade is determined by taking 50% of the school course grade and 50% of the MEES exam. Please note that the final course grade is subject to MEES moderation.