École Secondaire LAURIER MACDONALD High School
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COURSE STANDARDS AND PROCEDURES

COURSE: Mathematics 226

CLASS RESOURCES: *Teacher notes, in-class handouts, Math Help Services, Math Help Services Workbook, Google Classroom*

COURSE DESCRIPTION: *Secondary 2 Math*

MYP AIMS ADDRESSED BY THE COURSE: What are the aims/objectives of the course? How do these relate to the MEES competencies?

- Enjoy mathematics, develop curiosity and begin to appreciate its elegance and power
- Develop an understanding of the principles and nature of mathematics
- Communicate clearly and confidently in a variety of contexts
- Develop logical, critical and creative thinking

MYP Course Aims	MEES Course Objectives
- Knowing and understanding - Investigating patterns - Communicating - Applying mathematics in real-life contexts	**TERM 1** **Topic 1 - Ratios and Proportions** - Rate and unit rate - Ratios and equivalent rates - Comparison of ratios and rates - Proportion and proportional situations - Ratio of proportionality - Inversely proportional situation - Solving a proportional situation - Percentage of a number - Calculating the one hundred per cent **Topic 2 – Algebraic expressions** - Term/coefficient/like terms - Constructing an algebraic expression - Algebraic expressions - addition/subtraction - Monomials and degree of a monomial - Algebraic expressions - multiplication/division
- Knowing and understanding - Investigating patterns - Communicating - Applying mathematics in real-life contexts	**TERM 2** **Topic 3 – Solving equations** - Equation - Solving equations - Equivalent equations - Transforming arithmetic equalities - Rules for transforming equations - Solving equations using the balancing equalities method **Topic 4 – Representation of a situation**

	● Types of representations of a situation
	● Representation of a situation by a graph
	● Minimum and maximum values
	● Switching from one type of representation to another
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	TERM 3
	Topic 5 – Circles
	    ● Circle
	    ● Circumference
	    ● Central angle
	    ● Arc of a Circle
	    ● Disk/Sector
	Topic 6 – Regular Polygons
	    ● Classification of polygons
	    ● Sum of angles of a polygon
	    ● Exterior angles of a convex polygon
	    ● Apothem of a regular polygon
	    ● Area of a regular polygon and a decomposable polygon

● Knowing and understanding
● Investigating patterns
● Communicating
● Applying mathematics in real-life contexts
	Topic 7 – Solids
	    ● Prisms and Pyramids
	    ● Polyhedron nets
	    ● Height
	    ● Apothem of a regular pyramid
	    ● Area of bases, lateral area and total area of a prism and pyramid
	    ● Right circular cylinder
	    ● Lateral or total area of a cylinder
	    ● Area of a decomposable solid
	    ● Finding unknown measurements
	Topic 8 – Dilatations and Similar Figures
	    ● Dilatation
	    ● Similar figures
	    ● Ratio of similarity
	Topic 9 – Probability
	    ● Random experiment
	    ● Enumerating
	    ● Experimental and theoretical probability
	    ● Events and types of events
	    ● Probability of an event
	    ● Complementary events
	    ● Compatible and incompatible events
	    ● Random experiments with or without replacement
	    ● Dependent and independent events
	    ● Random experiments with or without order
	Topic 10 – Statistics
	    ● Surveys
	    ● Qualitative, discrete and continuous quantitative variables
	    ● Reading bar graphs, broken-line graphs and circle graphs
	    ● Distribution table: frequencies and relative frequencies
	    ● Samples
	    ● Sampling methods: random, systematic
	    ● Sources of bias
	    ● Constructing graphs: circle graph

KEY INSTRUCTIONAL STRATEGIES/APPROACHES TO LEARNING:
Which ATLs will be addressed in the course and how?
Critical thinking skills

• Analyzing and evaluating issues and ideas

• Practice observing carefully in order to recognize problems

• Gather and organize relevant information to formulate an argument

• Practice visible thinking strategies and techniques

• Utilizing skills and knowledge in multiple contexts

• Apply skills and knowledge in unfamiliar situations

• Transfer current knowledge to learning of new technologies

How will the content be delivered to the students?

• Warm up questions allows students to reflect on previous classes concepts and learning experiences.

• Demonstrate proper mathematical notation within explanation of concepts.

• Formative assessments (pop quizzes, quizzes, homework assignments)

• Group discussions when faced with unfamiliar situations; students discuss appropriate strategies and situations.

• Students combine and apply their mathematical knowledge when solving summative Situational Problems.

IB MYP LEARNER PROFILE: Identify which profile attributes will be addressed in the course and how.
Communicators, Inquirers/Thinkers, Caring

FORMATIVE & SUMMATIVE ASSESSMENT INCLUDING MYP ASSESSMENT:

Competencies targeted	Evaluation methods	Timeline
Competency 1: Solves a situational problem (30% of term grade) Competency 2: Uses mathematical reasoning (70% of term grade)	May include but not limited to: - Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem	Sept 1, 2023- Nov 3, 2023
Communication to students and parents	Materials required	
• Mozaik Parent Portal • Progress Report • First Term Report Card • (communication on an as needed basis • Google Classroom	• Notebooks, (graph paper or lined), binder for handouts and evaluations • Ruler, pencils, and eraser • Scientific calculator •Geometry set • Internet Access (Outside of the classroom: Home/Library)	

IB MYP Criterion	Examples of assessment/feedback both formative and/or summative
A: Knowing and understanding B: Investigating patterns C: Communicating D: Applying mathematics in real-life contexts	- Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem

Competencies targeted	Evaluation methods	Timeline
Competency 1: Solves a situational problem (30% of term grade) Competency 2: Uses mathematical reasoning (70% of term grade)	May include but not limited to: - Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem	Nov 4, 2023 – Jan 26, 2024
Communication to students and parents	Materials required	
•Mozaik Parent Portal •Progress Report (April) •Second Term Report Card • (communication on an as needed basis) •Google Classroom	• Notebooks, (graph paper or lined), binder for handouts and evaluations • Ruler, pencils, and eraser • Scientific calculator •Geometry set • Internet Access (Outside of the classroom: Home/Library)	
IB MYP Criterion	Examples of assessment/feedback both formative and/or summative	
A: Knowing and understanding B: Investigating patterns C: Communicating D: Applying mathematics in real-life contexts	- Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem	

Competencies targeted.	Evaluation methods	Timeline
Competency 1: Solves a situational problem (30% of term grade) Competency 2: Uses mathematical reasoning (70% of term grade)	May include but not limited to: - Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem	Jan 29,2024 – June 21,2024
Communication to students and parents	Materials required	
•Mozaik Parent Portal •Progress Report (April)	• Notebooks, (graph paper or lined), binder for handouts and evaluations	

•Second Term Report Card • (communication on an as needed basis) •Google Classroom	• Ruler, pencils, and eraser • Scientific calculator •Geometry set • Internet Access (Outside of the classroom: Home/Library)
IB MYP Criterion	*Examples of assessment/feedback both formative and/or summative*
A: Knowing and understanding B: Investigating patterns C: Communicating D: Applying mathematics in real-life contexts	- Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem

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☐ 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 80% of the school course grade and 20% 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.