

St. Clair Catholic District School Board

STUDENT INFORMATION SHEET / OUTLINE OF COURSE OF STUDY

School	St. Patrick's High School
Department	Mathematics
Course Title	Foundations of Mathematics (MFM1P1)
Grade	9
Course Type	Applied
Teacher(s)	Mr. Van Dinther
Department Head	Mrs. Kirchmair
Credit	one full
Ministry Document	Mathematics Grade 9 and 10
Prerequisite	none

Course Description

This course enables students to develop an understanding of mathematical concepts related to introductory algebra, proportional reasoning, and measurement and geometry through investigation, the effective use of technology, and hands-on activities. Students will investigate real-life examples to develop various representations of linear relations, and will determine the connections between the representations. They will also explore certain relationships that emerge from the measurement of three-dimensional figures and two-dimensional shapes. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

How This Course Supports the Ontario Catholic Graduate Expectations:

Through the use of the Catholic course profile as well as additional resources (I.C.E. documents) the Ontario Catholic Graduate expectations will be addressed.

How This Course Supports the Competencies of Choices Into Action:

Career Exploration Activities through classroom experience (page 19 , Choices into Action).

1. Overall Expectations for Student Learning

Through this course, the student will be expected to demonstrate knowledge, skills and values related to the following strands.

Strand 1 Number Sense & Algebra

- Solve problems involving proportional reasoning
- Simplify numerical and polynomial expressions in one variable, and solve simple first-degree equations

Strand 2 Linear Relations

- Apply data-management techniques to investigate relationships between two variables
- Determine the characteristics of linear relations
- Demonstrate an understanding of constant rate of change and its connection to linear relations
- Connect various representations of a linear relation, and solve problems using the representations

Strand 3 Measurement & Geometry

- Determine, through investigation, the optimal values of various measurements of rectangles
- Solve problems involving the measurements of two-dimensional shapes and the volumes of three-dimensional figures
- Determine, through investigation facilitated by dynamic geometry software, geometric properties and relationships involving two-dimensional shapes, and apply the results to solving problems

2. Learning Skills

It is expected that students will demonstrate the following learning skills. Learning skills will be assessed according to criteria which have been clearly communicated to students and will be reported separately from student achievement of the curriculum expectations. The student's demonstrated learning skills in each course will be evaluated using the four-point scale.

(E - Excellent, G - Good, S - Satisfactory, N - Needs Improvement)

- Responsibility
- Organization
- Independent Work
- Collaboration
- Initiative
- Self-Regulation

3. Supports For Individual Education Plans:

Whenever accommodations are made to address student learning needs, or alternative or modified expectations are identified for a student, these accommodations, modifications, or alternative expectations will be outlined in an IEP and will be communicated to parents.

4. Course Breakdown & Assessment and Evaluation Strategies:

Unit	Unit Title / Description	Assessment & Evaluation Strategies	Unit Planning Notes
Unit 1	Volume, Area and Perimeter	conversations, observations, quizzes, tests	
Unit 2	Linear Relationships Part 1	conversations, observations, quizzes, tests	
Unit 3	Ratio, Rate & Proportion	conversations, observations, quizzes, tests	
Unit 4	Linear Relationships Part 2	conversations, observations, quizzes, tests	
Unit 5	Algebraic modelling & Solving Equations	conversations, observations, quizzes, tests	
Unit 6	Angle Geometry	conversations, observations, quizzes, tests	

5. Key Dates, Special Events, and Additional Considerations:

- to be announced by the teacher
- EQAO testing during the last two weeks of the semester

6. Teaching / Learning Strategies:

Instruction in this course will include but not be limited to the following:

- use of technology tools: graphing calculators, computers
- presentation of homework solutions to class
- whole class activities
- pairs activities
- group work/ data collection
- EQAO resource booklet

7. Assessment and Evaluation:

Student achievement of the learning expectations will be evaluated according to the following breakdown.

Categories of the Achievement Chart	Weighting (%)	
	Term Evaluation	EQAO & Culminating Activity
Knowledge / Understanding	50	50
Thinking	10	10
Application	30	30
Communication	10	10
Final Mark	70%	30%

8. Learning Resources:

Textbook: Pearson Math

TIPS 4RM (Targeted Implementation and Planning Supports for Revised Mathematics)

9. School, Department and Classroom policies:

- be prepared for class: paper, pencil, graph paper, calculator
- keep work complete and up to date
- correct all tests and assignments