



St. John's College

80 Paris Road, Brantford, Ontario N3R 1H9
Course Information Sheet (Revised September, 2010)



Course Title: Foundations of Mathematics

Course Code: MFM1P1

Department: Mathematics

Level: Applied

Grade: 9

Credit Value: 1

Prerequisite: None

Teacher: A. Gesjorskyj

Course Description: This course enables students to develop 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 relationships, and will determine the connections between the representations. They will also explore certain relationships that emerge from the measurement of three-dimensional objects and two-dimensional shapes. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Students will understand:

- Measurement, linear, geometric and algebraic relationships.
- Many real world situations can be modeled using measurement, linear, geometric and algebraic properties
- Mathematical models have limitations in real world settings.
- A variety of tools exist to model relationships, and carefully selected models will help with understanding.

The overall expectations for this course can be found at <http://www.edu.gov.on.ca/eng/curriculum/secondary/subjects.html>

How This Course Supports the Ontario Catholic Graduate Expectations: This course enables students to develop a confident and positive sense of self. Within the setting of a supportive and caring classroom community, the dignity and value of each student is respected and affirmed. Through their personal growth in reason, critical thinking and communication, students come to appreciate their mathematical ability as a God given gift. By sharing their abilities, students contribute to the good of others, in service to the classroom and school community.

Topics:

Unit #	Unit Title
1	Relationships
2	Linear Functions
3	Measurement
4	Algebra
5	Geometry
6	Ratio and Proportion
7	Review and Final Summative Assessment

Evaluation:

Term Work (70% of the final grade)	
Category	Weight
Knowledge / Understanding (Knowledge of content, Understanding of content)	25%
Thinking / Inquiry (Use of planning skills, processing skills and critical/creative thinking processes)	10%
Communication (Expression and organization of ideas and information, communication for different audiences, use of conventions, vocabulary and terminology of the discipline in oral, visual and written forms)	15%
Application (Application of knowledge and skills in familiar contexts, transfer to new contexts, making connections within and between various contexts)	20%
Final Evaluation (30% of the final grade)	
Final Grade = Term work (70%) + Final Evaluation (15% exam, 15% EQAO)	

Learning Skills: Learning skills are crucial to academic, career and personal success. Students will be assessed continually on the learning skills:

1) Responsibility

- fulfils responsibilities and commitments within the learning environment;
- completes and submits class work, homework, and assignments according to agreed-upon timelines;
- takes responsibility for and manages own behaviour

2) Organization

- devises and follows a plan and process for completing work and tasks;
- establishes priorities and manages time to complete tasks and achieve goals;
- identifies, gathers, evaluates, and uses information, technology, and resources to complete tasks.

3) Independent Work

- independently monitors, assesses, and revises plans to complete tasks and meet goals;
- uses class time appropriately to complete tasks;
- follows instructions with minimal supervision.

4) Collaboration

- accepts various roles and an equitable share of work in a group;
- responds positively to the ideas, opinions, values, and traditions of others;
- builds healthy peer-to-peer relationships through personal and media-assisted interactions;
- works with others to resolve conflicts and build consensus to achieve group goals;
- shares information, resources, and expertise and promotes critical thinking to solve problems and make decisions.

5) Initiative

- looks for and acts on new ideas and opportunities for learning;
- demonstrates the capacity for innovation and a willingness to take risks;
- demonstrates curiosity and interest in learning;
- approaches new tasks with a positive attitude;
- recognizes and advocates appropriately for the rights of self and others.

6) Self-regulation

- sets own individual goals and monitors progress towards achieving them;
- seeks clarification or assistance when needed;
- assesses and reflects critically on own strengths, needs, and interests;
- identifies learning opportunities, choices, and strategies to meet personal needs and achieve goals;
- perseveres and makes an effort when responding to challenges.

Considerations for Program Planning:

Students with Special Education Needs:

The development of each student's abilities and potential is a shared responsibility. A collaborative model between the classroom teacher and Special Education Department provides services which are delivered primarily within the regular classroom through the classroom teacher. Accommodations such as specialized supports and services will be provided to help the student achieve the expectations, in keeping with the IEP. Students are responsible for working with specific classroom teachers for precise accommodations and responsibilities in each class.

School, Department and Classroom Policies:

- Students who miss a test or a quiz will write it on the first day back.
- Students who, at the end of the semester, have not successfully completed the course, must repeat it or take a course at a different level of difficulty.
- This course is very heavy on content. It is crucial for students to maintain good attendance throughout the course.

Grade 9 Assessment of Mathematics, mandated by the Education Quality and Accountability Office includes an Investigation component administered near the end of the semester. This provincial assessment is mandatory for all students registered in this course.