Durham Catholic District School Board
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Principles of Mathematics, Grade 9, Academic
MPM1D1 Course Overview

Academic Year	2017-2018	**Teacher Names**	Mrs. N. Kowalewski
Department	Mathematics	**Curriculum Chair**	Mr. D. LaMontagne

Curriculum Policy Document: Mathematics 2005 - The Ontario Curriculum Grades 9 and 10			
Course Title	Principles of Mathematics	**Course Code**	MPM1D1
Prerequisite	75% or greater in all grade 8 mathematics strands	**Grade and Course Type**	9 Academic
Program Developer	Ministry of Education	**Credit Value**	1.0
Course Outline Developed	August 2015	**Course Outline Revised**	2017

Course Description

This course enables students to develop an understanding of mathematical concepts related to algebra, analytic geometry, and measurement and geometry through investigation, the effective use of technology, and abstract reasoning. Students will investigate relationships which they will generalize as equations of lines, and will determine the connections between different representations of a linear relation. They will also explore relationships that emerge from the measurement of three-dimensional figures and two-dimensional shapes. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Course Content and Overall Expectations

Strand 1 – Number Sense and Algebra

By the end of this course, students will:
• demonstrate an understanding of the exponent rules of multiplication and division, and apply them to simplify expressions;
• manipulate numerical and polynomial expressions, and solve first-degree equations.

Strand 2 –Linear Relations

By the end of this course, students will:
• apply data-management techniques to investigate relationships between two variables;
• demonstrate an understanding of the characteristics of a linear relation;
• connect various representations of a linear relation.

Strand 3 - Analytic Geometry

By the end of this course, students will:
• determine the relationship between the form of an equation and the shape of its graph with respect to linearity and non-linearity;
• determine, through investigation, the properties of the slope and y-intercept of a linear relation;
• solve problems involving linear relations

Strand 4 – Measurement and Geometry

By the end of this course, students will:
• determine, through investigation, the optimal values of various measurements;
• solve problems involving the measurements of two-dimensional shapes and the surface areas and volumes of three-dimensional figures;
• verify, through investigation facilitated by dynamic geometry software, geometric properties and relationships involving two-dimensional shapes, and apply the results to solving problems

Class Guidelines and Program Considerations

Student Expectations:

Each student shall:

1. Be present for all lessons and tests (on time).
2. Be prepared with all necessary materials each class. (pencils, eraser, ruler, binder, lined + graph paper and scientific calculator).
3. Complete all homework and assignments to the best of his/her ability.
4. Contribute to classroom discussions.

Classroom Expectations:

Each student must:

1. Behave appropriately in class and work on task, giving full attention to the topic being studied.
2. Work cooperatively with other students and the teacher.
3. Maintain a positive attitude and display common courtesy to others in the classroom.
4. Treat computers, calculators and other classroom work tools with respect and closely follow teacher directives concerning such items.

Course Evaluation:

1. Homework is generally assigned each class. Homework difficulties will sometimes be discussed in class but it is the student's responsibility to seek extra help when necessary. Peer tutoring (Mon and Wed after school, room 1321), the Ontario Homework Help Online website, and extra help from the teacher are all resources available to help support students. Contact your teacher for more information.
2. Students need to be on time for class. If a student is persistently late, appropriate consequences will be determined by the teacher. If a student is legitimately late then they must present their teacher with a note explaining the lateness.
3. Student absence has a significant impact on student achievement. It is the student's responsibility to make up missed class work from illness, participation in school extracurricular activities or any other reason, so find a buddy! If a student must be absent, then it is the students' responsibility to complete the work missed and have the work completed upon the student's return. Please advise the teacher in advance if you know that you are going to be away.
4. Students must understand that there will be consequences for not completing assignments for evaluation or for submitting those assignments late. Late marks may be deducted in accordance with the Growing Success document. Failure to submit indicates that curriculum expectations are not being met; a zero may be recorded.
5. Most units/chapters will conclude with a Unit/Chapter Test. Students who are absent for a test have the responsibility of discussing their absence with the teacher. An undocumented absence for a test will result in an automatic mark of zero assigned. If, for a valid medical reason, a student is unable to write a Unit Test, the student must contact the teacher prior to the test. A note or phone call from a parent/guardian must confirm the reason for the student's absence day of/after the test.
6. Plagiarism is the act of passing off someone else's work as your own. Misuse of technological devices is considered cheating. Plagiarism or cheating will result in the student receiving a mark of zero on the assigned work.

Learning Strategies:

1. Assessment is an ongoing process that reflects how well a student is achieving the expectations. Based on the School Effectiveness Framework, assessment *as* and *for* learning involves goal setting for students and allows the teacher to gather evidence to determine where students are in their learning.
2. Strategies may include, but are not limited to: oral discussions, co-operative learning activities, differentiated instruction, homework checks, and individual consultations. These strategies are in place to help students clearly understand learning goals and success criteria.
3. Assessment *of* student learning involves assigning a value to judge the quality of student learning, for communication to parents and students. This may take place in the form of, but is not limited to: rich performance tasks, demonstrations, projects, essays, lab reports, problem solving tasks, written assignments, quizzes, tests, and presentations. All assessment of learning will count towards the student's grade and **no replacement** of these marks will be made.

Student Evaluation Criteria

Term Work (70% of final total)

Category	Knowledge	Application	Communication	Thinking
Weighting	**25%**	**20%**	**10%**	**10%**

Final Culminating Activities (30% of final total)

EQAO (10%)	Final Examination (20%)

Mark Reporting Periods

	Semester 1	Semester 2
Parent-Teacher Interviews	October 19, 2017	March 21, 2018
Midterm Report Cards	November 10, 2017	April 20, 2018

Resources

Textbook: Principles of Mathematics 9 by McGraw-Hill Ryerson	Replacement Cost: $85.00	Damaged Cost: $25.00
Mrs.K's math website	http://www.mrsk.ca	
Desmos Graphing Calculator Online	https://www.desmos.com/calculator	
Ontario Homework Help	https://homeworkhelp.ilc.org/	
MOODLE	http://www.notredamecss.ca/moodle/	