THAMES VALLEY DISTRICT SCHOOL BOARD

London Central Secondary School

COURSE OVERVIEW 2019-2020

Course Name:	**Foundations of Mathematics Grade 10**	**Course Code:**	**MFM 2P**
Course Type:	**Grade 10 Applied**	**Credit Value:**	**1.0**
Teachers(s):	**Mr. Pursch/Mr. Gilbert**		

Course Description:

This course enables students to consolidate their understanding of linear relations and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and hands-on activities. Students will develop and graph equations in analytic geometry; solve and apply linear systems, using real-life examples; and explore and interpret graphs of quadratic relations. Students will investigate similar triangles, the trigonometry of right triangles, and the measurement of three-dimensional figures. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.
http://www.edu.gov.on.ca/eng/curriculum/secondary/mathtr9curr.pdf
Prerequisite: Mathematics, Grade 9, Academic or Applied

Course Overall Expectations:

Strand	Overall Expectations
Measurement and Trigonometry	use their knowledge of ratio and proportion to investigate similar triangles and solve problems related to similarity;
	solve problems involving right triangles, using the primary trigonometric ratios and the Pythagorean theorem;
	solve problems involving the surface areas and volumes of three-dimensional figures, and use the imperial and metric systems of measurement.
Modelling Linear Relations	manipulate and solve algebraic equations, as needed to solve problems;
	graph a line and write the equation of a line from given information;
	solve systems of two linear equations, and solve related problems that arise from realistic situations.
Quadratic Relations of the Form $y = ax^2 + bx + c$	manipulate algebraic expressions, as needed to understand quadratic relations;
	identify characteristics of quadratic relations;
	solve problems by interpreting graphs of quadratic relations.

Assessment and Evaluation Strategies:

The purpose of assessment and evaluation is to improve student learning. Assessment and evaluation is based on the provincial curriculum expectations and the achievement levels outlined in the curriculum document. In order to ensure that assessment and evaluation are valid and reliable, and that they lead to the improvement of student learning, teachers use a variety of strategies throughout the course, including: providing students with feedback about their work (known as assessment for learning), helping to set learning goals and monitor their own progress (known as assessment as learning), and evaluation and reporting of progress in the form of grades and marks (known as assessment of learning).

Unit Overview	Assessment and Evaluation Methods (May include major evaluations)
Modelling Linear Relations **Manipulating and Solving Algebraic Equations/Formulas**	**quizzes, performance tasks, assignments, projects, portfolio, journals, unit tests**
Modelling Linear Relations **Graphing and Writing Equations of Lines**	
Modelling Linear Relations **Solving and Interpreting Systems of Linear Equations**	
Quadratic Relations of the Form **Manipulating Algebraic Expressions**	
Quadratic Relations of the Form **Identifying Characteristics of Quadratic Relations**	
Quadratic Relations of the Form **Solving Problems by Interpreting Graphs of Quadratic Relations**	
Measurement and Trigonometry **Solving Problems Involving Surface Areas and Volume, using the Imperial and Metric Systems of Measurement**	
Measurement and Trigonometry **Review of Proportional Reasoning leading to Similar Triangles**	
Measurement and Trigonometry **Introduction to Trigonometry and Solving Right Triangles**	
Course Culminating Activity/Independent Study	**End of year performance task.**
Final Exam	**End of year culminating exam.**

Assessment and Evaluation Categories and Weights:

Achievement Chart Categories	
Achievement Category	**Percentage**
Knowledge/Understanding	**35**
Thinking/Inquiry	**15**
Communication	**15**
Application	**35**

Evaluation/Weight of Marks	
Evaluation	**Percentage**
Term Evaluation	**70**
Final Evaluation	
• **ISP**	**10**
• **Exam**	**20**

Learning Skills and Work Habits Assessment:

The development of learning skills and work habits is an integral part of student learning. These skills are:

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

Learning skills and work habits influence student achievement and are included as a formal part of the assessment and evaluation process. Learning skills and work habits will be assessed through a variety of teacher strategies. (e.g. observation, student /teacher conference, self-reflection, checklists, exit cards, etc.) These important learning skills and work habits will be formally reported on the Provincial Report Card according to the following scale: E- Excellent, G- Good, S- Satisfactory, N- Needs Improvement.

Academic Dishonesty - Cheating and Plagiarism:

Learning tasks that students complete as well as the assignments, tests and exams that students submit for evaluation must be their own work. Cheating and plagiarism is a serious offence that will not be condoned. Academic consequences will result.

Test Policy:

According to the Growing Success Document (2010) a student MUST fulfill his/her responsibilities and commitments within the learning environment, including completing all types of assessments according to agreed-upon timelines.

It is the math department expectation that all students will write tests on the date set out by the classroom teacher. In the event of an illness, emergency, or other significant situation, an exception can be made, provided sufficient documentation is given to the classroom teacher. Please note that parental approval is not a legitimate reason for missing an evaluation. If an acceptable absence is known prior to the assessment date, alternate arrangements must be made with the classroom teacher in advance.

If this expectation is not met, the evaluation will be completed but may not contribute to the student's course marks.

Late and Missed Assignments - Student Roles and Responsibilities

Students are expected to:

- be responsible for providing evidence of their achievement of the overall expectations within the time frame specified by the teacher, and in a form approved by the teacher;
- understand that there will be consequences for not completing assignments for evaluation and/or for submitting those assignments late;
- use class time productively;
- in extenuating circumstances, request an extension from the teacher before the due date.

Mark deductions for late and missed assignments may apply to major assignments only.

References: *TVDSB Assessment & Evaluation Policy*, September 2011; *Growing Success - Assessment and Evaluation, and Reporting in Ontario Schools*, 2010.
Student Planner and School Web site