



Westside Secondary School

Orangeville, Ontario, Canada



519-938-9355

Course Outline

www.ugdsb.on.ca/westside

Course: MPM1D Grade 9 Academic

Program Leader: R. Marchildon

Teacher(s): Mr. T. Gunn

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Course Website: Google Classroom

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 then 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.

Big Ideas (overall learning outcomes for the course):

- Algebra is a universal language of mathematics
- Modelling situations in real life with linear functions helps us make educated predictions
- Individual math skills can be universally applied to any math topic
- Proper understanding of math skills comes with the ability to identify the most efficient way of solving a problem

Overall Curriculum Expectations:

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, geometric properties and relationships involving two-dimensional shapes, and apply the results to solving problems.
- 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.
- 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.
- 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.

Instructional Strategies:

Westside teaching staff will use a variety of instructional strategies to help students develop and improve skills in the following areas: character, citizenship, communication, critical thinking and problem solving, collaboration and teamwork, and creativity and imagination.

Assessment and Evaluation:

Formative assessments are used to improve student learning by providing varied opportunities to demonstrate an understanding of course expectations in preparation for summative evaluations. Students will have the opportunity to complete mastery quizzes throughout each unit. Summative evaluations test groups of key expectations. Failure to complete a summative evaluation may result in the expectations of the course not being met and the credit not being granted.

The following soft skills will be assessed:

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

More details about Westside's Assessment and Evaluation Policy is available at:

<http://www.ugdsb.ca/westside/wp-content/uploads/sites/74/2016/12/Westside-Assessment.pdf>

Late Policy

Students are expected to complete all assigned work and submit it by the teacher's established due date. Every attempt will be made to encourage students to complete all assigned work on time so their grade represents their actual achievement. For late and missed summative assessments, please see the *Westside Students' Contract for Missing Evidence of Learning*.

Achievement Categories:

Student learning is assessed and evaluated with respect to the following four categories of knowledge and skills.

Knowledge and Understanding: 25%

Thinking: 25%

Communication: 25%

Application: 25%

	Term Work (55%)
Unit of Study	Summative Evaluations
Algebra	Test
Measurement & Geometry	Test
Linear Relations	Test, Assessment Task
Analytic Geometry	Test, Assessment Task
Relationships	Assessment Task
	Final Summative (30%)
All units (5 - 10%)	EQAO (two days in class)
All units (20 - 25%)	Final Exam (on Exam Day)

Student Expectations

Every student enrolled in Mathematics at Westside is expected to:

- be prepared for class each and every day. This means you bring a writing utensil, calculator and paper with you to class
- actively participate in class discussions
- be on time to class
- complete homework assigned
- learn to problem solve using the techniques you will learn in class

Final Assessments/Examinations

Culminating activities for each unit must be completed by the student in order to achieve the credit. Failure to complete any one of them may result in loss of credit.

There are no extensions or exemptions for final assessments without the approval from an administrator.