Sir Wilfrid Laurier Secondary School

Grade 9 Mathematics – MTH 1W

1.0 **credit**

Course Description

This course enables students to consolidate, and continue to develop, an understanding of mathematical concepts related to number sense and operations, algebra, measurement, geometry, data, probability, and financial literacy. Students will use mathematical processes, mathematical modelling, and coding to make sense of the mathematics they are learning and to apply their understanding to culturally responsive and relevant real-world situations. Students will continue to enhance their mathematical reasoning skills, including proportional reasoning, spatial reasoning, and algebraic reasoning, as they solve problems and communicate their thinking.

Strands and Overall Expectations

Social-Emotional Learning (SEL)

By the end of this course students will:

- develop and explore a variety of social-emotional learning skills in a context that supports and reflects this learning in connection with the expectations across all other strands

Mathematical Thinking and Making Connections

By the end of this course students will:

- apply the mathematical processes to develop a conceptual understanding of, and procedural fluency with, the mathematics they are learning
- make connections between mathematics and various knowledge systems, their lived experiences, and various real-life applications of mathematics, including careers

Number

By the end of this course students will:

- demonstrate an understanding of the development and use of numbers, and make connections between sets of numbers
- represent numbers in various ways, evaluate powers, and simplify expressions by using the relationships between powers and their exponents
- apply an understanding of rational numbers, ratios, rates, percentages, and proportions, in various mathematical contexts, and to solve problems

Algebra

By the end of this course students will:

- demonstrate an understanding of the development and use of algebraic concepts and of their connection to numbers, using various tools and representations
- apply coding skills to represent mathematical concepts and relationships dynamically, and to solve problems, in algebra and across the other strands
- represent and compare linear and non-linear relations that model real-life situations, and use these representations to make predictions
- demonstrate an understanding of the characteristics of various representations of linear and non-linear relations, using tools, including coding when appropriate

Data

By the end of this course students will:

- describe the collection and use of data, and represent and analyse data involving one and two variables
- apply the process of mathematical modelling, using data and mathematical concepts from other strands, to represent, analyse, make predictions, and provide insight into real-life situations

Geometry and Measurement

By the end of this course students will:

- demonstrate an understanding of the development and use of geometric and measurement relationships, and apply these relationships to solve problems, including problems involving real-life situations

Financial Literacy

By the end of this course students will:

- demonstrate the knowledge and skills needed to make informed financial decisions

Evaluation

The final report card mark will be determined according to the **student's overall achievement of all of the course expectations** as set out in The Ontario Curriculum Mathematics documents. Students will be given **multiple and varied opportunities to demonstrate their achievement of the expectations within each strand** throughout the term as well as in the summative activity and/or final exam.

A final mark will be determined by achievement in *all* areas with knowledge and skills described by:

a **high degree** of effectiveness	**Level 4** (80-100)	Achievement surpasses the provincial standard.
considerable effectiveness	**Level 3** (70-79)	Achievement represents the **provincial standard.**
some effectiveness	**Level 2** (60-69)	Achievement is approaching provincial standard.
limited effectiveness	**Level 1** (50-59)	Achievement falls much below the provincial standard.
	Below Level 1 (49 and below)	*Student does not achieve at least *limited effectiveness* in <u>all</u> overall expectations.

Guidelines for Missed Evaluations and Academic Fraud

1. Upon missing a test or presentation, students will be required at the teacher's discretion, either to:
   a) Complete the test or presentation immediately upon return to school; or
   b) Make arrangements with the teacher for a make-up; or

   Failure to complete the missed test according to the negotiated schedule will result in a mark of **zero**.

2. If an assignment is late or incomplete, a student will be provided with a second opportunity. If no evidence is forthcoming , an incomplete (R) will be assigned for the evaluation.

3. Copied, borrowed or stolen work provides no evidence of learning. Students who submit fraudulent work may be referred to Sir Wilfrid Laurier's Academic Integrity Committee where they will participate in a workshop on academic integrity. Upon completion of the workshop the student may be given a second opportunity. A mark of **zero** will be assigned if the student does not produce evidence of learning.

General Course Information

Students must bring the following materials to each class:

- separate Math binder (to hold notes, tests, quizzes, handouts)
- pencil case (to hold pencils, erasers, ruler, coloured pens)
- scientific or graphing calculator, with fraction capability
- lined and graph papers

The full curriculum document can be viewed at:
https://www.dcp.edu.gov.on.ca/en/curriculum/secondary-mathematics/courses/mth1w

<u>For Graphing use:</u> https://www.desmos.com/calculator
