



CENTENNIAL REGIONAL HIGH SCHOOL

COURSE OUTLINE 2018-2019

Subject: Mathematics

Level: Secondary1

Course Content:

- **Arithmetic and Algebra**

- Representations, patterns, and properties
- Fractional, decimal & exponential notation; percentage, square root
- Properties of divisibility
- Rules of signs
- Equality relations
- Inverse operations
- Properties of operations
- Order of operations
- Estimation & rounding
- Comparing
- Using a variety of representations
- Equivalent numbers & expressions
- Switching between representations
- Transforming arithmetic equalities
- Locating numbers on a number line
- Simplifying
- Mental computation
- Written computation
- Use of a calculator

- **Statistics and Probability**

- Random experiment
- Enumerating possible outcomes
- Theoretical & experimental probability
- Tables & graphs
- Arithmetic mean & range

- **Geometry**

- Plane figures (Area & perimeter)
- Angles
- Geometric constructions
- Geometric transformations
- Finding unknown measurements

Evaluation Methods

Under the Quebec Education Program (QEP), students will be evaluated according to two Mathematical competencies. (*see chart*)

Term Weighting:

In accordance with the revised QEP, each term will be weighted.

TERM 1: 20%

TERM 2: 20%

TERM 3: 60%

EVALUATING WITH COMPETENCIES

C1: Solves a Situational Problem 30%	C2: Uses Mathematical Reasoning 70%
<p><i>A situational problem . . .</i></p> <ul style="list-style-type: none"> ▪ Has not previously been presented in the learning process ▪ Involves using a new combination of rules or principles, that the student may or may not have previously learned, in order to create a solution ▪ Has a solution that has not been encountered before <p><i>The student will . . .</i></p> <ul style="list-style-type: none"> ▪ Decode the elements of the problem that can be processed mathematically ▪ Represent the problem by using a mathematical model ▪ Work out a mathematical solution ▪ Validate the solution ▪ Share information related to the solution <p><i>Evaluation Criteria</i></p> <p>CR1 Oral or written indication that the student has an appropriate understanding of the situational problem</p> <p>CR2 Mobilization of mathematical knowledge appropriate to the situational problem</p> <p>CR3 Development of a solution appropriate to the situational problem</p>	<p><i>A reasoning problem . . .</i></p> <ul style="list-style-type: none"> ▪ Requires organization & application of mathematical concepts & processes in a clearly defined context ▪ Could be one of three different subtypes: <ul style="list-style-type: none"> - <i>Application</i>: Choose & apply the appropriate mathematical concepts - <i>Validation</i>: Justify a statement, check a result/procedure, take a position, provide a critical assessment or convince using mathematical arguments - <i>Conjecture</i>: Uses inductive reasoning to make a proposition or a conjecture. The goal is to generalize. <p><i>The student will . . .</i></p> <ul style="list-style-type: none"> ▪ Form & apply networks of mathematical concepts & processes ▪ Establish conjectures ▪ Construct proofs <p><i>Evaluation Criteria</i></p> <p>CR3 Proper application of mathematical reasoning suited to the situation</p> <p>CR2 Correct application of concepts and processes suited to the situation</p> <p>CR4 Proper organization of the steps in an appropriate procedure</p> <p>CR5 Correct justification of the steps in an appropriate procedure</p> <p>CR1 Formulation of a conjecture appropriate to the situation</p>