CROCUS PLAINS REGIONAL SECONDARY SCHOOL
COURSE OUTLINE AND ASSESSMENT GUIDE

Grade 9 Mathematics Full Year (MAT10FY)

Teacher's Name: Mr. Solomon

Contact Information: Solomon.daniel@bsd.ca

Course Description:

- Grade 9 Mathematics (10FY) is a foundation course to prepare students for multiple possible pathways in Grades 10 to 12. The course builds on the understandings from Kindergarten to Grade 8 Mathematics. This course continues with the four strands of mathematics; number, patterns and relations, shape and space and statistics and probability.
- The activities that take place in the Grade 9 mathematics classroom should stem from a problem-solving approach and be based on the seven mathematical processes. Students should develop an understanding of the nature of mathematics through specific knowledge, skills, and connections among and between strands.

Text/Other Resources: Math Makes Sense 9

Units of Study

Unit Title	Learning Outcomes	Assessment Plan	Proposed Time
Square Roots & Surface Area	Determine the square root of positive rational numbers that are perfect squares. Determine the approximate square root of positive rational numbers that are non-perfect squares. Determine the surface area of composite 3-D objects to solve problems.	*Formative Assessment* Assessment may include: • Textbook Assignments • Mental Math • Quizzes • Math Journals • Conferencing • Group Discussions *Summative Assessment* Unit Tests/Quizzes/Projects	Approx. 1 month
	Demonstrate and understanding of powers with integral bases.	*Formative Assessment* Assessment may include:	

Powers & Exponent Laws	Demonstrate an understanding of operations on powers with integral bases.	• Assignments • Mental Math • Quizzes • Math Journals • Conferencing • Group Discussions *<u>Summative Assessment</u>* Unit Tests/Quizzes/Projects	Approx. 1 month
Rational Numbers	Demonstrate an understanding of rational numbers. Explain and apply the order of operations, including exponents, with and without technology.	See above	Approx. 1 month
Linear Relations	Generalize a pattern arising from a problem-solving context using linear equations and verify by substitution. Graph linear relations, analyze the graph, and interpolate or extrapolate to solve problems.	See above	Approx. 1 month
Polynomials	Demonstrate an understanding of polynomials. Model, record, and explain the operations of addition, subtraction, multiplication, and division of polynomial expressions, concretely, pictorially, and symbolically.	See above	Approx. 1 month
Linear Equations & Inequalities	Model and solve problems using linear equations. Explain and illustrate strategies to solve single variable linear inequalities with rational number coefficients within a problem-solving context.	See above	Approx. 1 month

Similarities & Transformations	Demonstrate an understanding of similarity of polygons. Draw and interpret scale diagrams of 2-D shapes. Demonstrate an understanding of line and rotation symmetry.	*Formative Assessment* Assessment may include: • Textbook Assignments • Mental Math • Quizzes • Math Journals • Conferencing • Group Discussions *Summative Assessment* Unit Tests/Quizzes/Projects	Approx. 1 month
Circle Geometry	Solve problems and justify the solution strategy using circle properties.	See above	Approx. 1 month
Probability & Statistics	Describe the effect of bias, use of language, ethics, cost, time and timing, privacy, cultural sensitivity on the collection of data. Select and defend the choice of using either a population or a sample of a population to answer a question. Develop and implement a project plan for the collection, display, and analysis of data. Demonstrate an understanding of the role of probability in society.	See above	Approx. 1 month

Mark Breakdown

- 10% classwork – these will be math exercises we do together in class.
- 30% Assignments – Practice makes better, and **so I allow students to redo assignments as many times as needed to achieve the required math skills**. Please encourage your child take advantage of the opportunity to re-do assignments.
- 40% Tests – Students can expect one quiz and one test per unit.
- 20% Final Exam – The final exam assesses overall comprehension and retention of the course material.

Learning Behaviours

Assessment and reporting of learning behaviors will be according to the Brandon School Division Learning Behaviors Rubric.