COURSE SYLLABUS: IB MYP YEAR 3 MATHEMATICS

Teacher Name: Sebastian Cabrera (Term 1) and Nikki Thomson (Term 2 and 3)

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Course Description:

The Math 8 course is designed to provide students with the foundation of mathematical understanding and critical thinking skills required to successfully complete subsequent high school math courses. Topics include perfect squares and cubes, square and cube roots, percent, proportional reasoning (rates, ratio, proportions, and percent), fractions (addition, subtraction, multiplication, division and order of operations), discrete linear relations, expressions, two-step equations, surface area and volume, Pythagorean Theorem, 3D objects, central tendency, theoretical probability and financial literacy.

Course Expectations:

- Students must follow the North Vancouver School District 's [Student Conduct Policy](#).
- Only healthy snacks/drinks will be permitted in the classroom.
- Class begins when the bell rings, and you enter the classroom, and ends when your teacher dismisses you.
- Be on time and be prepared for class. You may not be able to leave to go to your locker. It is a disruption to the class and it affects your learning.
- Please come to class prepared with all of the required supplies when needed (paper textbook, and pencils, calculators, protractors, rulers, etc.)
- Smart phones, tablets, MP3 players are not permitted in the classroom, unless it's part of a learning exploration or task.
- Actively participate in lessons and assigned work both individually and collaboratively.
- Work to the best of your ability.
- I am always available for extra help, before school, at lunch, and after school. You just need to ask, and together we will work out a suitable time.

Big Ideas:

- Number represents, describes, and compares the quantities of ratios, rates, and percents.
- Computational fluency and flexibility extend to operations with fractions.
- Discrete linear relationships can be represented in many connected ways and used to identify and make generalizations.
- The relationship between surface area and volume of 3D objects can be used to describe, measure, and compare spatial relationships.
- Analyzing data by determining averages is one way to make sense of large data sets and enables us to compare and interpret.

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Curricular Competencies

Students are expected to do the following:

Reasoning and analyzing	• Use logic and patterns to solve puzzles and play games • Use reasoning and logic to explore, analyze, and apply mathematical ideas • Estimate reasonably • Demonstrate and apply mental math strategies • Use tools or technology to explore and create patterns and relationships, and test conjectures • Model mathematics in contextualized experiences
Understanding and solving	• Apply multiple strategies to solve problems in both abstract and contextualized situations • Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving • Visualize to explore mathematical concepts • Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures
Communicating and representing	• Use mathematical vocabulary and language to contribute to mathematical discussions • Explain and justify mathematical ideas and decisions • Communicate mathematical thinking in many ways • Represent mathematical ideas in concrete, pictorial, and symbolic forms
Connecting and reflecting	• Reflect on mathematical thinking • Connect mathematical concepts to each other and to other areas and personal interests • Use mathematical arguments to support personal choices • Incorporate First Peoples worldviews and perspectives to make connections to mathematical concepts

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Course Content and Tentative Schedule:

Estimated Time Sequence	Units	Topics	Summative Assessment
Term 1	Unit 1 – Square Roots and the Pythagorean Theorem	square numbers and area models, squares and square roots, measuring line segments, estimating squares roots, the Pythagorean Theorem, exploring the Pythagorean Theorem, and applying the Pythagorean Theorem	Unit 1 Mid Chapter Quiz Unit Test Unit 2 Mid- Chapter Quiz Unit 2 Test Unit 3 Mid Chapter Quiz Unit 3 Test Assignments/Projects
	Unit 2 – Integers	representing integers, adding and subtracting integers with tiles, adding and subtracting integers on a number line	
	Unit 3 – Operation with Fractions	Using models to multiply and divide fractions and whole numbers, multiplying and dividing fractions and mixed numbers, Solving problems with fractions and order of operations with fractions	
Term 2	Unit 4 – Measuring Prisms and Cylinders	exploring nets, creating objects from nets, surface area of a right rectangular prism and a right triangular prism, volume of a right rectangular prism and a right triangular prism, surface area and volume of a cylinder	Unit 4 Mid Chapter Quiz Unit 4 Test Unit 5 Mid- Chapter Quiz Unit 5 Test Assignments/Projects
	Unit 5 – Percent, Ratio and Rate	relating fractions, decimals and percents, calculating percents, solving percent problems, sale tax and discount, exploring ratios, equivalent ratios, comparing ratios, solving ratio problems and exploring rates, and comparing rates	
Term 3	Unit 6 – Linear Equations and Graphing	solving equations using models, solving equations using algebra, solving equations involving fractions, the distributive property, solving equations involving the distributive property, graphing and creating a table of values, and graphing linear relations	Unit 6 Mid- Chapter Quiz Unit 6 Test Unit 7 Mid- Chapter Quiz Unit 7 Test Assignments/Projects
	Unit 7 – Data Analysis and Probability	Choosing an appropriate graph, misrepresenting data, probability and independent events, and solving problems involving independent events,	

Note: Order of topics subject to change

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Learning Plan:

Students will engage in the following activities:

-note-taking/active listening
-group work/peer teaching
-online video tutorial
-completing textbook questions/assignments/projects both in class and at home
-completing graphs, worksheets and questions assigned on the board or projector

Assessment: (Carson website: [IB MYP Year 3 Mathematic Course Outline](#))

Assessment of student performance will include some or all of the following strategies:

Summative Assessment
- Tests and Mid-Chapter quizzes
- Assignments designed to draw ideas from a whole unit, or connect two separate units.
- Final Exam

Formative Assessment
- Teacher observations (work habits)
- Regular, small scale quizzes with questions from the homework
- Self-Assessment and Reflections

Evaluation:

Summative Assessment
Submitted Assignments/Projects
Mid-Chapter Quizzes
Chapter Tests
School based Final Assessment

Supplies:

- Math 8 Makes Sense Textbook (given on the first day), binder, note-paper, graph paper, a calculator and writing utensils
- Students will need a scientific calculator

Thank you for taking the time to review this information together with your son/daughter. Please return the last page to me signed and dated. Should you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Mr. Cabrera

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IB MYP Year 3 Mathematics Learning Agreement

I, _____ have read and understood the IB MYP Year 3 Mathematics course
(Print Student Name – First & Last) syllabus.

I am aware of all the expectations and agree to follow them. I will complete all assignments and projects assigned to me this year, unless my parents, due to an illness or unforeseen extreme circumstance, excuse me. I am committed to learning, and working to the best of my ability, taking full responsibility for my academic success this year.

Date: _____

Student Signature: _____

Parent signature: _____

Parent Contact Phone Number: _____

Parent Contact Email: _____

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