Mathematics 8

Course Information 2023-2024
Sutherland Secondary School

Teacher: M. Ahoy
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Room B205
Tutorial: Tue/Fri – C202, Wed/Thu – B205

Welcome to Mathematics 8!

Mathematics 8 is designed to build strong numeracy skills through meaningful, hands-on learning experiences. In this course, students will develop confidence and fluency with numbers, operations, and problem solving by working in real-world contexts that connect mathematics to everyday life.

Instruction emphasizes practice, reasoning, and application rather than memorization. Students are encouraged to explain their thinking, make estimates, test strategies, and revise their understanding as they learn. Mathematics is presented as a useful, practical tool for decision-making, rather than a set of isolated rules.

This course follows the BC Ministry of Education Mathematics 8 curriculum and is structured to spiral skills forward so that key concepts are revisited and strengthened throughout the year.
BC Curriculum: https://curriculum.gov.bc.ca/curriculum/mathematics/8/core

Big Ideas

- Number sense supports estimation and informed decision-making
- Proportional reasoning helps compare quantities and prices
- Algebra describes patterns and relationships in real situations
- Geometry helps us measure, build, and design the world around us
- Statistics and probability help us interpret data and evaluate claims

Differentiation: Green / Blue / Black Tasks

Students will regularly encounter tasks offered at three levels:

- Green tasks focus on core skills and foundational understanding
- Blue tasks involve multi-step thinking and deeper application
- Black tasks extend learning through open-ended problems, optimization, and justification

All students are expected to work through Green tasks and progress into Blue tasks as part of proficiency. Black tasks provide challenge and extension for students who are ready to push their thinking further.

Required Materials (to be brought to every class)

Binder with lined and/or graph paper
Scientific calculator (phones will not be accepted as a calculator)
Pencil, eraser, and ruler
Coloured pens/pencil (optional but recommended)

Unit Outline

Unit 1 Financial Foundations and Number Sense	Students build fluency with integers, order of operations, estimation, and money calculations. Emphasis is placed on understanding numbers as they appear in everyday life, such as bank balances, purchases, and discounts.
Unit 2 Ratios, Rates, and Unit Pricing	This unit focuses on proportional reasoning, including ratios, rates, and unit pricing. Students learn how to compare value, analyze real-world deals, and scale quantities in practical contexts such as shopping and fuel consumption.
Unit 3 Percent in Real Life	Students explore percent as a powerful tool for understanding discounts, tax, tips, and financial changes. Multi-step percent problems are emphasized, including percent increase and decrease in real-world situations.
Unit 4 Algebra as a Tool	Algebra is introduced as a way to model real situations. Students work with variables, expressions, and equations to represent costs, pay rates, and relationships between quantities.
Unit 5 Measurement, Area, and Volume	This unit focuses on measurement using metric units, area and volume calculations, estimation, and conversions. Real-world applications include room design, packaging, storage, and cost estimation.
Unit 6 Geometry in the Real World	Students explore geometric concepts such as angles, polygons, nets, and three-dimensional shapes. An introductory look at the Pythagorean theorem supports real-world design and construction problems.
Unit 7 Data, Probability, & Decision Making	Students analyze data using graphs, measures of central tendency, and basic probability. Emphasis is placed on interpreting data critically and identifying misleading or incomplete representations.
Unit 8 Integrated Financial Project	In this capstone-style unit, students apply skills from throughout the year to a comprehensive project. Projects may include planning a trip within a budget, designing a small business, or comparing long-term costs. Students are expected to justify decisions using mathematical reasoning.

Classroom Expectations

- Come to class on time, prepared and ready to learn.
- You get what you put into class, and you get good at what you practice,
- Treat yourself and others with kindness, dignity, and respect
- Only leave the room after giving notification
- Phones are to be placed in the phone holder in the room (screen in, camera down)
- Perfection is not required… just do your best. That is why we have erasers.
- If you come to class ready to learn, I will come prepared, ready to teach you.

Evaluation

You will be evaluated using the BC Ministry of Education Provincial K-9 Proficiency Scale:

The Provincial Proficiency Scale	EMERGING	DEVELOPING	PROFICIENT	EXTENDING
	The student demonstrates an initial understanding of the concepts and competencies relevant to the expected learning.	The student demonstrates a partial understanding of the concepts and competencies relevant to the expected learning.	The student demonstrates a complete understanding of the concepts and competencies relevant to the expected learning.	The student demonstrates a sophisticated understanding of the concepts and competencies relevant to the expected learning.

You will have tests, quizzes, assignments, and projects where you will have an opportunity to show your learning. Grades will be recorded and posted on MS Teams. I used **continuous grading** which means that grades are not averaged or weighted but reflect the **most frequently achieved mark**.

Homework Expectations – "You get good at what you practice."

Meaningful practice is important in math. You need to practice skills, even if they are familiar or unfamiliar to you. **You are expected to complete the minimum assigned homework given in class.** Extra homework questions are always given, so that you have extra practice when you need it.

Missed Class

If you miss class, you are responsible for the material you missed. All handouts and lesson outlines can be found on the class website and homework assignments on the class team. A copy of the handout can also be found there. Missed assessments are only available to students with an **excused absence** and/or have communicated with me with respect to their absence. For extended absences – work will not be provided ahead of time – as all information can be found on the class website.

Extra Help

Extra help is available during tutorial time, Tuesdays and Fridays in C202 and Wednesdays and Thursdays in B205

If you have any other questions or concerns, please do not hesitate to talk to me directly or contact me through Teams.