

Grade Eight Mathematics Course Outline  
Mrs. W. Medisky and Ms. C. Hutchings

Based on Western Canadian Protocol for Collaboration in Basic Education

There are four main strands in this Protocol:

1. **Numbers:** number concepts, number operations
2. **Patterns and Relations:** patterns, variables and equations, relations and functions
3. **Shape and Space:** measurement, 3-D objects and 2-D shapes, transformations
4. **Statistics and Probability:** data analysis, chance and uncertainty

The Math Processes that are stressed are the following: Communication, Connections, Estimation and Mental Math, Problem Solving, Reasoning, Technology, and Visualization

General Outcomes of the Four Strands and Sub strands

1. Numbers

**Number Concepts:** Students will demonstrate a number sense for rational numbers, including common fractions, integers, and whole numbers.

**Number Operations:** Students will apply arithmetic operations on rational numbers to solve problems. Students will apply the concepts of rate, ratio, percentage, and proportion to solve problems in meaningful contexts.

2. Patterns and Relations

**Patterns:** Students will use patterns, variables, and expressions, together with their graphs to solve problems.

**Variables and Equations:** Solve and verify one step and two step linear equations with rational number solutions.

### 3. Shape and Space

Measurement: Apply indirect measurement procedures to solve problems. Generalize measurement patterns and procedures, and solve problems involving area, perimeter, surface area and volume.

**3-D Objects and 2-D Shapes:** Link angle measures and the properties of parallel lines to the classification and properties of quadrilaterals.

Transformations: Create and analyze design problems and architectural patterns, using properties of scaling, proportion and networks.

### 4. Statistics and Probability

**Data Analysis:** Develop and implement a plan for the collection, display, and analysis of data using technology as required. Evaluate and use measures of central tendency and variability.

**Chance and Uncertainty:** Compare theoretical and experimental probability of independent events.

<u>Time Line</u>	
Introduction	September
Ch. 1 Fractions	September
Ch. 3 Percent	October
Ch. 2 Proportion and Scaling	November
Ch. 5 Integers-Rational Numbers	December
Ch. 4 Data Management	January
Ch. 7 Algebra	February
Ch. 6 Measurement	March
Ch. 8 Geometry	April
Ch. 9 Powers and Roots	May
Course Review and Final Exam	June

## Equipment Needed for

### Course

- |                            |                                       |                 |
|----------------------------|---------------------------------------|-----------------|
| 1. Red pens                | 4. Scientific calculator              | 7. Geometry kit |
| 2. HB Pencils(10 at least) | 5. 30 cm ruler                        | 8. Eraser       |
| 3. Binder/Notebook         | 6. At least 100 sheets of lined paper |                 |

### Evaluation

Grades will be based on daily work, quizzes, exams, surprise exams, binder checks, attitude, effort and participation.

Daily Work	25%
Quizzes	20%
Term Exam	25%
Unit Exams	<u>30%</u>
	100%

### **Final Report Card Mark**

Term 1	23.3 %
Term 2	23.3 %
Term 3	23.4 %
Year end exam	30 _ %
	100%

### Math Class Expectations

If you are absent for any reason, it is very important you see me or a classmate to find out what you missed. You should borrow the notes from myself or a classmate and copy them. Your text book is loaned to you for the year. It must be returned in June in the same condition you received it in during September. If it is damaged, missing, or vandalized, you are responsible for any costs to repair or replace the book.

## Resources

1. Minds on Math 8
2. Journeys in Math 8
3. Canadian Math 8
4. Minds on Math 8 Software

Parent Signature