

Mathematics 7

Course Outline

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	<p>Number Concepts: Students will demonstrate a number sense for decimals and integers, including whole numbers.</p> <p>Number Operations: Students will apply arithmetic operations on decimals and integers, and illustrate their use in solving problems. Illustrate the use of rates, ratios, percentages and decimals in solving problems.</p>
2. Patterns and Relations	<p>Patterns: Students will express patterns, including those used in business and industry, in terms of variables, and use expressions containing variables to make predictions</p> <p>Variables and Equations: Use variables and equations to express, summarize and apply relationships as problem solving tools in a restricted range of contexts.</p>
3. Shape and Space	<p>Measurement: Solve problems involving the properties of circles and their connections with angles and time zones.</p> <p>3-D Objects and 2-D Shapes: Link angle measures and the properties of parallel lines.</p> <p>Transformations: Create and analyze patterns and designs, using congruence, symmetry, translation, rotation and reflection.</p>
4. Statistics and Probability	<p>Data Analysis: Develop and implement a plan for the collection, display, and analysis of data using measures of variability and central tendency.</p> <p>Chance and Uncertainty: Create and solve problems using probability.</p>

Time Line

Course and text introduction	September
Ch. 1 Representing Whole Numbers	September
Ch. 2 Fractions and Decimals	October
Ch. 3 Percent and Probability	November
Ch. 4 Data Management	December
Ch. 5 Integers	January
Ch. 6 Arithmetic to Algebra	February
Ch. 7 2-Dimensional Geometry	March
Ch. 8 Proportions	April
Ch. 9 Transformations	May
Course Review and Final Exam	June

Equipment Needed for Course

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

Evaluation

Grades will be based on daily work, quizzes, exams, and binder checks. A positive attitude, effort and participation are required.

Daily Work	25 %	Final Report Card Mark	
Quizzes (minor tests)	15 %	Term 1	23.3 %
Unit Exams (one per chapter)	30 %	Term 2	23.3 %
Term Exams (one per term)	25 %	Term 3	23.4 %
Binder Check	5 %	Final exam	<u>30.0 %</u>
		Final mark	100.0 %

Math Class General 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 a classmate or me and copy them. This is critical, as I will be marking your binder on neatness and completeness. Your textbook 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 7
2. Journeys in Math 7
3. Canadian Math 7
4. Math Warm-ups
5. Minds on Math 7 software