


PEACE RIVER SCHOOL DIVISION
VIRTUAL EDUCATION PROGRAM
"Learning Together - Success for All"



Mathematics 10-3
Course Outline
2021-2022 | Semester 1
Teacher: Ms. Kathryn Brooks

I. Course Overview

Mathematics 10-3 builds on key concepts from Mathematics 7- 9 and prepares students for Mathematics 20-3. Learning through problem solving is the key focus. Students develop and refine their own way of solving problems and show their work in a variety of ways. Students use mathematical vocabulary to explain how they solve problems and continue to acquire the mathematical processes of communication, making connections, mental mathematics, and visualization, and the use of technology as a tool.

Students who believe they can learn, take risks and persevere in problem solving will be successful mathematics students.

The topics in Mathematics 10-3 include:

- Measurement: develop special sense through direct and indirect measurement.
- Geometry: develop special sense
- Number: develop number sense and critical thinking skills
- Algebra: develop algebraic reasoning

II. Key Message/Expectations

Virtual Education is an exciting opportunity for PRSD students. Regular attendance and productive engagement in course material is an expectation and requirement for success in this course, both during synchronous and asynchronous instruction and learning activities.

Course content is organized into both teacher-directed and student-directed learning activities. Successful students will employ effective time management strategies to complete all activities on time.

Students are expected to demonstrate appropriate online and in-person behaviour in accordance with PRSD Board Policies and Administrative Procedures. By default, teachers will require students to have their cameras on during class time and require students to respond to

questions or participate in discussions with their microphone. There will be times when teachers may allow students to turn their cameras off.

III. Scope and Sequence

UNIT 1: Unit Pricing and Proportion	
Week 1: Aug 30	<ul style="list-style-type: none"> ● Introductions ● Proportional Reasoning
Week 2: Sept 7 <i>Sept 6 - Labour day</i>	<ul style="list-style-type: none"> ● Unit Price ● Setting a Price
Week 3: Sept 13	<ul style="list-style-type: none"> ● On Sale Discount ● Currency Exchange Rate
Week 4: Sept 21 <i>Sept 20 - PD Day</i>	<ul style="list-style-type: none"> ● Review ● Unit 1 Test: Sept 24 **REWRITE: Oct 8**
UNIT 2: Earning an Income	
Week 5: Sept 27	<ul style="list-style-type: none"> ● Wages and Salaries ● Alternative Ways to Make Money (Piecework or Commission)
Week 6: Oct 4 <i>Oct 8 – No School</i>	<ul style="list-style-type: none"> ● Additional Earning (Bonuses) ● Deductions and Net Pay
Week 7: Oct 12 <i>Oct 11 - Thanksgiving</i>	<ul style="list-style-type: none"> ● Review ● Unit 2 Test: Oct 15 **REWRITE: Oct 29**
UNIT 3: Length, Area and Volume	
Week 8: Oct 18	<ul style="list-style-type: none"> ● Metric System ● Imperial Measurements ● Conversions between Metric/Imperial
Week 9: Oct 26 <i>Oct 25: PD Day</i>	<ul style="list-style-type: none"> ● Perimeter ● Area/ Surface Area of Objects ● Volume of Objects
Week 10: Nov 1	<ul style="list-style-type: none"> ● Review ● Unit 3 Test: Nov 5 **REWRITE: Nov 19**
UNIT 4: Mass, Temperature, and Volume	
Nov 6	<ul style="list-style-type: none"> ● Conversions between Celsius/Fahrenheit
Week 11: Nov 8 <i>Nov 11 – Remembrance Day</i>	<ul style="list-style-type: none"> ● Mass in Metric System ● Mass in Imperial System

<i>Nov 12 – No School</i>	
<i>Week 12: Nov 15</i>	<ul style="list-style-type: none"> • Conversions involving Volume and Weight • Review • Unit 4 Test: Nov 19 **REWRITE: Dec 3**
<i>UNIT 5: Angles and Parallel Lines</i>	
<i>Week 13: Nov 23 Nov 22 – PD Day</i>	<ul style="list-style-type: none"> • Measuring, Drawing, and Estimating Angles • Angle Bisectors and Parallel Lines
<i>Week 14: Nov 29</i>	<ul style="list-style-type: none"> • Non Parallel Lines and Transversals • Parallel Lines and Transversals
<i>Week 15: Dec 6</i>	<ul style="list-style-type: none"> • Review • Unit 5 Test: Dec 8 **REWRITE: Dec 17**
<i>UNIT 6: Similar Figures</i>	
<i>Dec 9</i>	<ul style="list-style-type: none"> • Working with Similar Polygons
<i>Week 16: Dec 13</i>	<ul style="list-style-type: none"> • Determining if Two Polygons are Similar • Drawing Similar Polygons • Review
<i>Week 17: Jan 4</i>	<ul style="list-style-type: none"> • Unit 6 Test: Jan 5 **REWRITE: Jan 19**
<i>UNIT 7: Trigonometry</i>	
<i>Jan 6</i>	<ul style="list-style-type: none"> • The Pythagorean Theory • Sine/Cosine/Tangent Ratio
<i>Week 18: Jan 10</i>	<ul style="list-style-type: none"> • Finding and Solving Right Triangles • Review • Unit 7 Test: Jan 14 **REWRITE: Jan 21**
<i>Weeks Jan 17&24: Final Project/Review</i>	
<i>FINAL EXAM: To Be Determined</i>	

IV. Instruction and Assessment

A variety of instructional and formative and summative assessment strategies will be used throughout this course, including through the use of both technology and traditional pencil-and-paper. Summative assessments will be used to determine course grades which can be accessed through PowerSchool.

The course will be evaluated over the term as follows:

Total Unit Weight	Gradebook Category	Gradebook Weighting
UNIT 1: Unit Pricing and Proportion 12%	Unit 1 Assignments	6%
	Unit 1 Quizzes	2%
	Unit 1 Test	4%
UNIT 2: Earning an Income 10%	Unit 2 Assignments	5%
	Unit 2 Quizzes	2%
	Unit 2 Test	3%
UNIT 3: Length, Area and Volume 12%	Unit 3 Assignments	6%
	Unit 3 Quizzes	2%
	Unit 3 Test	4%
UNIT 4: Mass, Temperature, and Volume 10%	Unit 4 Assignments	5%
	Unit 4 Quizzes	2%
	Unit 4 Test	3%
UNIT 5: Angles and Parallel Lines 8%	Unit 5 Assignments	4%
	Unit 5 Quizzes	1.6%
	Unit 5 Test	2.4%
UNIT 6: Similar Figures 8%	Unit 6 Assignments	4%
	Unit 6 Quizzes	1.6%
	Unit 6 Test	2.4%
UNIT 7: Trigonometry 10%	Unit 7 Assignments	5%
	Unit 7 Quizzes	2%
	Unit 7 Test	3%
Final Exam	Final Exam	30%

Unit Breakdown:

Assignments	50%
Quizzes	20%
Tests	30%

V. Resources

The required textbook for Mathematics 10-3 is *MathWorks 10*. A digital version of the textbook may be available. A student-owned scientific calculator, protractor, and ruler is also required.

Students require access to reliable high speed internet that supports Google Meets. Students require a compatible device, usually a Chromebook, with a working webcam to access and participate in the course. Students require a working headset that includes a microphone and headphones.