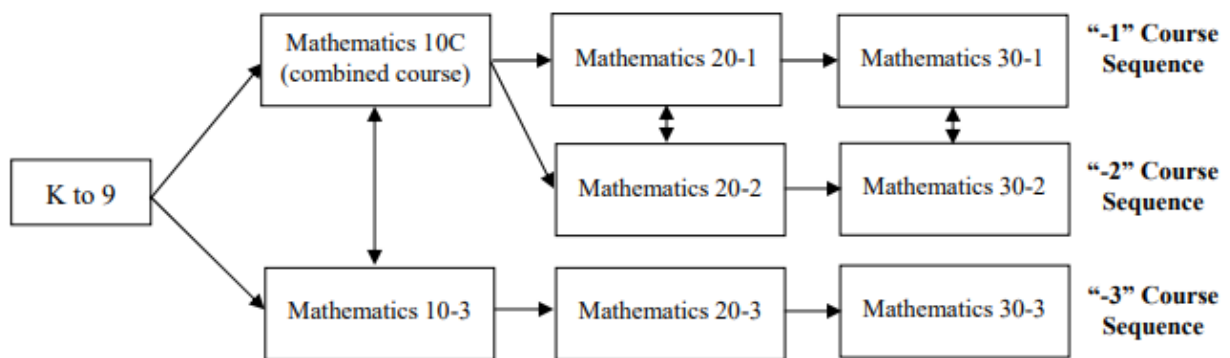


PEACE RIVER SCHOOL DIVISION
 VIRTUAL EDUCATION PROGRAM
"Learning Together - Success for All"

Math 20-3
 Course Outline
 2021-22 Semester 1
 Teacher: **Bill Sheets** sheetsb@prsd.ab.ca
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I. Course Overview



Math 20-3 is a course sequence designed to provide students with the mathematical understandings and critical-thinking skills identified for entry into the majority of trades and for direct entry into the workforce. Topics include algebra, geometry, measurement, number, statistics and probability.

Measurement *Develop spatial sense through direct and indirect measurement.* Students will:

- Solve problems that involve SI and imperial units in surface area measurements and verify the solutions.
- Solve problems that involve SI and imperial units in volume and capacity measurements.

Algebra *Develop algebraic reasoning.* Students will:

- Solve problems that require manipulation and application of formulas related to volume and capacity, surface area, slope and rate of change, simple interest, and finance charges.
- Students will demonstrate an understanding of slope.
- Students will solve problems by applying proportional reasoning and unit analysis.

Number *Develop number sense and critical thinking skills.* Students will

- Analyze puzzles and games that involve numerical reasoning, using problem-solving strategies.
- Solve problems that involve personal budgets.
- Demonstrate an understanding of compound interest.
- Demonstrate an understanding of financial institution services used to access and manage finances.
- Demonstrate an understanding of credit card options including credit cards and loans.

Geometry *Develop spatial sense.* Students will

- Solve problems that involve two and three right triangles.
- Solve problems that involve scale.
- Model and draw 3-D objects and their views.
- Draw and describe exploded views, component parts and scale diagrams of simple 3-D objects.

Statistics *Develop statistical reasoning.* Students will

- Solve problems that involve creating and interpreting graphs, including: bar graphs, histograms, line graphs, and circle graphs.

II. Key Messages/Expectations

Expectation of Students for Success:

- Attend every class
- Arrive on time
- Bring a calculator, binder/paper, pencil and eraser
- Be ready to work for the full class block

If extra help is required, I am available before and after school. Please talk to me and together we can make arrangements to meet.

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

Section	Tentative dates	Percent of Grade
M0: Games and Graphs	Aug. 31 - Sept. 8th	5%
M1: Becoming MoneyWise	Sept. 9th - Sept. 24th	10%
M2: Interest Rates	Sept. 27th - Oct. 15th	10%
M3: Slope and Rate of Change	Oct. 18th - Oct. 29th	15%
M4: Right Triangles	Nov. 1st - Nov. 26th	12%
M5: Scale and Views	Nov. 29th - Dec. 10th	8%
M6: Surface Area	Dec. 13th - Jan. 7th	10%
M7: Volume and Capacity	Jan. 10th - Jan. 21st	10%
Final Exam	Jan. 24 - Jan. 28 (TBD)	20%

IV. Instruction and Assessment

Formative Assessment: There will be a variety of formative assessments throughout the course. Formative assessment is designed to help students learn, provide practice and feedback and help students improve (O'Connor. 2012). This could include daily practice, textbook work, assignments, quizzes, group work, etc. These assessments will **not** be factored into the course grade but provide valuable information to the students and teacher. If you would like to discuss your child's formative assessments please contact the teacher.

- Grades for each unit will be based on summative assessments consisting of performance assessments worth 40% of their grade and unit tests worth 60%.

- Final exam will take place during the scheduled final exam week in June and will cover material from the entire course. The final exam will be worth a total of 20% of their final grade.
- The above dates are a rough estimate of the timeline. It may change according to the needs of the class.

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:

Section	Performance Assessment	Unit Test
M0: Games and Graphs	2%	3%
M1: Becoming MoneyWise	4%	6%
M2: Interest Rates	4%	6%
M3: Slope and Rate of Change	6%	9%
M4: Right Triangles	4.8%	7.2%
M5: Scale and Views	3.2%	4.8%
M6: Surface Area	4%	6%
M7: Volume and Capacity	4%	6%
Final Exam		20%

V. Resources

Mathworks 11 by Pacific Press is the recommended Resource and students will be completing teacher generated notes and assignments.

Students will also require a **scientific calculator** for this course that has trigonometric functions of sine, cosine, and tangent built into it. The use of a phone based calculator is not recommended as you will not have access to this form of technology for summative assessments. Students will also require a straightedge and pencil to complete diagrams and drawings.

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.