

Seycove Secondary



Course: Workplace Math 11

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Course Description

Mathematics is increasingly important in our technological society. Students today require the ability to solve problems, to understand and use mathematics, to interpret the results, and to explain their findings. Workplace Mathematics 11 is a means of gaining these necessary skills. Students will explore reasoning, problem solving, communicating and connecting mathematical concepts.

Enduring Understandings and Big Ideas

By the end of this course students is expected to understand that:

- Math is part of everyday life
- Math helps to optimize financial decisions
- Graphs can help us understand relationships between variables
- 3D shapes can be represented by 2D patterns

Inquiry Questions

- How can mathematical equations and graphs help optimize personal finances?
- Does the media use graphs or data to sometimes present biased stories?
- How are scale models and drawings created?
- How can we determine the surface area of 3D shapes?

Curricular Competencies are detailed at the following link.

<https://curriculum.gov.bc.ca/curriculum/mathematics/11/workplace-mathematics>

Course Content

By the end of this course, a student should be able to understand the following.

Financial Literacy

- Determine whether to lease or buy a vehicle
- The cost of buying on credit

- How do home mortgages work
- How budgets help with financial decisions

Rate of Change

- What is the angle of elevation
- How to calculate slope
- How are interest rates calculated graphically

Contexts

- What is the risk of insurance payout
- How to determine the odds in games
- Interpreting graphs and data helps to make better decisions
- Statistics terminology deepens understanding of data

Interpret Graphs

- Reading graphs aids understanding
- Media sometimes uses graphs and data in a biased manner
- Data and media influence social justice issues and personal decisions

3D Objects

- Draw and construct 3D objects from their 2D nets
- Create and interpret exploded diagrams and perspective diagrams

Learning Plan

Learning will occur through the following activities.

- note-taking/active listening
- group work/peer teaching
- completing assigned questions
- assignments/worksheets done in class and at home
- asking questions of the teacher both in and out of class

Feedback from these activities will prepare students for formative assessments.

Classroom Expectations

As with all courses, students are expected to attend all classes, arrive on time, behave respectfully towards staff and other students, actively participate in the lessons and work to the best of their ability. Please note that students with unexplained absences for tests or quizzes will receive a reduced mark. Students should also be aware of the Seycove Code of Conduct in regards to plagiarism. I consider allowing others to copy your work as cheating

and thus both the student copying the work and the one allowing his or her work to be copied will receive a reduced mark. Technology can be used in the classroom but a student may need to put it away if it becomes a distraction. In extreme cases, students may be asked to forfeit their technology until the end of the class.

Classroom Necessities

You must have a calculator for this course with Texas Instruments (TI) being the preferred brand. If a student cannot purchase a calculator, there are a number of calculators available for rent through Seycove's Math Department. Normal supplies such as pencil, paper and textbook are also required each class. Course marks are calculated as follows.

Tests	45%
Quizzes	25%
Assignments	15%
Final Exams	15%

All quizzes are formative as long as a student maintains a "G" level of work habits. This means that one quiz mark per unit can be upgraded if the test mark for that unit is higher than the quiz mark.

Grade Expectations

An "A" student can:

- Demonstrate and apply the curricular competencies
- Analyze the information and synthesize the correct solution
- Apply the concepts and extrapolate onto contextualized situations
- Demonstrate superb command of numeracy (no computational error)
- Solve challenging problems in familiar and unfamiliar situations

A "B" student can:

- Sometimes demonstrate and apply the curricular competencies
- Analyze the information and synthesize the solution
- Apply the concepts and understand some details in contextualized situations
- Demonstrate good command of numeracy
- Solve challenging problems in familiar and working towards unfamiliar situations

A "C" student can:

- Demonstrate the curricular competencies
- Organize the information and attempt to interpret the solution
- Identify the patterns within the context of the problem

- Build on learned concepts but is still working on finding details in contextualized situations
- Solve routine problems

Resources

Textbook: The textbook is MathWorks 11 by Pacific Educational Press. (replacement cost \$72). We will use the textbooks during classroom time. If you need one outside of the class, you can sign it out.