

Canterbury High School

Ottawa-Carleton District School Board

Mathematics Department

Semester I – 2010/ 11 – Course Outline

Course Title: Math for Work and Everyday Life	Grade Level: 11
Course Code: MEL 3E	Credit Value: 1.0
Prerequisite: MPM 1D, MFM 1P	

Teacher: M. Dearing

Course Overview 110 hours

This course enables students to broaden their understanding of mathematics as it is applied in the workplace and daily life. Students will solve problems associated with earning money, paying taxes, and making purchases; apply calculations of simple and compound interest in saving, investing, and borrowing; and calculate the costs of transportation and travel in a variety of situations. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Strands:

Course Expectations

As students work through the course they will develop a set of skills that will support lifelong learning in mathematics. These skills are a set of seven mathematical processes that are embedded throughout all of the course expectations; they are, problem-solving, reasoning and proving, reflecting, selecting tools and computational strategies, connecting, representing, and communicating. This course will provide students with rich problem-solving opportunities that will help the student develop and apply these processes.

A. Earning and Purchasing

By the end of this course, students will:

1. interpret information about different types of remuneration, and solve problems and make decisions involving different remuneration methods;
2. demonstrate an understanding of payroll deductions and their impact on purchasing power;
3. demonstrate an understanding of the factors and methods involved in making and justifying informed purchasing decisions.

B. Saving, investing, and borrowing

By the end of this course, students will:

1. describe and compare services available from financial institutions;
2. demonstrate an understanding of simple and compound interest, and solve problems involving related applications;
3. interpret information about different ways of borrowing and their associated costs, and make and justify informed borrowing decisions.

C. Transportation and Travel

By the end of this course, students will:

1. interpret information about owning and operating a vehicle, and solve problems involving the associated costs;
2. plan and justify a route for a trip by automobile, and solve problems involving the associated costs;
3. interpret information about different modes of transportation, and solve related problems.

Units of Study

1. Working and Earning

- Investigate different ways to be paid
- Calculate salary if paid by commission, piecework, or hourly wage
- Learn about payroll deductions, net and gross pay

2. Making purchases

- Calculate GST and PST
- Calculate discounts and sale prices
- Different buying options-leasing, layaway, instalment plans

3. Banking transactions and saving money

- Reading bank statements and passbooks
- Learning about different ways of saving money
- Investing money by simple or compound interest

4. Borrowing money

- Using credit cards
- Paying off credit card purchases
- Paying off loans

5. Taking a trip

- Planning a car trip, and investigating the associated costs
- Investigating other modes of travel
- Reading schedules and travelling abroad

6. Buying a car

- Learning about the driver's licence and how to get one
- Buying a used versus new car, buying or leasing
- Owning and operating costs; insuring a car

- Comparing public transportation versus owning a car

Teaching Strategies

Students will have the opportunity to learn in a variety of ways; individually, cooperatively, investigative, teacher directed class discussion and notes, visual aids and manipulatives (e.g., toy money, newspapers).

Assessment and Evaluation Strategies

Student achievement will be monitored through the use of formative assessments in the form of quizzes, assignments, observations. Feedback on these assessments will provide the student with information to determine their level of understanding of the concepts. Student achievement will be recorded through the use of quizzes, tests, assignments/tasks. The percentage grade will represent the quality of the student's overall achievement of the expectations for the course and reflect the corresponding level of achievement as described in the achievement chart.

Evaluation Summary

Term Evaluation (70%) comprised of:

- | | | |
|----|----------------------------------------------------------------------------------------------------------------------------------|-------|
| a) | <u>Knowledge and Understanding</u>
(Understand the concepts and computational skills of specific expectations) | - 20% |
| b) | <u>Application</u>
(knowing when and how to use appropriate tools and concepts to solve problems) | - 25% |
| c) | <u>Thinking</u>
(being able to use critical and creative thinking skills to solve problems, connect ideas from other strands) | - 15% |
| d) | <u>Communication</u>
(reflect and express through writing a mathematical solution or concept) | - 10% |

Summative Evaluation (30%) comprised of:

- | | | |
|----|-----------------------------------------------------------|-------|
| a) | <u>Summative Task</u> (problems using a variety of tools) | - 20% |
| b) | <u>Examination</u> | - 10% |

References

www.edu.gov.on.ca/eng/curriculum/secondary/math1112currb.pdf

Student Resources / Texts

1. Mathematics for Everyday Life, Irwin
2. Various other texts and resources (e.g., www.oame.on.ca)