Geometry, Measurement and Finance 10

Course Outline

2012-2013

Resources: Text- (Pacific Educational Press) MathWorks 10 New Brunswick Edition

 <http://pacificedpress.ca/files/books/MW10-NB-TR/index.html#/1/> (teacher resource)

 <http://pacificedpress.ca/files/books/MW10-NB-SR/index.html> (student text)

Unit: Curriculum Reference:

Solving Problems requiring manipulation and application of Formulas:

 Perimeter AN 1

 Area

Volume

Capacity

Pythagorean Theorem

Primary trig ratios These continue throughout the semester

Income

Currency exchange

Interest

Finance charges

**Chapter 1 Unit Pricing & Currency Exchange (13 days)**

Unit Pricing and currency exchange using proportional reasoning: N1

 Compare Unit prices

 Determine best buy

 Compare sales promotion techniques

 Increase/Decrease in price depending on percentage discounts/ extra charges

 Currency exchange – proportional reasoning

 - Selling rate / purchasing rate

 - estimate cost in Canadian currency while in foreign country

 - convert between Canadian and foreign currency using formulas, charts or tables

**Chapter 2 Earning Income (7 days)**

Income: N2

 Describe and identify various jobs that use different methods of earning income (advantages/disadvantages)

 Hourly wage

 Wage + tips

 Piecework

 Salary

 Commission

 Contract

 Bonus

 Shift premiums

 Determine in decimal form, the total time worked in hours and minutes

 Time

 Time and one half

 Double time

 Determine Gross pay when given:

 Base hourly wage with and without tips

 Base hourly wages plus overtime (time and one half or double time)

 Base hourly wage plus commission

 Single commission

 Describe the difference between Gross pay and Net pay

 Canadian Pension Plan (CPP)

 Employment Insurance (EI)

 Income Tax deductions

 Calculate Net Pay when given:

 Health plans

 Uniforms

 Union Dues

 Charitable donations

 Payroll tax

**Chapter 3 Financial Services (13 days)**

Financial Institution Services: N3

 Banking services

 Online services

 Types of accounts

 Bank Charges

 Service Charges

 Describe advantages / disadvantages

 Online banking

 Debit card purchases

 Describe ways to ensure security

 Passwords

 Encryption

 Protection of personal identification number

Compound Interest: N4

 Simple Interest I=Prt

 Compound Interest (Describe the effect of different periods)

 Compare simple and compound interest

 Estimate, using the Rule of 72, the time required for a given investment to double in value

Credit Options: N5

 Advantages and disadvantages of:

 Bank / Store credit cards

 Personal loans

 Lines of credit

 Overdraft

 Issues related to credit:

 Service charges

 Interest

 Payday loans

 Sales promotions

**Chapter 4 System of Measurement and Conversions (17 days)**

Systeme International (SI) M1

 Explain how the SI system was developed

 Base units

 Why are decimals used?

 Identify contexts that involve the SI system

 Conversions

Imperial System M2

 Explain how the Imperial system was developed

 Base units

 Why are fractions used?

 Identify contexts that involve the Imperial system

 Conversions

Solve problems using the SI and Imperial systems M3

 Determine referent measurements

 Conversions between SI and Imperial systems

**Chapter 5 Mass, Temperature, & Volume (13 days) / Chapter 6 Surface Area, Volume & Capacity (13 days)**

Area of 2-D shapes M4

 Decimal / fraction measurements

 SI and Imperial systems

 Convert from one unit squared to another unit squared

 Regular and composite 2-D shapes including circles

Volume / Suface Area of 3-D shapes M5

 Right cone, right cylinder, right prism, right pyramid or sphere

 Find an unknown dimension when given volume or surface area

 Composite 3-D objects

**Chapter 8 Trigonometry of Right Triangles (13 days)**

Pythagorean Theorem G2

Primary Trigonometric Ratios G3

Parallel, Perpendicular, Transversal lines and the angles formed between them G4

 Identify pairs of angles and determine the value

 Corresponding

 Vertically opposite

 Alternate interior

 Alternate exterior

 Interior angles on the same side of the transversal

 Exterior angles on the same side of the transversal

Angles G5

 Acute, right, obtuse, straight, reflex

 Draw, replicate, construct, bisect and solve problems

 Referent angles: 30, 45, 60, 90, 180

Analyze Puzzles and Games G1

 Problem Solving strategies

 Guess and c heck

 Look for a pattern

 Make a systematic list

 Draw or model

 Eliminate possibilities

 Simplify the original problem

 Work backwards

 Develop alternative approaches