

Math 8 Course Outline
2017-18
McClelland/Reynolds/Bichel

The main goals of mathematics education are to prepare students to:

- use math to confidently solve problems
- communicate and reason mathematically
- appreciate and value math
- make connections between math and life
- become mathematically literate adults

In Math 8 we will explore the following areas of mathematics:

Unit 1: **Statistics and Probability**- September

a) Data Analysis

Chapter 1: Representing Data

- advantages and disadvantages of graphs, misrepresenting data, critiquing data presentation

b) Chance and Uncertainty

Chapter 11: Probability

- tree diagrams and tables, independent events, probability using fractions

Unit 2: **Numbers**- October - December

Chapter 4: Understanding Percents

- representing percents, converting between fraction, decimals and percents, percent of a number, combining percents

Chapter 2: Rate, Ratio and Percent

- two-term and three-term ratios, rates, proportions

Chapter 8: Integers

- multiplying and dividing integers, integer operations

Chapter 6: Fractions

- multiplying and dividing fractions by fractions & fractions by whole numbers, multiplying and dividing improper and mixed fractions

Unit 3: **Patterns and Relations**- January - February

Chapter 9: Linear Relations

- graphs of linear relations, patterns in a table of values, linear relations

Chapter 10: Solving Linear Equations

- modeling and solving one-step equations, modeling and solving two-step equations

Unit 4: **Space and Shape**- March – June

a) Measurement

Chapter 3: Pythagorean Relationship

- squares and square roots, **using and applying Pythagorean relationships**

Chapter 5: Surface Area

- views and nets of 3-D objects, surface area of prisms and cylinders

Chapter 7: Volume

- defining volume, volume of prisms and cylinders

b) Transformation

Chapter 12: Tessellations

- tessellations with regular and irregular polygons, translations, reflections and rotations, Escher-style tessellations

Evaluation:

Assessment for Learning

Assignments 0%

Assessment of Learning

Quizzes & Tests & Exams 100%

Daily assignments will be marked but **will not** have a weight. This is to provide the student with feedback as to how he or she is doing and to allow the student to learn from their mistakes before a quiz, test or exam is written. Incomplete homework will result in a homework mark (4 marks = **Period 6**) and the assignment will still need to be completed at a time chosen by the teacher such as at lunch hour, after school, etc.

Rewrites for quizzes and tests are a possibility but only after a student has devised a plan for success. This will include correcting the original quiz or test and also possibly preparing for the rewrite by attending a tutorial (lunch hour or after school) at the teacher's discretion.

Student achievement of learning outcomes will be reported as follows:

E – Excelling – The student has independently shown an in-depth understanding. Achievement is excellent
P – Proficient - The student has shown a well-developed understanding. Achievement is proficient
B – Beginning - The student has shown a basic or inconsistent understanding. Achievement is developing
L- Limited - Insufficient evidence was available to assess the outcome.

Resources:

Math Links 8 McGraw-Hill Ryerson

Math Power 8 Addison Wesley

Math: Easy as 3.14 Roguemedi