

Grade 7: Term 2

Math Curriculum Overview

Unit 3: Fractions, Decimals, and Percents

In this unit: Students will explore the relationship between fractions, decimals and percents. They will order numbers by converting between the three ways of representing numbers. Students will add and subtract fractions and decimals. They will solve questions which use fractions, decimals, and percents.

Unit 4: Circles and Area

In this unit: Students will work with circles finding circumference and area. They will also find the area of parallelograms and triangles. Finally, in this unit they will examine circle graphs and draw them as well.

Unit 5: Operations with Fractions

In this unit: Students will add and subtract fractions and mixed numbers.

Unit 6: Equations

Students will solve equations using a balance beam model or tiles. The emphasis will be on developing an understanding of the techniques that will be used in algebra throughout middle and high school.

Each strand is addressed with a major emphasis and strands are interrelated whenever possible to provide a rich variety of math experiences for students

Multiple Intelligences are employed whenever possible All lessons include **Intra and Inter personal** components, as students work collaboratively and the independently on each skill

Existential Intelligence will be used when asking students to estimate, reflect on, or think about their thinking on an ongoing basis **Naturalistic** examples will be used in word problems and real life examples when possible

Unit 4: Circles and Area

General Outcome: Use direct or indirect measurement to solve problems

Specific Outcome

- SS1:** Demonstrate an understanding of circles by:
- describing the relationships among radius, diameter and circumference of circles
 - relating circumference to pi
 - determining the sum of the central angles

- constructing circles with a given radius or diameter
- solving problems involving the radii, diameters and circumferences of circles

Lessons:

**Investigating circles –
Circumference of a circle
Area of a parallelogram, triangle and circle
Interpreting circle graphs
Drawing circle graphs**

Unit 5: Operations with Fractions

General Outcome: Develop number sense

Specific Outcome:

N5: Demonstrate an understanding of adding and subtracting positive fractions mixed numbers, with like and unlike denominators, concretely, pictorially symbolically (limited to positive sums and differences)

Lessons:

**Using Models to Add Fractions
Using Symbols to Add Fractions
Using Models to Subtract Fractions
Using Symbols to Subtract Fractions
Adding and Subtracting with Mixed Numbers**

Unit 6: Equations

General Outcome: Represent algebraic expressions in multiple ways

Specific Outcomes:

PR3: Demonstrate an understanding of preservation of equality by:

- modeling preservation of equality, concretely, pictorially and symbolically
- applying preservation of equality to solve equations

PR4: Explain the difference between an expression and an equation

PR6: Model and solve problems that can be represented by one-step linear equations of the form $x + a = b$, concretely, pictorially and symbolically, where a and b are integers

PR7: Model and solve problems that can be represented by linear equations of the form:

- $ax + b = c$
- $ax = b$

Lessons:

Solving Equations

Using a Model to Solve Equations

Solving Equations Involving Integers

Solving Equations Using Algebra

Using Different Methods to Solve Equations

Decoding Word Problems