



St. Mel's Catholic School

## **MATHEMATICS STANDARDS**

### **Grade Three**

#### **Number Sense**

##### **1.0 Place Value**

- 1.1 Count, read, and write whole numbers to 10,000.
- 1.2 Compare and order whole numbers to 10,000.
- 1.3 Identify the place value for each digit in numbers to 10,000.
- 1.4 Round off numbers to 10,000 to the nearest ten, hundred, and thousand.
- 1.5 Use expanded notation to represent numbers (e.g.,  $3,206 = 3,000 + 200 + 6$ ).

##### **2.0 Computation**

- 2.1 Find the sum or difference of two whole numbers between 0 and 10,000.
- 2.2 Memorize multiplication tables from 1 to 10.
- 2.3 Use the inverse relationship of multiplication and division to compute and check results.
- 2.4 Solve multiplication problems when multiplying by one-digit numbers.
- 2.5 Solve division problems when dividing by a one-digit number with no remainder.
- 2.6 Understand the special properties of 0 and 1 in multiplication and division.
- 2.7 Determine the unit cost when given the total cost and number of units.
- 2.8 Solve problems that require two or more of the skills mentioned above.

##### **3.0 Fractions and Decimals**

- 3.1 Compare equivalent fractions using drawings or concrete materials.
- 3.2 Add and subtract simple fractions.
- 3.3 Solve problems involving addition, subtraction, multiplication, and division of money amounts.
- 3.4 Understand that fractions and decimals are two different representations of the same concept (e.g., 50 cents is  $\frac{1}{2}$  of a dollar).

#### **Algebra and Functions**

##### **1.0 Number Sentences**

- 1.1 Represent relationships of quantities in the form of mathematical expressions, equations, or inequalities.
- 1.2 Solve problems involving numeric equations or inequalities.
- 1.3 Select the appropriate operation to make an expression true (e.g.,  $4 \times 3 = 12$ ).
- 1.4 Express simple unit conversions in symbolic form (e.g., in. = \_\_\_\_ feet  $\times 12$ ).
- 1.5 Recognize and use the commutative and associative properties of multiplication (e.g., if  $5 \times 7 \times 3 = 105$ , then what is  $7 \times 3 \times 5$ ?).

##### **2.0 Functional Relationships**

- 2.1 Solve simple problems involving a functional relationship between two quantities (e.g., find the total cost of multiple items given the cost per unit).
- 2.2 Extend and recognize a linear pattern.

#### **Measurement and Geometry**



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### **1.0 Measurement**

- 1.1 Choose the appropriate tools and units (metric and U.S.) and estimating and measuring the length, liquid volume, and weight/mass of given objects.
- 1.2 Estimate or determine the area and volume of solid figures by covering them with squares or by counting the number of cubes that would fill them.
- 1.3 Find the perimeter of a polygon with integer sides.
- 1.4 Carry out simple unit conversions within a system of measurement (e.g., centimeters and meters, hours and minutes).

### **2.0 Geometry**

- 2.1 Identify, describe, and classify polygons.
- 2.2 Identify attributes of triangles (e.g., two equal sides for the isosceles triangle).
- 2.3 Identify attributes of quadrilaterals (e.g., parallel sides for the parallelogram, right angles for the rectangle).
- 2.4 Identify right angles in geometric figures or in appropriate objects and determine whether other angles are greater or less than a right angle.
- 2.5 Identify, describe, and classify common three-dimensional geometric objects (e.g., cube, rectangular solid, sphere, prism, pyramid, cone, cylinder).
- 2.6 Identify common solid objects that are the components needed to make a more complex solid object.

### **Statistics, Data Analysis, and Probability**

#### **1.0 Data**

- 1.1 Identify whether common events are certain, likely, unlikely, or improbable.
- 1.2 Record the possible outcomes for a simple event (e.g., tossing a coin) and systematically keeping track of the outcomes when the event is repeated many times.
- 1.3 Summarize and display the results of probability experiments in a clear and organized way (e.g., using a bar graph).
- 1.4 Use the results of probability experiments to predict future events.

### **Mathematical Reasoning**

#### **1.0 Make Decisions about a Problem**

- 1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.
- 1.2 Determine when and how to break a problem into simpler parts.

#### **2.0 Solve Problems, Justify Reasoning**

- 2.1 Use estimation to verify the reasonableness of calculated results.
- 2.2 Apply strategies and results from simpler problems to more complex problems.
- 2.3 Use a variety of methods (e.g., words, numbers, symbols) to explain mathematical reasoning.
- 2.4 Express the solution clearly and logically.
- 2.5 Indicate the relative advantages of exact and approximate solutions to problems.



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2.6 Make precise calculations and check the validity of the results.

**3.0 Make Connections**

3.1 Evaluate the reasonableness of the solution.

3.2 Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems.

3.3 Develop generalizations of the results obtained and apply them in other circumstances.