MINNESOTA ACADEMIC STANDARDS
GRADE 3

MATH

Strand:	Sub-Strand:	Standard:	Benchmarks:
MATHEMATICAL REASONING		Apply skills of mathematical representation, communication and reasoning throughout the remaining four content strands.	1. Communicate, reason and represent situations mathematically. 2. Solve problems by distinguishing relevant from irrelevant information, sequencing and prioritizing information and breaking multi-step problems into simpler parts. 3. Evaluate the reasonableness of the solution by considering appropriate estimates and the context of the original problem. 4. Know when it is appropriate to estimate and when an exact answer with whole numbers, fractions or decimals is needed. 5. Express a written problem in suitable mathematical language, solve the problem and interpret the result in the original context. 6. Support mathematical results using pictures, numbers and words to explain why the steps in a solution are valid and why a particular solution method is appropriate.
NUMBER SENSE, COMPUTATION, AND OPERATIONS	**A. Number Sense**	Represent whole numbers in various ways to quantify information and to solve real-world and mathematical problems. Understand the concept of decimals and common fractions.	1. Read, write with numerals, compare and order whole numbers to 9,999. 2. Represent up to 4-digit whole numbers in various ways maintaining equivalence, such as 3206 = (32 x 100) + 6 or 3206 = 3200 + 6. 3. Know how fractions are related to the whole, such as four-fourths equal a whole or three-fourths equal three of four equal parts of a whole. 4. Represent and write fractions with pictures, models and numbers.
NUMBER SENSE, COMPUTATION, AND OPERATIONS	**B. Computation and Operation**	Compute fluently and make reasonable estimates with whole numbers in real-world and mathematical problems. Understand addition and subtraction and how they relate to one another. Understand the concepts of	1. Use addition of up to three whole number addends, containing up to four digits each in real-world and mathematical problems. 2. Use subtraction with up to three digit whole numbers in real-world and mathematical problems. 3. Use the inverse relationship of addition and subtraction

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		multiplication and division.	to compute and check results. 4. Demonstrate mastery of basic addition facts for addends 0 through 9, without a calculator. 5. Demonstrate mastery of subtraction facts that are inverses of the basic addition facts, without a calculator. 6. Demonstrate an understanding of the multiplication facts through 10 using concrete models. 7. Use models to solve multiplication and division problems and use number sentences to record the solutions.
Strand: **PATTERNS, FUNCTIONS AND ALGEBRA**	**Sub-Strand:** **A. Patterns and Functions**	**Standard:** Understand and describe patterns in numbers and shapes.	**Benchmarks:** 1. Create and identify patterns in numbers and shapes and explain how to extend those patterns.
Strand: **PATTERNS, FUNCTIONS AND ALGEBRA**	**Sub-Strand:** **B. Algebra (Algebraic Thinking)**	**Standard:** Add and subtract whole numbers in the correct order to solve real-world and mathematical problems.	**Benchmarks:** 1. Identify a missing number or operation in a simple arithmetic equation such as 3 _ 4 = 7 or 9 - _ = 2. 2. Use the properties of addition and subtraction that involve ordering, grouping and the number 0, to do simple computations with whole numbers.
Strand: **DATA ANALYSIS, STATISTICS AND PROBABILITY**	**Sub-Strand:** **A. Data and Statistics**	**Standard:** Represent and interpret data in real-world and mathematical problems.	**Benchmarks:** 1. Read and interpret data from circle graphs using halves, thirds and quarters. 2. Collect data using observations or surveys and represent the data with pictographs and line plots with appropriate title and key.
Strand: **DATA ANALYSIS, STATISTICS AND PROBABILITY**	**Sub-Strand:** **B. Probability**	**Standard:** Explore the basic concept of probability.	**Benchmarks:**
Strand: **SPATIAL SENSE, GEOMETRY, AND MEASUREMENT**	**Sub-Strand:** **A. Spatial Sense**	**Standard:** Understand the concept of reflection symmetry as applied to geometric shapes. Understand how representations of shapes are affected by various motions.	**Benchmarks:** 1. Identify lines of symmetry in geometric shapes. 2. Recognize and predict the position and orientation of a shape after a single flip, slide or turn.

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SPATIAL SENSE, GEOMETRY, AND MEASUREMENT	**B. Geometry**	Classify shapes by specified attributes. Identify simple shapes within complex shapes.	1. Identify, describe and classify two-dimensional shapes according to number and length of sides and kinds of angles. 2. Identify common two- and three-dimensional shapes that are components of more complex shapes.
Strand:	**Sub-Strand:**	**Standard:**	**Benchmarks:**
SPATIAL SENSE, GEOMETRY, AND MEASUREMENT	**C. Measurement**	Measure and calculate length, time, weight, temperature and money using appropriate tools and units to solve real-world and mathematical problems.	1. Select an appropriate tool and identify the appropriate unit to measure time, length, weight and temperature. 2. Find the perimeter of a polygon with whole number sides. 3. Know relationships between units of length in a system of measurement, such as 12 inches equals 1 foot or 100 centimeters equals 1 meter. 4. Tell time to the minute using digital and analog time. 5. Determine elapsed time to the minute. 6. Make change using as few coins as possible up to a dollar.