2nd Grade New Mexico Math Standards

Strand 1: NUMBER AND OPERATIONS
Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark 1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.

Performance Standards

1. Understand the relationship between numbers, quantities, and place value in whole numbers up to 1,000 and develop flexible ways of thinking about numbers:
   a. Use multiple models to explore place value and the base- ten- number system
   b. Represent whole numbers and use them in flexible ways including decomposing, and recombining numbers and see their relationships (e.g., 3 is one less than 4, one more than 2, two less than 5)
   c. Identify whether a set of objects has an odd or even number of elements
   d. Compare and order numbers using a variety of terms (e.g., tens, less than, odd numbers)
   e. Apply strategies for computation utilizing an understanding of place value (e.g., 48 + 25 would be 40 + 20 is 60, 8 + 5 is 13, 60 + 13 is 73)
2. Apply counting skills and number sense through meaningful activities:
   a. Count and recognize "how many" in sets of objects up to 1,000
   b. Count forward and backward from given numbers to 1,000
   c. Connect number words and numerals to the quantities they represent using physical models and other representations (e.g., 23 can be twenty-three 1s, one 10 and thirteen 1s, or two 10s and three 1s)
   d. Model how many parts make a whole using equal fractional parts (e.g., ½, ⅓, ¼, and 1/6 as equal parts of a whole)

K-4 Benchmark 2: Understands the meaning of operations and how they relate to one another.

Performance Standards

1. Find the sum of two whole numbers up to three digits long (e.g., 235 + 476 = □; 564 – 273 = □).
2. Find the difference of two whole numbers up to three digits long.
3. Understand and use the inverse relationships between addition and subtraction to solve problems and check solutions (28 + 31 = 59; therefore, 59 - 31 = 28).
4. Identify and describe situations that require multiplication and division and develop strategies to solve problems for repeated joining of groups and partitioning into equal subgroups or shares (e.g., repeated addition and subtraction, counting by multiples, equal sharing).

2nd Grade New Mexico Math Standards

Strand 1: NUMBER AND OPERATIONS (continued):
Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark 3: Compute fluently and make reasonable estimates.

Performance Standards	
1. Use and explain strategies for addition and subtraction of multi-digit whole numbers. 2. Model and solve problems representing adding and subtracting amounts of money using dollars and coins. 3. Use addition combinations (addends through 10) and related subtraction combinations, and develop strategies for computing based on number sense (e.g., 25 + 37: Take 3 from the 25 and use it to turn 37 into 40; then add 40 and 22 to get 62). 4. Select and use a variety of appropriate strategies methods to compute (e.g., objects, mental computation, estimation, paper and pencil). 5. Skip-count by 2, 5, and 10 to develop multiplicative reasoning and notational representations (e.g., 5, 10, 15, 20; 4 x 5 = 20; four groups of 5 equals 20).	

2nd Grade New Mexico Math Standards

Strand 2: ALGEBRA
Standard: Students will understand algebraic concepts and applications.

K-4 Benchmark 1: Understand patterns, relations, and functions

Performance Standards	
1. Recognize, reproduce, describe, extend, and create repeating and growing patterns, and translate from one representation to another. 2. Skip-count using calculators or a hundreds chart to identify, describe, predict, and make generalizations about number patterns to differentiate rote counting versus the meaning of the numbers. 3. Construct and solve open sentences that have variables (e.g., 10 = □+ 7). 4. Relate everyday problem situations to number sentences involving addition and subtraction (e.g., 25 students are going to the store. Five students can ride in a car. How many cars will be needed?).	

K-4 Benchmark 2: Represent and analyze mathematical situations and structures using algebraic symbols.

Performance Standards	
1. Use mathematical language to describe a variety of representations and mathematical ideas and situations. 2. Explain the concept of equal (e.g., quantities on both sides of equation are the same) by using objects or giving examples. 3. Construct and solve open number sentences that have variables representing numbers up to 20 (e.g., 20 = □ + 6). 4. Use objects, words, and symbols to explain the concept of addition.	

K-4 Benchmark 3: Use mathematical models to represent and understand quantitative relationships

Performance Standards	
1. Model situations of addition and subtraction of whole numbers using objects, pictures, and symbols. 2. Solve problems related to trading (e.g., coin trading, measurement trading). 3. Solve addition and subtraction problems by using data from simple charts, picture graphs, and number sentences.	

K-4 Benchmark 4: Analyze changes in various contexts.

Performance Standards	
1. Describe quantitative change (e.g., a student growing two inches in one year, water heating up to boil).	

2nd Grade New Mexico Math Standards

Strand 3: GEOMETRY
Standard: Students will understand geometric concepts and applications.

K-4 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships

Performance Standards

1. Identify and describe the attributes of common figures in a plane and common objects in space:
   a. Sort, describe, and analyze plane and solid geometric shapes (e.g., circle, triangle, square, rectangle, sphere, pyramid, cube, rectangular prism) based on various attributes (e.g., faces, edges, and corners).
   b. Put shapes together and take them apart to form other shapes (e.g., two congruent right triangles can be arranged to form a rectangle).
2. Explore lines of symmetry in two-dimensional shapes.

K-4 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems

Performance Standards

1. Find and name locations with simple relationships like "near to" and apply ideas about relative position.
2. Describe, name, and interpret direction in navigating space and apply ideas about direction and distance.
3. Use maps to locate points and navigate through mazes or maps.
4. Visualize, justify, and create paths using landmarks, space, shapes, and descriptive language.
5. Make and draw rectangular arrays of squares.

K-4 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations.

Performance Standards

1. Use systematic thinking to solve geometric puzzles (e.g., pentominoes).
2. Use materials to investigate rotational and line symmetry and create shapes that have symmetry.

K-4 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems.

Performance Standards

1. Demonstrate relationships of different attributes with concrete materials (e.g., change one characteristic of a shape while preserving others such as increasing number of sides while perimeter stays the same).
2. Select and use visualization skills to create mental images of geometric shapes.
3. Describe geometric shapes and structures from different perspectives.
4. Relate geometric ideas to numbers (e.g., seeing rows in array as a model of repeated addition).
5. Recognize geometric shapes and structures in the environment and specify their location.

2nd Grade New Mexico Math Standards

Strand 4: MEASUREMENT
Standard: Students will understand measurement systems and applications.

K-4 Benchmark 1: Understand measurable attributes of objects and the units, systems, and process of measurement.

Performance Standards	
1. Identify a unit of measure (e.g., nearest inch) and repeat that unit comparing it to the item being measured. 2. Use direct comparison to compare and order objects according to length, mass, and area. 3. Measure and compare common objects using standard and non-standard units of length. 4. Find and represent the value of a collection of coins and dollars up to $5.00, using appropriate notation. 5. Identify and use time intervals (e.g., hours, days, weeks, months). 6. Select and use appropriate measurement tools (e.g., ruler, yardstick, meter stick) 7. Tell time to the nearest quarter hour.	

K-4 Benchmark 2: Apply appropriate techniques, tools, and formulas to determine measurements.

Performance Standards	
1. Develop common referents to make comparisons and estimates of length, volume, weight, area, and time. 2. Develop an understanding that different measuring tools will yield different numerical measurements of the same object (e.g., ruler, yardstick, meter stick, paper clip). 3. Estimate measurements and develop precision in measuring objects.	

2nd Grade New Mexico Math Standards

Strand 5: DATA ANALYSIS AND PROBABILITY
Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark 1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

Performance Standards	
1. Collect numerical data systematically. 2. Represent data by using concrete objects, pictures, tables, numbers, tallies, and graphs (e.g., pictographs). 3. Pose questions about students' selves and their surroundings and gather data by interviewing, surveying, and making observations to answer the questions posed. 4. Identify patterns and explain the relationships of the units in the pattern (e.g., the number of ears on one dog, two dogs, etc., or linear numerical patterns).	

K-4 Benchmark 2: Select and use appropriate statistical methods to analyze data.

Performance Standards	
1. Describe and interpret data by drawing conclusions and making conjectures based on the data collected. 2. Display data in a variety of formats.	

K-4 Benchmark 3: Develop and evaluate inferences and predictions that are based on data.

Performance Standards	
1. Discuss events related to students' experiences as "likely" or "unlikely" and "possible" or "certain". 2. Recognize appropriate conclusions generated from the data collected. 3. Recognize inappropriate descriptions of the data set.	

K-4 Benchmark 4: Understand and apply basic concepts of probability.

Performance Standards	
1. Investigate concepts of chance (e.g., outcomes of a simple experiment). 2. Investigate whether outcomes of a simple event are equally likely to occur.	