New Mexico Mathematics Standards	Marilyn Burns Math Classroom Library
Standard 1: NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.	
A. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.	
1. Demonstrate an understanding of the place- value structure of the base-ten number system:	
<ul> <li>count with understanding and recognize 'how many' in sets of objects up to 20</li> <li>read and write whole numbers up to 20</li> <li>compare and order whole numbers up to 20</li> <li>connect numerals to the quantities they represent using various physical models</li> <li>use an organized counting method to keep track of quantities while counting (one-to-one correspondence) (e.g., touch object once and only once as counting a set)</li> <li>order sets of objects and numbers from least to most or most to least</li> </ul>	Afro-Bets 123 Book by Cheryl Willis Hudson (TE 14-15) ¡Fiesta! By Ginger Foglesong Guy (18-19) George's Store at the Shore by Francine Basséde (TE 24-25) Good Night, Gorilla by Peggy Rathmann (TE 26- 27) Gray Rabbit's 1, 2, 3 by Alan Baker (TE 28-29) Let's Count it Out, Jesse Bear by Nancy White Carlstrom (TE 30-31) Puppies in the Snow by James Young (TE 42-43) Rooster's Off to See the World by Eric Carle (TE 44-45) Trick or Treat Countdown by Patricia Hubbard (TE 54-55)

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B. Understand the meaning of operations and how they relate to one	
another.	
1. Represent numbers using pictures, objects, or numerals.	
2. Use concrete objects to solve simple addition and subtraction story problems (e.g., oral not written).	Ten Little Bears by Kathleen Hague (TE 46-47)
C. Compute fluently and make reasonable estimates.	
1. Estimate quantities of objects up to 20.	Let's Count it Out, Jesse Bear by Nancy White Carlstrom (TE 30-31) Monster Math Picnic by Grace Maccarone (TE 34-35) Monster Musical Chairs by Stuart J. Murphy (TE 36-37) Rooster's Off to See the World by Eric Carle (TE 44-45) Let's Go Visiting by Sue Williams (TE 10-13) Ten Little Fish by Audrey Wood (TE 48-49)
Standard 2: (Grades K-8) ALGEBRA: Students will understand algebraic concepts and applications. (Grades 9-12) ALGEBRA, FUNCTIONS, AND GRAPHS: Students will understand algebraic concepts and applications.	
A. Understand patterns, relations, and functions.	
1. Identify the attributes of objects (e.g. the ability to identify attributes is a foundational skill for sorting and classifying).	Ten Black Dots by Donald Crews (TE 48-49)
2. Sort, classify, and order objects by size, number, and other properties.	Feast for 10 by Cathryn Falwell (TE 18-19)
3. Recognize, reproduce, describe, extend, and create repeating patterns (e.g., color, shape, size, sound, movement,	Pancakes, Crackers, and Pizza by Marjorie Eberts and Margaret Gisler (TE 38-39) What Is a Triangle? By Rebecca Kai Dotlich (TE 56-57) What Is Round? By Rebecca Kai Dotlich (TE 58-59) What Is Square? By Rebecca Kai Dotlich (TE 60-61)

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Standards	
simple numbers).	
B. Represent and analyze mathematical situations and structures using algebraic symbols.	
1. Use concrete, pictorial, and verbal representation to develop an understanding of invented and conventional symbols.	
C. Use mathematical models to represent and understand quantitative relationships.	
1. Model situations that involve whole numbers using objects or pictures.	
D. Analyze changes in various contexts.	
1. Verbally describe changes in various contexts (e.g., plants or animals growing over time).	
Standard 3: (Grades K-8) GEOMETRY: Students will understand geometric	
concepts and applications. (Grades 9-12) GEOMETRY AND TRIGOMETRY:	
Students will understand geometric concepts and applications.	
A. Analyze characteristics and properties of two- and three- dimensional geometric shapes and develop mathematical arguments about geometric relationships	
1. Identify common objects in their environments and describe their geometric features:	
describe, identify, model, and draw common geometric	Pancakes, Crackers, and Pizza by Marjorie Eberts and Margaret Gisler (TE 38-39) What Is a Triangle? By Rebecca Kai Dotlich (TE 56-57)

New Mexico Mathematics Standards	Marilyn Burns Math Classroom Library
objects (e.g., circle, triangle, square, rectangle, cube, sphere, cone)	What Is Round? By Rebecca Kai Dotlich (TE 58-59) What Is Square? By Rebecca Kai Dotlich (TE 60-61)
• compare familiar plane and solid objects by common attributes (e.g., shape, size, number of corners)	Pancakes, Crackers, and Pizza by Marjorie Eberts and Margaret Gisler (TE 38-39) What Is a Triangle? By Rebecca Kai Dotlich (TE 56-57) What Is Round? By Rebecca Kai Dotlich (TE 58-59) What Is Square? By Rebecca Kai Dotlich (TE 60-61)
B. Specify locations and describe spatial relationships using coordinate geometry and other representational	
systems.	
1. Follow simple directions to	
find a specific location in space.	
2. Use spatial vocabulary (e.g., left, right, above, below) to describe relative position	
C. Apply transformations and	
use symmetry to analyze	
mathematical situations.	
1. Use manipulatives (e.g., puzzles, tangrams, blocks) to demonstrate rotation (i.e., flips), translations (i.e., slides), and reflection (i.e., turns).	
2. Investigate the symmetry of two-dimensional shapes (e.g., by folding or cutting paper, using mirrors).	Pancakes, Crackers, and Pizza by Marjorie Eberts and Margaret Gisler (TE 38-39) What Is a Triangle? By Rebecca Kai Dotlich (TE 56-57) What Is Round? By Rebecca Kai Dotlich (TE 58-59) What Is Square? By Rebecca Kai Dotlich (TE 60-61)
D. Use visualization, spatial	
reasoning, and geometric	
modeling to solve problems.	
1. Describe how to get from one	
location to another (e.g., how to	
get to the library).	

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2. Find and describe geometric shapes in nature or architecture.	Pancakes, Crackers, and Pizza by Marjorie Eberts and Margaret Gisler (TE 38-39) What Is a Triangle? By Rebecca Kai Dotlich (TE 56-57) What Is Round? By Rebecca Kai Dotlich (TE 58-59) What Is Square? By Rebecca Kai Dotlich (TE 60-61)
Standard 4: MEASUREMENT: Students will understand measurement systems and applications.	
A. Understand measurable attributes of objects and the units, systems, and process of measurement.	
1. Describe and compare, using appropriate concepts and vocabulary, the measurable properties of length (e.g., shorter, longer, taller), volume (e.g., full, empty), weight (e.g., heavy, light), and time (e.g., before, after, morning, afternoon, days of week).	Let's Count it Out, Jesse Bear by Nancy White Carlstrom (TE 30-31) Monster Musical Chairs by Stuart J. Murphy (TE 36-37)
2. Use tools to make predictions (e.g., using a balance scale, predicting how many cups a container will hold and then filling it to check the prediction).	
3. Measure using non- standard units of measurement (e.g., use pencils to measure desk top, use different lengths of rope to measure distance in classroom).	
<ul><li>4. Use digital and analog (face) clocks to tell time to the hour.</li><li>B. Apply appropriate</li></ul>	
techniques, tools, and	

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formulas to determine	
measurements.	
1. Explore measuring objects using a repeating non-standard unit of measurement (e.g., paper clips, cubes, etc.).	
Standard 5: DATA	
ANALYSIS AND PROBABILITY: Students will understand how to formulate questions, analyze data, and determine probabilities.	
A. Formulate questions	
that can be addressed with	
data and collect, organize,	
and display relevant data	
to answer them.	
and events in the	
environment to answer	
simple questions (e.g.,	
brainstorm questions about	
self and surroundings,	
collect data, and record the	
results using objects,	
pictures, and pictographs).	
B. Select and use	
appropriate statistical methods to analyze data.	
1. Describe simple data and	
pose questions about the data.	
C. Develop and evaluate	
inferences and predictions	
that are based on data.	
1. Make simple predictions	
D. Understand and apply	
basic concepts of probability.	

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1. Answer questions that relate to the possibility of familiar events happening or not.	

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