

AFTERSCHOOL ACHIEVERS: MATH CLUB © 2002

correlated to

**New Mexico Mathematics Content Standards,
Benchmarks, and Performance Standards
Grade 5**



YOUR NEW MEXICO GREAT SOURCE REPRESENTATIVE

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Publisher: Great Source Education Group

Title: Afterschool Achievers Math Club Instructor's Guide-Grade 5

ISBN 0-669-48827-5 5

NEW MEXICO MATHEMATICS CONTENT STANDARDS, BENCHMARKS, & PERFORMANCE STANDARDS
Publisher Alignment Analyses for Primary Tool of Instruction

This correlation table/matrix is a tool to show alignment with New Mexico's Content Standards, Benchmarks, & Performance Standards and the proposed instructional material considered for adoption. The purpose is to demonstrate how your material can contribute to student achievement as measured against these Content Standards.

Attach a completed copy of this document to each core basal sample you are submitting for review. You will submit 3 copies of each student & teacher edition for each title & other material deemed necessary to provide appropriate instruction, along with these alignment documents at the 2006 June Summer Institute. **DO NOT SEND WITH THE RFP.**

Mathematics Grade 5

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

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
A. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.	1. Compare and order using concrete or illustrated models: <ul style="list-style-type: none">• whole numbers (to millions)• common fractions (halves, thirds, fourths, eighths)• decimals (thousandths)	20, 31, 121, 143, 157	
	2. Demonstrate understanding of the magnitude of the value of numbers from thousandths to millions, including common fractions.	The opportunity to address this objective is available on the following pages: 77, 95, 97, 152	

***Objectives are clearly stated with measurable outcomes at 90% or above.**

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
A. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.	3. Represent place value using concrete or illustrated models up to one billion (1,000,000,000).	1, 52, 77, 95, 97, 152	
	4. Interpret percents as part of a hundred (i.e., find decimal and percent equivalents for common fractions, explain how they represent the same value, and compute a given percent of a whole number).	28, 145, 178	
	5. Identify and represent on a number line decimals, fractions, and mixed numbers.	121, 143	
	6. Identify prime and composite numbers to 50.	36, 41, 67, 70, 120, 168, 180	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
B. Understand the meaning of operations and how they relate to one another.	1. Explain and perform whole number division and express remainders as a whole number or a fractional part as appropriate to the context of real-life problems.	34, 42, 64, 69, 74, 75, 79, 82	
	2. Add and subtract decimals.	54, 104, 129, 74	
	3. Add and subtract fractions and mixed numbers without regrouping and express answers in simplest form.	47, 89, 125, 133, 144, 155, 160, 169	
	4. Find the factors and multiples of whole numbers.	1, 6, 7, 11, 18, 21, 26, 31, 36, 37, 45, 99	
	5. Use arithmetic operations and inverse relationships to represent and solve real-world problems.	80, 105, 108, 112, 125, 130, 155, 160, 177	

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B. Understand the meaning of operations and how they relate to one another.	6. Identify and represent on a number line decimals, fractions, and mixed numbers.	121, 143	
	7. Demonstrate proficiency with division, including one-and two-digit divisors.	34, 42, 64, 69, 74, 75, 79, 82	
	8. Solve simple problems involving the addition and subtraction of fractions and mixed numbers.	47, 89, 125, 133, 144, 155, 160, 169	
	9. Represent and use fractions and decimals in equivalent forms.	27, 28, 58, 87, 88, 91, 145, 178	

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

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
C. Compute fluently and make reasonable estimates.	1. Add, subtract, multiply, and divide whole numbers.	4, 7, 9, 14, 24, 29, 32, 34, 39, 42, 50, 59, 64, 69, 74, 75, 79, 97, 107, 114, 119, 122, 124	
	2. Add and subtract decimals.	54, 104, 129, 174	
	3. Use estimation strategies to verify the reasonableness of calculated results.	13, 25, 33, 53, 68, 78, 93, 100, 118, 125, 147, 148, 163	

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

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C. Compute fluently and make reasonable estimates.	4. Explain how the estimation strategy impacts the result.	The opportunity to address this objective is available on the following pages: 13, 25, 33, 53, 68, 78, 93, 100, 118, 125, 147, 148, 163	
	5. Relate the basic arithmetic operations to one another (e.g., multiplication and division are inverse operations).	42	
	6. Simplify numerical expressions using order of operations.	162	
	7. Recognize and explain the differences between exact and approximate values.	The opportunity to address this objective is available on the following pages: 13, 25, 33, 53, 68, 78, 93, 100, 118, 125, 147, 148, 163	

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Mathematics Grade 5

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

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
A. Understand patterns, relations, and functions.	1. Identify and graph ordered pairs in the first quadrant of the coordinate plane.	135, 151, 156, 176	
	2. Describe, represent, and analyze patterns and relationships.	6, 11, 16, 18, 21, 46, 48, 65, 114, 126, 131, 136, 141, 149, 151, 165	
	3. Identify, describe, and continue patterns presented in a variety of formats (e.g., numeric, visual, oral, written, kinesthetic, pictorial).	6, 11, 16, 18, 21, 46, 48, 65, 114, 126, 131, 136, 141, 149, 151, 165	
	4. Generate a pattern using a written description.	The opportunity to address this objective is available on the following pages: 6, 11, 16, 18, 21, 46, 48, 65, 114, 126, 131, 136, 141, 149, 151, 165	

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B. Represent and analyze mathematical situations and structures using algebraic symbols.	1. Compute the value of the expression for specific numerical values of the variable.	42	
	2. Use a letter to represent an unknown number.	17, 40, 51, 56, 57, 76, 92, 142	
	3. Understand the differences between the symbols for “less than”, “less than or equal to”, “greater than”, and “greater than or equal to”.	92, 157	

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

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
C. Use mathematical models to represent and understand quantitative relationships.	1. Use mathematical models to represent and explain mathematical concepts and procedures.	1, 3, 5, 6, 11, 16, 18, 21, 23, 26, 30, 35, 36, 37, 41, 46, 51, 55, 56, 60, 61, 63, 65, 66, 67, 71, 73, 76, 80, 81, 83, 85, 86, 91, 96, 99, 101, 102, 103, 106, 109, 110, 111, 112, 115, 116, 151, 123, 156, 128, 131, 134, 135, 136, 138, 140, 141, 143, 146, 151, 152, 153, 154, 156, 161, 166, 175, 176, 179	
	2. Understand and use mathematical models such as: <ul style="list-style-type: none">• the number line to model the relationship between rational numbers and rational number operations• pictorial representation of addition and subtraction of rational numbers with regrouping• manipulatives or pictures to model computational procedures• graphs, tables, and charts to describe data• diagrams or pictures to model problem situations	1, 3, 5, 6, 11, 16, 18, 21, 23, 26, 30, 36, 37, 41, 46, 48, 51, 55, 56, 60, 61, 63, 65, 66, 67, 71, 76, 80, 81, 83, 85, 86, 91, 96, 99, 101, 102, 103, 105, 106, 109, 111, 112, 115, 116, 121, 123, 126, 131, 134, 135, 136, 138, 141, 143, 146, 151, 153, 154, 156, 161, 166, 175, 176, 179	
	3. Demonstrate how a situation can be represented in more than one way.	26, 65, 66, 143, 146	

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

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
D. Analyze changes in various contexts.	1. Recognize and create patterns of change from everyday life using numerical or pictorial representations.	126, 131, 136, 156	
	2. Generalize patterns of change and recognize the same general patterns presented in different representations.	The opportunity to address this objective is available on the following pages: 126, 131, 136, 156	

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

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
A. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.	1. Identify, describe, and classify two-dimensional shapes and three-dimensional figures by their properties.	10, 22, 35, 102, 110, 115, 138, 140, 153	
	2. Recognize and describe properties of regular polygons having up to ten sides.	22, 35, 102, 110, 115, 138, 140, 153	
	3. Identify faces, edges, and bases on three-dimensional objects.	10, 60	
B. Specify locations and describe spatial relationships using coordinate geometry and other representational systems.	1. Recognize perpendicular and parallel lines.	85	
C. Apply transformations and use symmetry to analyze mathematical situations.	1. Identify line of symmetry in simple geometric figures.	The opportunity to address this objective is available on the following pages: 35, 115, 138, 153	

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

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
D. Use visualization, spatial reasoning, and geometric modeling to solve problems.	1. Understand and compute the perimeter of regular polygons.	3, 23, 43, 63, 83, 127, 141, 175	
	2. Identify and explain circumference, radius, and diameter.	No specific lesson addresses this objective.	

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

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
A. Understand measurable attributes of objects and the units, systems, and process of measurement.	1. Understand properties (e.g., length, area, weight, volume) and select the appropriate type of unit for measuring each using both U.S. customary and metric systems.	5, 30, 125	
	2. Select and use appropriate units and tools to measure according to the degree of accuracy required in a particular problem-solving situation.	2, 30, 158	
	3. Solve problems involving linear measurement, weight, and capacity (e.g., measuring to the nearest sixteenth of an inch or nearest millimeter; using ounces, milliliters, or pounds and kilograms) to the appropriate degree of accuracy.	8, 32, 80, 88, 170	
	4. Perform one-step conversions within a system of measurement (e.g., inches to feet, centimeters to meters).	2, 32, 38, 73, 80, 81, 88, 91, 96, 101, 106, 107, 116, 121, 137, 143	

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

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
B. Apply appropriate techniques, tools, and formulas to determine measurements.	1. Solve measurement problems using appropriate tools involving length, perimeter, weight, capacity, time, and temperature.	2, 32, 55, 80, 88, 98, 105, 108, 130, 170	
	2. Select and use strategies to estimate measurements including length, distance, capacity, and time.	The opportunity to address this objective is available on the following pages: 2, 32, 55, 80, 88, 98, 105, 108, 130, 170	
	3. Apply strategies and use tools for estimating and measuring the perimeter of regular and irregular shapes.	The opportunity to address this objective is available on the following pages: 127, 141, 175	

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

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.	1. Construct, read, analyze, and interpret tables, charts, graphs, and data plots.	5, 37, 66, 71, 86, 111, 126, 131, 136, 156, 161, 166	
	2. Construct, interpret, and analyze data from graphical representations and draw simple conclusions using bar graphs, line graphs, circle graphs, frequency tables, and Venn diagrams.	The opportunity to address this objective is available on the following pages: 5, 37, 66, 71, 86, 111, 126, 131, 136, 156, 161, 166	
	3. Display, analyze, compare, and interpret different data sets, including data sets of different sizes.	126, 131, 161	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.	4. Organize and display single-variable data in appropriate graphs and representations.	156, 166, 176	
	5. Organize, read, and display numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including correct titles, labels, and intervals or categories including: <ul style="list-style-type: none">• frequency tables• stem and leaf plots• bar, line, and circle graphs• Venn diagrams• pictorial displays• charts and tables	37, 66, 71, 86, 111, 126, 131, 136, 156, 161, 166	
	6. Formulate questions and identify data to be collected to correctly answer a question.	The opportunity to address this objective is available on the following pages: 37, 66, 71, 86, 111, 126, 131, 136, 156, 161, 166	

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

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
B. Select and use appropriate statistical methods to analyze data.	1. Organize and display single-variable data in appropriate graphs and representations and determine which types of graphs are appropriate for various data sets.	156, 166, 176	
	2. Use fractions and percentages to compare data sets of different sizes.	The opportunity to address this objective is available on the following pages: 126, 131, 161	
	3. Correctly rank the values of a numerical data set containing simple fractions and decimals, identify maximum and minimum data values, and calculate the range for a data set.	The opportunity to address this objective is available on the following pages: 126, 131, 156, 161, 166	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard *
C. Develop and evaluate inferences and predictions that are based on data.	1. Make and justify valid inferences, predictions, and arguments based on statistical analysis.	The opportunity to address this objective is available on the following pages: 126, 131, 161, 166	
	2. Compare a given prediction with the results of an investigation.	The opportunity to address this objective is available on the following pages: 126, 131, 161, 166	
	3. Use counting strategies to determine all the possible outcomes of a particular familiar event.	No specific lesson addresses this objective.	
	4. Find all possible outcome sets involving four or more sets of objects.	No specific lesson addresses this objective.	

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C. Develop and evaluate inferences and predictions that are based on data.	5. Evaluate the reasonableness of inferences that are based on data in the context of the original solution.	The opportunity to address this objective is available on the following pages: 126, 131, 161, 166	
	6. Identify the method used to make an inference and/or a prediction on a given data set and solve similar problems.	No specific lesson addresses this objective.	
	7. Determine the accuracy of a prediction or an inference based on the accuracy of the data in a given data set.	No specific lesson addresses this objective.	
	8. List all possible outcomes of simple events.	No specific lesson addresses this objective.	

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D. Understand and apply basic concepts of probability.	1. Determine probabilities through experiments and/or simulations and compare the results with mathematical expressions.	No specific lesson addresses this objective.	
	2. Make predictions from the results of student-generated experiments of single events.	No specific lesson addresses this objective.	
	3. Identify simple experiments where the probabilities of all outcomes are equal.	No specific lesson addresses this objective.	

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D. Understand and apply basic concepts of probability.	4. Describe and predict the results of a probability experiment.	No specific lesson addresses this objective.	
	5. Use fractions to describe the results of an experiment.	No specific lesson addresses this objective.	
	6. Use probability to generalize from a simple pattern or set of examples and justify why the generalization is reasonable.	No specific lesson addresses this objective.	

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