Math Teachers Press, Inc.

Arizona Mathematics Standards Correlated to
Moving with Math Foundations Grade 4

	B1 *Number Sense, Addition & Subtraction* Student Book Skill Builders (SB)	B2 *Multiplication & Division Basic Facts* Student Book Skill Builders (SB)	B3 *Multiplication & Division - Problem Solving* Student Book Skill Builders (SB)	B4 *Fractions, Decimals, Geometry, Measurement* Student Book Skill Builders (SB)
STRAND 1: NUMBER AND OPERATIONS				
Concept 1: Number sense				
PO.1 Express whole numbers, fractions, decimals, and percents using and connecting multiple representations.	3, 4, 15 **SB:** 4-1			
PO.2 Compose and decompose whole numbers using factors and multiples.		16	37, 38 **SB:** 25-15, 25-28	
PO.3 Express fractions as fair sharing, parts of a whole, parts of a set, and locations on a real number line.				2-10 **SB:** 30-1 to 30-3, 31-1, 31-2
PO.4 Compare and order decimals to hundredths.				28 **SB:** 47-18
PO.5 Use simple ratios to describe problems in context.				

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Concept 2: Numerical Operations				
PO.1 Add and subtract decimals through hundredths including money to $1000.00 and fractions with like denominators.	58 **SB:** 47-2, 47-3			17 **SB:** 47-19
PO.2 Use multiple strategies to multiply whole numbers				
• two-digit by two-digit and			31-33 **SB:** 23-1, 23-2	
• multi-digit by one-digit.		57 **SB:** 21-1	26-29 **SB:** 21-8, 21-9, 21-13	
PO.3 Demonstrate fluency of multiplication and division facts through 12.		20, 39, 40 **SB:** 20-8, 25-13	7, 13, 65 **SB:** 20-24, 20-30, 20-34, 25-23, 25-	
PO.4 Use multiple strategies to divide whole numbers.		24, 27, 28 **SB:** 25-1 to 25-4	57, 59, 61 **SB:** 25-19, 26-9, 26-10	
PO.5 Apply associative and distributive properties to solve multiplication and division problems.		54 **SB:** 20-17	16, 22 **SB:** 20-32, 23-4	
PO.6 Apply order of operations with whole numbers.				
Concept 3: Estimation				

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PO.1	Use benchmarks as meaningful points of comparison for whole numbers, decimals, and fractions.	26 **SB:** 6-3			
PO.2	Make estimates appropriate to a given situation or computation with whole numbers and fractions.	60, 61 **SB:** 10-14, 15-16	59 **SB:** 21-2	23, 24 **SB:** 21-6, 21-7, 26-13	
	STRAND 2: DATA ANALYSIS, PROBABILITY, AND DISCRETE MATHEMATICS				
	Concept 1: Data Analysis (Statistics)				
PO.1	Collect, record, organize, and display data using double bar graphs, single line graphs, or circle graphs.				
PO.2	Formulate and answer questions by interpreting and analyzing displays of data, including double bar graphs, single line graphs, or circle graphs.	68-70 **SB:** 50-1, 50-3			
PO.3	Use median, mode, and range to describe the distribution of a given data set.			68 **SB:** 50-9	
PO.4	Compare two sets of related data.				
	Concept 2: Probability				

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PO.1 Describe elements of theoretical probability by listing or drawing all possible outcomes of a given event and predicting the outcome using word and number benchmarks.				71
Concept 3: Systematic Listing and Counting				
PO.1 Construct tree diagrams to solve problems in context by				
• representing all possibilities for a variety of counting problems,				
• explaining how its properties relate to the problem,				
• representing the same counting problem in multiple ways, and				
• drawing conclusions.				
PO.2 Justify that all possibilities have been enumerated without duplication.				
Concept 4: Vertex-Edge Graphs				
PO.1 Demonstrate the connection between map coloring and vertex coloring.				
PO.2 Construct vertex-edge graphs to represent concrete situations and identify paths and circuits.				
PO.3 Solve conflict problems by constructing and coloring vertex-edge graphs.				

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STRAND 3: PATTERNS, ALGEBRA, AND FUNCTIONS				
Concept 1: Patterns				
PO.1 Recognize, describe, create, extend, and find missing terms in a numerical sequence involving whole numbers using all four basic operations.	10, 11, 14 **SB:** 3-2			
PO.2 Explain the rule for a given numerical sequence, verify that the rule works, and use the rule to make predictions.	10 **SB:** 3-2	43	**SB:** 20-31	
Concept 2: Functions and Relationships				
Moved to grade 2				
Concept 3: Algebraic Representations				
PO.1 Use a symbol to represent an unknown quantity in a simple algebraic expression involving all operations.	38, 52, 53, 65 **SB:** 15-18, 19-2	69, 77 **SB:** 24-1	39, 40 **SB:** 24-3	
PO.2 Create and solve one-step equations that can be solved using addition, subtraction, multiplication, and division of whole numbers.	38 **SB:** 14-2	19 **SB:** 20-18	40 **SB:** 24-3	
Concept 4: Analysis of Change				

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PO.1	Identify the change in a quantity over time and make simple predictions.				
	STRAND 4: GEOMETRY AND MEASUREMENT				
	Concept 1: Geometric Properties				
PO.1	Draw and describe the relationships between points, lines, line segments, rays, and angles including parallelism and perpendicularity.				29-33
PO.2	Justify which objects in a collection match a given geometric description.				
PO.3	Describe and classify triangles by angles and sides.				
PO.4	Recognize which attributes (such as shape or area) change and which do not change when 2-dimensional figures are cut up or rearranged.				40
PO.5	Recognize and draw congruent figures, and match them in a given collection.				44
PO.6	Draw right, acute, obtuse, and straight angles and identify these angles in other geometric figures.				31
PO.7	Recognize the relationship between a 3-dimensional figure and its corresponding net(s).				48
	Concept 2: Transformation of Shapes				

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	Concept 3: Coordinate Geometry				
PO.1	Name, locate, and graph points in the first quadrant of the coordinate plane using ordered pairs.	12, 13 **SB:** 48-2, 48-3			
PO.2	Plot line segments in the first quadrant of the coordinate plane using a set of ordered pairs in a table.	13 **SB:** 48-3			
PO.3	Construct geometric figures with vertices at points on the coordinate plane.				
	Concept 4: Measurement				
PO.1	Compute elapsed time to the minute.				51
PO.2	Apply measurement skills to measure length, mass, and capacity using metric units.				62-64
PO.3	Solve problems involving conversions within the same measurement system.				59-61
PO.4	Solve problems involving perimeter of 2-dimensional figures and areas of rectangles.				65
PO.5	Describe the change in perimeter or area when one attribute (length or width) of a rectangle changes.				67
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	STRAND 5: STRUCTURE AND LOGIC				
	Concept 1: Algorithms and Algorithmic Thinking				

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PO.1 Analyze common algorithms for computing (adding, subtracting, multiplying, and dividing) with whole numbers using the associative, commutative, and distributive properties.	27, 28 SB: 9-1, 9-2	54 SB: 20-6, 20-17	6, 16 SB: 20-23, 20-32	
Concept 2: Logic, Reasoning, Problem Solving, and Proof				
PO.1 Analyze a problem situation to determine the question(s) to be answered.	38, 52, 53	34	25, 51	
PO.2 Identify relevant, missing, and extraneous information related to the solution to a problem.	54	34, 38	25, 51	
PO.3 Select and use one or more strategies to efficiently solve the problem and justify the selection.	67	33, 36, 37	51, 76	
PO.4 Determine whether a problem to be solved is similar to previously solved problems and identify possible strategies for solving the problem.	33	48, 60	74	
PO.5 Represent a problem situation using any combination of words, numbers, pictures, physical objects, or symbols.	38	33, 37	61	
PO.6 Summarize mathematical information, explain reasoning, and draw conclusions.	Sum-It-Up througout	Sum-It-Up througout	Sum-It-Up througout	

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PO.7 Analyze and evaluate whether a solution is reasonable, is mathematically correct, and answers the question.	63	72 (T.G.)	24, 34	
PO.8 Make and test conjectures based on data (or information) collected from explorations and experiments.	66, 77 **SB:** 3-1	7, 46	77	