Chapter 12. Curriculum for Grade 5

Part A. Correlation of Objectives with Recommended Textbooks

The following pages show how resources from *Investigations in Number, Data, and Space* ("Investigations") and Scott Foresman Addison Wesley ("SFAW") align with the TEAM-Math and Alabama Course of Study objectives.

Abbreviations for units in *Investigations in Number, Data, and Space* follow:

- BNA = "Between Never and Always"
- BONYK = "Building on Numbers You Know"
- CC = "Containers and Cubes"
- KCA = "Kids, Cats, and Ads"
- MT = "Mathematical Thinking at Grade 5"
- MB = "Measurement Benchmarks"
- NTP= "Name That Portion"
- PC = "Patterns of Change"
- PP = "Picturing Polygons"

NUMBER STRAND – Grade 5

Course of Study	TEAM-Math	Investigations	SFAW
1. Demonstrate number sense by comparing, ordering, rounding, and expanding whole numbers through millions and decimals to thousandths. a. Relating percents to parts out of 100 by using equivalent fractions and decimals b. Determining the value of a digit to thousandths 5. Identify numbers less than zero by extending the number line.	N1. Compare, order…		
	a. Compare, order, round, and expand whole numbers through millions and decimals to the thousandths	**KCA** TMM:The Digits Game,1:2-3, 3:1 **PC** TMM (pp. 93-95) **BONYK** 1:2; **NTP** 3:3-6 **MB** 1:4 , 7-8; **MT** 2:1-5, 3:1-5, 4:2-6	1:1,2,4
	b. Determine the value of a whole number to the millions and decimals to the thousandths	**KCA** TMM:The Digits Game, 2:1, 3:1 **PC** 2:2-4, 3:3-6; **BONYK** 4:1- 2 **NTP** 1:1, 3:1-7**,** 4:2 **BNA** 1:1-2 **,** TMM: Nearest Answer Number Line **MB**1:4-6, 2:1-2; **MT** 4:1-6	1:3
	c. Determine equivalency between fractions, decimals, and percents	**KCA** 3:1-4, 4:3, 5:3-5 **BONYK** 2:3 **NTP** 1:1-7, 3:1-8, TMM (pp. 124-125) **BNA** 1:1-4	7:7,8 11:8
	d. Identify numbers less than zero on a number line and in real life situations	**PC** TMM (p. 95) **MT** 4:1 (Teacher note p. 79) **PP** 1:4, 2:4-5	9:14 12:5

Course of Study	TEAM-Math	Investigations	SFAW
4. Determine the sum and difference of fractions with common and uncommon denominators. a. Changing mixed numbers to improper fractions b. Solving problems involving addition and subtraction of fractions with common and uncommon denominators c. Estimating sums and differences of fractions	N3. Fractions		
	a. Adding, subtracting, and multiplying fractions with common and uncommon denominators	**KCA** 1:1-4, 2:1-3, 3:1-4 ,4:1-3, 5:3-5 **PC** TMM (p. 94)	8:1,2,4,5,7,8
	b. Changing mixed numbers to improper fractions and improper fractions to mixed numbers	**NTP** 2:6-8, 3:7	7:3
	c. Simplifying fractions, making equivalent fractions	**NTP** 1:1-6, 2:4-8	7:7,8,10
	d. Identify and use order of operation rules		3:13
d. Using least common multiples	N4. Number Theory		
	a. Find and use the least common multiple (LCM) by listing multiples of the numbers involved and greatest common factor (GCF) by listing factors of the numbers involved	**NTP** 2:4-8, 3:8	8:6
	b. Determine divisibility of numbers 2, 3, 4, 5, 6, 9, and 10	**BONYK** 1:3-5 **BNA** 1:7	
	c. Introduce prime and composite numbers		3:11
3. Solve word problems that involve decimals, fractions, or money. a. Solving word problems involving elapsed time	N5. Problem solving • Solve problems using basic operations on whole numbers, fractions, and decimals • Solve problems by estimating sums, differences, products, and quotients	**MB** 3:1-3 **NTP** 1:1,7 2:1-3, 7-8 3:7 **BONYK** 1:2-8, 2:1-7, 3:1-10, 4:1-2, 5:1-8	1-12,13 2:7,8,9,10,11,16 3-5,9,12 4-10,11,12 5-13; 6-12 7-6,16 8-1,2,4,5,7,8,9, 15,16 9-16; 10-11 11-11
	6. Convert fractions to decimals and percents	**NTP**1:1-7, 2:1-9, 3:1, 3-8, 4:1-7	11-8
	7. Use ratios and proportions in real life applications such as scale drawings: • Equivalent fractions • Unit rate • Factor of change	**PC** 1:1-4, 2:1-5, 3:1-7	11-6

ALGEBRA STRAND – Grade 5

Course of Study	TEAM-Math	Investigations	SFAWy
6. Demonstrate the commutative, associative, and identity properties of addition and multiplication of whole numbers.	A1. Demonstrate the use of commutative, distributive, associative, and identity properties of addition and multiplication	**MT** 2:1-4, 3:2-5 **BONYK** 1:6-7,2:5-6, 3:1-3 **MB** TMM:Estimation and Number Sense	1-7 2-1
7. Write a number sentence for a problem expressed in words.	A2. Write a number sentence or sentences for a problem expressed in words involving multiple steps	**MT** 2:1, 3:2-5, 4:1 **NTP** TMM:Seeing Numbers **BONYK** 1:1, 3-4, 6-8, 2:1-2, 5-6, 3:1-10, 5:4-7	12-4
	A3. Realize a variable is an unknown quantity represented by a letter or a symbol	**PC** 1:3-4 **BONYK** 1:1-8, 2:1-3, 5-6,3:4-10, 4:1-2, 5:1-8	12:1
	A4. Solve simple algebraic equations	**PC** 1:3-4 **BONYK** 1:1-8, 2:1-3, 5-6, 3:4-10, 4:1-2, 5:1-8 **NTP** TMM, 1:3-4,2:3,6	12:2,3
	A5. Express mathematical relationships using equations	**PC** 1:3-4 (pp. 14-25) **BONYK** 1:1-8, 2:1-3, 5-6, 3:4-10, 4:1-2,5:1-8	12:4
	A6. Find the output of functions (number machines)	**BONYK** 1:1-8, 2:1-3, 5- 3:4-10, 4:1-2, 5:1-8	2:14

GEOMETRY STRAND – Grade 5

Course of Study	TEAM-Math	Investigations	SFAW
8. Identify regular polygons and congruent polygons. a. Identifying angles as right, obtuse, acute, or straight b. Classifying triangles as equilateral, isosceles, or scalene c. Identifying figures that have rotational symmetry 8. Identify regular polygons and congruent polygons. a. Identifying angles as right, obtuse, acute, or straight b. Classifying triangles as equilateral, isosceles, or scalene c. Identifying figures that have rotational symmetry 10. Identify the center, radius, and diameter of a circle.	G1. Identify figures that have a rotational symmetry	**PP** 2:1-5	6:2,4,5,9,11,12
	G2. Identify and explore geometric shapes in terms of their angles and sides:		6:3 (pp. 336-337)
	a. Identify angles as right, obtuse, acute or straight	**BONYK** TMM (pp. 74, 122,149-150) **PP** 2:1-3, 6-9,3:1-3	
	b. Classify triangles as equilateral, isosceles, or scalene	**PP** 2:1-3, 6-7; 3:1-3	
	c. Components of a circle:center, radius, diameter, and introduce circumference	**NTP** 1:7, Page 31, 2:1-2,3:8, 4:2-7	
a. Predicting the results of a flip (reflection), turn (rotation), or slide (translation)	G3. Use either transformations (slides, flips, or turns) or measurements to determine the congruence of angles, line segments, and polygons	**PP** 2:1-5	6-10

Course of Study	TEAM-Math	Investigations	SFAW
9. Identify components of the Cartesian plane, including the x-axis, y-axis, origin, and quadrants	G4. Identify the x-axis, y-axis, origin, and quadrants on the Cartesian Plane	**PP** 1:3-4, 2:4-7, 9, 3:1-2, 5-6	3-14 12-9
	G5. Locate points on the coordinate grid using ordered pairs	**PP** 1:3-4, 2:4-7, 9, 3:1-2, 5-6	3-14 12-9
	G6. Identify the nets (combination of two-dimensional shapes to make three-dimensional shapes) for three-dimensional shapes	**KCA** TMM:(pp. 108-109)	Ch 10 Activity pp. 592i 10-1,2
	G7. Recognize geometric ideas and relationships and apply them to other disciplines and to problems that arise in the classroom or in everyday life	**CC** 4:1-9	

Measurement Strand – Grade 5

Course of Study	TEAM-Math	Investigations	SFAW
	M1. Use appropriate units and tools of measurement in customary and metric units	**MB** 1:1,3-7, 2:3-4,3:1	
13. Convert a larger unit of measurement to a smaller unit of measurement within the same system (customary or metric).	M2. Convert a larger unit of measurement into a smaller unit of measurement and vice versa (length, capacity, time, weight)	**MB** 1:4, 7-8,2:1-4, 7-8, 3:2	9-1,4 10-6
11. Estimate perimeter and area of irregular shapes using unit squares and grid paper. 12. Calculate the perimeter of rectangles from measured dimensions.	M3. Develop and use formulas to find and/or estimate the perimeter of all shapes and area of parallelograms	**KCA** TMM:(pp. 108-109) **MT**1:1-3 **PP**3:4-6 **CC** 2:3-5	9-5,7
11. Estimate perimeter and area of irregular shapes using unit squares and grid paper. 12. Calculate the perimeter of rectangles from measured dimensions.	M4. Calculate the area and perimeter of measured dimensions	**KCA** TMM:(pp. 108-109) **PP** 3:4-6 **CC** 2:3-5	9-5

DATA ANALYSIS AND PROBABILITY STRAND – Grade 5

Course of Study	TEAM-Math	Investigations	SFAW
14. Analyze data collected from a survey or experiment to distinguish between what the data show and what might account for the results. • Evaluating different representations of the same data to determine how well each representation shows important aspects of the data	D1. Collect data through investigating and be able to organize and demonstrate the data in a variety of ways:charts, tables, graphs, and grids	**KCA** 1:1, 2:2,5:3-5 **PC** 1:1-4, 2:3-5, 3:1-6, TMM:Nearest Answer Number Line Problems, TMM:Graph Stories	5-1,2,3,4,5
• Using given measures of central tendency (mean, median, and mode) to analyze data	D2. Analyze data using measures of central tendency:mean, median, mode, and range	**KCA** 1:1-4, 2:1 **BNA** 1:3-6	5-6
15. Use common fractions to represent the probability of events that are neither certain nor impossible.	D3. Apply and understand concepts of probability using experiments and predictions	**BONYK** TMM (pp. 147-148) **BNA** 1:1-2,5**,** 2:4-5	5-10,11,12