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DISTRICT OF COLUMBIA LEARNING STANDARDS CORRELATED TO *MOVING WITH MATH® INTERMEDIATE/MIDDLE (IM) GRADE 5*

		IM1 <i>Number, Reasoning & Data</i> Student Book Skill Builders (SB)	IM2 <i>Fractions, Decimals & Percent</i> Student Book Skill Builders (SB)	IM3 <i>Geometry, Measurement, Graphing</i> Student Book Skill Builders (SB)
	NUMBER SENSE AND OPERATIONS			
	Number Sense			
5.NSO-N.1.	Estimate, round, and manipulate very large (e.g., billions) and very small (e.g., thousandths) numbers; demonstrate an understanding of place value to billions and thousandths.	2-12 SB: 1-1 to 1-3, 2-1, 2-2, 3-1 to 3-4	45-47 SB: 23-1, 23-3, 23-4	SB: 1-1, 2-1, 3-1
5.NSO-N.2.	Represent and compare very large (billions) and very small (thousandths) positive numbers in various forms, such as expanded notation without exponents, e.g., $9,724 = (9 \times 1,000) + (7 \times 100) + (2 \times 10) + 4$.	3 SB: 1-4, 1-5	43, 44	SB: 5-1
5.NSO-N.3.	Find and position integers, fractions, mixed numbers, and decimals (both positive and negative) on the number line.	64-69 SB: 59-2, 59-3	5, 43 SB: 11-4, 21-2, 23-2	SB: 11-1, 14-1, 21-1
5.NSO-N.4.	Compare and order integers (including negative integers) and positive fractions, mixed numbers, decimals, and percents.	66 SB: 2-3, 2-4	10, 11, 49-51 SB: 13-2, 13-5, 14-1	SB: 13-1, 14-1, 21-1
5.NSO-N.5.	Apply the number theory concepts of common factor, common multiple, and divisibility rules for 2, 3, 5, and 10 to the solution of problems. Demonstrate an understanding of the concepts of prime and composite numbers.	13-15, 18 SB: 4-1, 4-2	8, 11 SB: 4-2, 4-3, 12-2	
5.NSO-N.6.	Know the set of prime numbers to 100.	13-15 SB: 4-1, 4-2	SB: 4-2	SB: 4-1

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5.NSO-N.7.	Determine the prime factors of all numbers through 100, and write the numbers as the product of their prime factors by using exponents to show multiples of a factor (e.g., $24 = 2 \times 2 \times 3 = 2^3 \times 3$).	13-15, 18 SB: 4-1, 4-2, 4-5	SB: 4-3	SB: 4-1
	Fractions			
5.NSO-F.8.	Explain different interpretations of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection, as division of whole numbers by whole numbers, and as locations on the number line.		2-7 SB: 11-2 to 11-4	SB: 11-1, 12-1, 13-1, 14-1, 21-1
5.NSO-F.9.	Interpret percents as parts out of 100, use % notation, and express a part of a whole as a percentage.		67-69 SB: 29-1 to 29-3, 30-1 to 30-4	SB: 29-1, 30-1
5.NSO-F.10.	Identify and determine common equivalent fractions, mixed numbers (with denominators 2, 4, 5, and 10), decimals, and percents, and explain why they represent the same value.		6, 7 SB: 12-1, 12-3 to 12-10	SB: 21-1, 25-1, 30-1
F.NSO-F.11.	Write improper fractions as mixed numbers, and know that a mixed number represents the number of "wholes" and the part of a whole remaining (e.g., $5/4 = 1 + 1/4 = 1 \frac{1}{4}$).		12, 13 SB: 14-2	SB: 14-1, 16-1, 18-1, 21-1, 25-1
	Computation and Operations			
5.NSO-C.12.	Add with negative integers, subtract positive integers from negative integers, and verify the reasonableness of the results.	68, 69 SB: 59-5 to 59-7		SB: 59-2
5.NSO-C.13.	Add and subtract fractions (including mixed numbers) with like and unlike denominators (of 2, 3, 4, 5 and 10), and express answers in the simplest form.		15-17, 20-23 SB: 15-1 to 15-3, 16-1 to 16-4, 17-1 to 17-4, 18-1, 18-2	SB: 17-1, 18-1

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5.NSO-C.14.	Add and subtract positive decimals.		54 SB: 26-2	
5.NSO-C.15.	Solve problems involving multiplication and division of any whole number.	32-39, 41-45 SB: 8-2 to 8-7, 9-1 to 9-5, 10-1 to 10-3, 10-5 to 10-7	SB: 8-1, 9-1, 10-1, 10-2	SB: 5-1, 8-1, 9-1, 10-1
5.NSO-C.16.	Demonstrate proficiency with division, including division with positive decimals and long division with multi-digit divisors.	44-47 SB: 10-1 to 10-3	61-63 SB: 28-1 to 28-6	SB: 9-1, 10-1, 20-1, 28-1
5.NSO-C.17.	Show an understanding of multiplication and division of fractions; multiply positive fractions with whole numbers.		28, 29, 33, 34 SB: 19-1 to 19-5, 20-1 to 20-5	SB: 18-1, 19-1, 20-1
5.NSO-C.18.	Simplify fractions in cases when both the numerator and the denominator have 2, 3, 4, 5, or 10 as a common factor. Show that two fractions are not equivalent by reducing to simpler forms or by finding a common denominator (e.g., show how $10/15 = 14/21$).		6-8 SB: 12-1 to 12-10	SB: 12-1
5.NSO-C.19.	Multiply positive decimals with whole numbers.		57 SB: 27-2, 27-5	SB: 27-1
5.NSO-C.20.	Demonstrate an understanding of and compute (positive integer) powers of 10 (e.g., 10^2 , 10^5); compute examples as repeated multiplication.	SB: 4-4		
5.NSO-C.21.	Know integer subtraction is the inverse of integer addition; use the number line to model addition and subtraction of integers and add and subtract integers, with the exception of subtracting negative integers.	23-26 SB: 6-1 to 6-3, 7-1 to 7-4		SB: 59-2

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5.NSO-C.22.	Demonstrate an understanding of how parentheses affect expressions involving addition, subtraction, and multiplication, and use that understanding to solve problems - e.g., $3 \times (4 + 2) = 3 \times 6$.	20-22 SB: 5-2 to 5-8	SB: 5-2	SB: 5-1
	Estimation			
5.NSO-E..23	Estimate sums and differences of whole numbers, positive fractions, and positive decimals. Estimate products of whole numbers and products of positive decimals with whole numbers. Use a variety of strategies and judge reasonableness of answers.	27, 28, 48, 49, 51 SB: 49-1, 49-2, 50-1 to 50-3	24-27, 65 SB: 13-3, 18-3, 18-4, 45-2 to 45-6	SB: 49-1, 50-1
	PATTERNS, RELATIONS, AND ALGEBRA			
5.PRA.1.	Analyze and determine the rules for extending symbolic, arithmetic, and geometric patterns and progressions (e.g., ABCC...; 1, 5, 9, 13,...; 3, 9, 27...).	73-75 SB: 44-1 to 44-3	SB: 44-1	21, 22 SB: 44-1 to 44-6
5.PRA.2.	Replace variables with given values, evaluate, and simplify.	71, 72 SB: 56-2 to 56-4	21	SB: 56-1,56-2
5.PRA.3.	Use the properties of equality to solve problems with whole numbers (e.g., if $x + 7 = 13$, then $x = 13 - 7$, therefore $x = 6$; if $3 \times \underline{\quad} = 15$, then $1/3 \times 3 \times \underline{\quad} = 1/3 \times 15$, therefore $\underline{\quad} = 5$).	71, 72 SB: 56-2 to 56-4		SB: 56-2

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5.PRA.4.	Represent real situations and mathematical relationships with concrete models, tables, graphs, and rules in words and with symbols (e.g., input-output tables).	76-78 SB: 44-4, 44-5	6, 63 SB: 28-3, 28-7, 48-1 to 48-3, 53-3	68-76 SB: 44-5, 46-1, 47-1 to 47-6, 48-1 to 48-5
5.PRA.5.	Interpret and evaluate mathematical expressions that use parentheses; use parentheses to indicate which operation to perform first when writing expressions containing more than two terms and different operations.	20-22 SB: 5-2 to 5-8	SB: 5-2	
5.PRA.6.	Solve problems involving proportional relationships using concrete models, tables, graphs, and paper-pencil methods.		4-6, 9 SB: 12-4, 12-5, 12-8, 12-9	56-61 SB: 52-1 to 52-5
5.PRA.7.	Interpret graphs that represent the relationship between two variables in everyday situations.	62, 78 SB: 44-4		69-76 SB: 6-1, 47-1 to 47-6, 48-1 to 48-5
	GEOMETRY			
5.G.1.	Identify polygons based on their properties, including types of interior angles, perpendicular or parallel sides, and congruence of sides (e.g., squares, rectangles, rhombuses, parallelograms, and trapezoids; isosceles, equilateral, and right triangles).			7-9 SB: 32-4, 34-1 to 34-5, 34-10

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5.G.2.	Identify, describe, and compare special types of three-dimensional shapes (e.g., cubes, prisms, spheres, cones, and pyramids) based on their properties, such as edges and faces.			11, 12 SB: 34-6 to 34-8
5.G.3.	Identify relationships among points, lines, and planes (e.g., intersecting, parallel, perpendicular).			2-4 SB: 32-1 to 32-3, 32-5
5.G.4.	Identify and describe types of symmetry, including line and rotational.			17 SB: 60-1
5.G.5.	Determine if two triangles or two quadrilaterals are congruent by measuring sides or a combination of sides and angles.			19 SB: 60-3, 60-6
5.G.6.	Predict, describe, and perform transformations on two-dimensional shapes (e.g., translations, rotations, and reflections).			20 SB: 60-4, 60-5
5.G.7.	Graph points and identify coordinates of points on the Cartesian coordinate plane in the first two quadrants.	77, 78 SB: 43-1, 44-4	SB: 43-1	72-74 SB: 43-1, 44-5
	MEASUREMENT			
5.M.1.	Apply the concepts of perimeter and area to the solution of problems involving triangles and rectangles. Apply formulas where appropriate.			40-42, 47, Master 20, Master 21 SB: 38-1 to 38-4, 38-6 to 38-11
5.M.2.	Apply formulas for the area of triangles, rectangles, and parallelograms; recognize that shapes with the same number of sides but different appearances can have the same area.			45-50, Master 21 SB: 38-5 to 38-7, 38-9 to 38-11
5.M.3.	Solve problems involving proportional relationships and units of measurement.	76, 78		31, 33-38, 56-61 SB: 36-6, 40-2, 40-3, 41-1, 41-2, 42-1, 42-2, 52-1 to 52-5

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5.M.4.	Identify, measure, and describe circles and the relationships of the radius, diameter, circumference, and area (e.g., $d = 2r$), and use these concepts to solve problems.			13, 14 SB: 35-1, 35-2
5.M.5.	Find volumes and surface areas of rectangular prisms.			52-54 SB: 39-1 to 39-5
5.M.6.	Know that angles on a straight line add up to 180° , interior angles of a triangle add up to 180° ; angles surrounding a point add up to 360° , and interior angles of a quadrilateral add up to 360° ; use these properties to solve			23-27 SB: 54-1, 55-1 to 55-3
5.M.7.	Identify, measure, describe, classify, and draw various angles and triangles, given sides and the angle between them or given two angles and the side between them (e.g., draw a triangle with one right angle and two sides congruent).			5, 6, 8 SB: 33-1, 34-3, 37-1 to 37-3
	DATA ANALYSIS, STATISTICS, AND PROBABILITY			
5.DASP.1.	Define and apply the concepts of mean to solve problems.	59 SB: 46-1, 46-2, 46-4		65 SB: 46-1
5.DASP.2.	Construct, draw conclusions, and make predictions from various representations of data sets, including tables, line graphs, line plots, circle graphs, and bar graphs (where symbols or scales represent multiple units).	59-62 SB: 46-5	SB: 48-1 to 48-3	68-76 SB: 47-1 to 47-3, 47-5, 47-6, 48-1 to 48-5
5.DASP.3.	Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a die) and test the predictions.		73-75 SB: 57-1 to 57-4	SB: 57-1