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DISTRICT OF COLUMBIA EARNING STANDARDS CORRELATED TO
MOVING WITH MATH® FOUNDATIONS LEVEL B GRADE4

	B1 Number Sense, Addition, & Subtraction Student Book Skill Builders (SB)	B2 Multiplication & Division 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)
NUMBER SENSE AND OPERATIONS				
Number Sense				
4.NSO-N.1. Exhibit an understanding of the base 10 number system by reading, modeling, and writing whole numbers to at least 100,000; demonstrating an understanding of the values of the digits; and comparing and ordering the numbers.	3, 14, 16-21 **SB:** 1-1, 4-1, 6-2, 6-3			
4.NSO-N.2. Represent, compare, and order numbers to 100,000 using various forms, including expanded notation.	4, 6, 15, 16, 17, 19, 20 **SB:** 1-2, 2-1, 2-3, 2-4, 4-2			
4.NSO-N.3. Round whole numbers to 100,000 to the nearest 10, 100, 1,000, 10,000 and 100,000.	22-26 **SB:** 7-1, 7-2, 8-1 to 8-3			
4.NSO-N.4. Recognize sets to which a number may belong (odds, evens, multiples and factors of given numbers, and squares), and use these in the solution of problems.	8, 9 **SB:** 3-1, 3-2			

Standard	Description				
4.NSO-N.5.	Read and interpret whole numbers and decimals up to two decimal places; relate to money and place-value decomposition.	20			23-25 **SB:** 47-12, 47-13
4.NSO-N.6.	Determine if a whole number is a multiple of a given one-digit whole number and if a one-digit number is a factor of a given whole number.		16	37	
4.NSO-N.7.	Find all factors of a whole number up to 50; know that numbers such as 2, 3, 5, 7, and 11 do not have any factors except one and itself and that such numbers are called prime numbers.			37, 38 **SB:** 25-15, 25-16	
4.NSO-N.8.	Use concepts of negative numbers (e.g., on a number line, in counting, in temperature, in owing money).	**SB:** 42-1			54 **SB:** 42-4
	Fractions				
4.NSO-F.9.	Demonstrate an understanding of fractions as parts of unit wholes, as parts of a collection, and as locations on a number line.				2-11 **SB:** 30-1 to 30-6, 31-1, 31-2
4.NSO-F.10.	Know the relationships among halves, fourths, eights and among thirds, sixths, and twelfths; compare and order such fractions.				13-15 **SB:** 32-1, 32-3, 32-4
4.NSO-N.11.	Recognize, name, and generate equivalent forms of common decimals (0.5, 0.25, 0.2, 0.1) and fractions (halves, quarters, fifths, and tenths) and explain why they are equivalent.				23, 24, 26, 27 **SB:** 47-11, 47-12
4.NSO-F.12.	Select, use, and explain models to relate common fractions and mixed numbers (e.g., 1/2, 1/3, 1/4, 1/5, 1/8, 1/10, 1/12, and 1 1/2); find equivalent fractions, mixed numbers, and decimals.				14, 20, 25 **SB:** 32-1. 47-13

Standard	Description			
4.NSO-F.13.	Represent positive decimals to the hundredths.			24, 25 **SB:** 47-12
	Computation and Operations			
4.NSO-C.14.	Demonstrate an understanding of and the ability to use conventional algorithms for the addition and subtraction of multi-digit whole numbers.	33, 34, 45-48, 71, 74 **SB:** 12-1, 12-2, 15-7, 15-8, 15-9, 17-1, 17-2		
4.NSO-C.15.	Add and subtract up to five-digit numbers accurately and efficiently.	35-37, 48, 49, 71, 72, 75 **SB:** 12-1, 15-12, 17-1, 17-2		
4.NSO-C.16	Use concrete objects and visual models to add and subtract fractions where the denominators are equal or when one denominator is a multiple of the other (denominators 2 through 12, and 100).			17-19 **SB:** 33-1 to 33-5
4.NSO-C.17.	Select, use, and explain various meanings and models of multiplication and division of whole numbers. Understand and use the inverse relationship between the two operations.		2-5, 21-23, 26 **SB:** 20-1, 20-2, 25-1 to 25-4	3, 5, 8, 9, 41-44, 46-49 **SB:** 20-19, 20-20, 20-22, 25-18 to 25-22
4.NSO-C.18.	Know multiplication facts through 12 x 12 and the inverse division facts. Use these facts to solve related multiplication problems and compute related problems.		9, 18, 20, 32, 29, 40, 63 **SB:** 25-7	7, 13, 59, 63 **SB:** 20-24, 20-30, 20-34, 25-23, 25-26
4.NSO-C.19.	Demonstrate understanding of and ability to use the conventional algorithms for multiplication of up to a three-digit whole number by a two-digit whole number. Multiply three-digit whole numbers by two-digit whole numbers accurately and efficiently.			27-33 **SB:** 21-8, 21-9, 23-1

Standard	Description			
4.NSO-C.20.	Demonstrate understanding of and the ability to use the conventional algorithm for division of up to a three-digit whole number with a single-digit divisor (with or without remainders). Divide up to a three digit whole number with a single-digit divisor accurately and efficiently. Interpret any remainders.		71 SB: 26-4	69-73 SB: 27-1, 27-2
4.NSO-C.21.	Multiply fractions by whole numbers, using repeated addition and area rectangular models.			**SB:** 33-6, 33-7
4.NSO-C.22.	Mentally calculate simple products and quotients up to a three-digit number by a one-digit number (e.g., 400 x 7, or 320 ÷ 8).		12, 59 SB: 20-8	7, 30, 74 SB: 21-6, 22-3, 26-13
4.NSO-C.23.	Multiply and divide money amounts in decimal notation by using whole-number multipliers and divisors.			35
4.NSO-C.24.	Determine the unit cost when given the total cost and number of units.		75	50 SB: 26-11
4.NSO-C.25.	Select and use appropriate operations (addition, subtraction, multiplication, and division) to solve problems, including those involving money.	55	35 SB: 26-5	36, 51, 76 SB: 47-9
4.NSO-C.26.	Select, use, and explain the commutative, associative, and identity properties of operations on whole numbers in problem situations, e.g., 37 x 46 = 46 37, (5 x 7) x 2 = 5 x (7 x 2).	27, 28 **SB:** 9-1, 9-2	10, 13, 29, 54 **SB:** 20-6, 20-9, 20-17	4, 6, 16, 45 **SB:** 20-21, 20-23, 20-32, 25-17
4.NSO-C.27.	Use the relationship between multiplication and division to simplify computations and check results.		28, 32 **SB:** 25-9	44, 63 **SB:** 25-24
	Estimation			

4.NSO-E.28.	Estimate and compute the sum or difference of whole numbers and positive decimals to two places.	60, 61 **SB:** 10-14, 15-16		
4.NSO-E.29.	Estimate the answers to calculations involving addition, subtraction, or multiplication; know when approximation or a rounded solution is appropriate and use it to check the reasonableness of answers.	63	59 **SB:** 21-2	23, 24 **SB:** 21-6, 21-7, 23-3, 47-10
4.NSO-3.30.	Select and use a variety of strategies (e.g., front-end, rounding, and regrouping) to estimate quantities, measures, and the results of whole-number computations up to three-digit whole numbers and amounts of money to $1,000 and to judge the reasonableness of answers.	7, 60-63 **SB:** 47-4		**SB:** 21-6, 21-7, 23-3
	PATTERNS, RELATIONS, AND ALGEBRA			
4.PRA.1.	Create, describe, extend, and explain geometric and numeric patterns, including multiplication patterns such as 3, 30, 300, and 3,000; generalize the rule for the pattern and make predictions when given a table of number pairs of a set of data.	10, 11 **SB:** 3-2	43	
4.PRA.2.	Use letters and other symbols as variables in expressions and in equations or inequalities (mathematical sentences that use =, <, and >).	38, 41 **SB:** 19-6	19, 69 **SB:** 24-1	39, 40
4.PRA.3.	Use pictures, models, tables, charts, graphs, words, number sentences and mathematical notations to interpret mathematical relationships.	11, 13, 38, 53, 64, 65 **SB:** 14-2, 15-13, 15-14, 19-2	43, 69 **SB:** 20-18	10

4.PRA.4.	Solve problems involving proportional relationships, including unit pricing (e.g., 4 apples cost 80 cents, so 1 apple costs 20 cents) and map interpretation (e.g., 1 inch represents 5 miles, so 2 inches represent 10 miles).		43, 75		14, 15 **SB:** 26-11
4.PRA.5.	Determine how change in one variable relates to a change in a second variable (e.g., input-output tables).	11	17 **SB:** 20-11, 25-8		
	GEOMETRY				
4.G.1.	Compare and analyze attributes and other features (e.g., number of sides, faces, corners, right angles, diagonals, and symmetry) of two- and three-dimensional geometric shapes.				35-39, 45-48 **SB:** 37-4 to 37-8, 40-3, 40-4
4.G.2.	Describe, model, draw, compare, and classify two- and three-dimensional shapes (e.g., circles, polygons, parallelograms, trapezoids, cubes, spheres, pyramids, cones, cylinders).				34-40, 46-48 **SB:** 37-3 to 37-8, 40-3, 40-4
4.G.3.	Know the definitions of a right angle, an acute angle, and an obtuse angle. Understand that 90°, 180°, 270°, and 360° are associated, respectively, with 1/4, 1/2, 3/4, and full turns.				31 **SB:** 35-2, 35-3, 35-7, 35-9
4.G.4.	Describe and draw intersecting, parallel, and perpendicular lines.				33 **SB:** 36-2, 36-3
4.G.5.	Recognize similar figures (two shapes, R and S, are similar if they are congruent after one of them is shrunk or expanded).				
4.G.6.	Describe and apply techniques such as reflections (flips), rotations (turns), and translations (slides) for determining if two shapes are congruent.				42, 43 **SB:** 39-2

4.G.7.	Predict and validate the results of partitioning, folding, and combining two- and three-dimensional shapes.		40, 45 **SB:** 39-4
4.G.8.	Using ordered pairs of numbers and/or letters, graph, locate, and identify points and describe paths (first quadrant).	12, 13 **SB:** 48-2, 48-3	71, 73 **SB:** 48-6, 48-8
	MEASUREMENT		
4.M.1.	Identify and use appropriate metric and U.S. customary units and tools (e.g., ruler, protractor, graduated cylinder, thermometer) to estimate, measure, and solve problems involving length, area, volume, weight, time, angle size, and temperature.		50-53, 56-64 **SB:** 42-3, 43-1 to 43-5
4.M.2.	Carry out simple unit conversions within a system of measurement e.g., yards to feet or inches; gallons to quarts and pints).		58-64 **SB:** 44-1, 44-2, 45-1, 45-2
4.M.3.	Identify time to the minute on an analog and digital clocks using a.m. and p.m. Compute elapsed time using a clock (e.g., hours and minutes since...) and using a calendar (e.g., days since...).		50-52 **SB:** 41-1, 41-2, 42-2
4.M.4.	Estimate and find area and perimeter of shapes, including irregular shapes, using diagrams, models, and grids or by measuring.		65-70 **SB:** 46-1 to 46-9
4.M.5.	Recognize that rectangles that have the same area can have different perimeters; understand that rectangles that have the same perimeter can have different areas.		70 **SB:** 46-8
	DATA ANALYSIS, STATISTICS, AND PROBABILITY		

		Col 1	Col 2	Col 3
4.DASP.1.	Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.	68 **SB:** 50-4		46
4.DASP.2.	Match a representation of a data set, such as lists, tables, or graphs (including circle graphs), with the actual set of data.			
4.DASP.3.	Compare two data sets represented in two bar graphs, pie graphs, and histograms.		46, 58 (T.G.)	
4.DASP.4.	Represent the possible outcomes for a simple probability situation (e.g., the probability of drawing a red marble from a bag containing 2 red marbles and 4 green marbles).			74, 75 **SB:** 49-4, 49-5, 49-6
4.DASP.5.	List and count the number of possible combinations of objects from 3 sets (e.g., How many different outfits can one make from a set of 3 shirts, a set of 2 skirts, and a set of 2 hats?).	7 **SB:** 49-1	76 **SB:** 49-3	