Math Teachers Press, Inc.

West Virginia Mathematics Content Standards Correlated to
Moving with Math Intermediate/Middle (IM) Grade 6

		IM1 *Number, Reasoning & Data* Student Book Skill Builders (SB)	IM2. *Fractions, Decimals & Percent* Student Book Skill Builders (SB)	IM3 *Geometry, Measurement & Graphing* Student Book Skill Builders (SB)
	STANDARD 1. NUMBER AND OPERATIONS			
M.O.6.1.1	demonstrate an understanding of large numbers by converting and comparing numbers in scientific notation and standard notation (with and without technology)			
M.O.6.1.2	determine the greatest common factor and least common multiple using multiple strategies to solve real-world problems; find prime factorization of a number	13 **SB:** 4-6	Throughout	**SB:** 12-1, 52-1
M.O.6.1.3	compare and order integers using multiple strategies (e.g., symbols, manipulatives, number line)	7, 8, 17, 64-69 **SB:** 2-3, 2-4, 4-4, 59-3, 59-5	**SB:** 59-1	**SB:** 59-1
M.O.6.1.4	analyze and solve real-world problems involving addition, subtraction, multiplication and division of:			

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•	whole numbers	Throughout	21, 22, 28-38, 54-57, 59-66, 70-72, 77 **SB:** 5-1 5-2, 6-1, 7-1, 8-1, 9-1, 10-1, 10-2, 16-1, 16-4, 17-4, 19-2 to 19-5, 20-2 to 20-5, 26-4, 27-2 to 27-6, 28-1 to 28-7, 44-1 45-1 to 45-4, 45-6 to 45-9, 45-11 to 45-15, 46-1, 48-1 to 48-3, 49-1, 50-1, 53-1 to 53-4, 56-1, 58-3	Throughout
•	fractions, mixed numbers		Throughout	28, 31, 34-36, 47 **SB:** 15-1, 16-1, 17-1, 18-1, 19-1, 20-1, 36-4, 38-3, 38-6, 38-7, 39-3, 41-1, 41-2, 42-1, 42-2, 45-3
•	decimals		Throughout	33, 35, 37, 59 **SB:** 26-1, 27-1, 28-1, 36-6, 38-3, 38-6, 38-11, 39-2, 39-3, 41-2, 42-1, 42-2, 45-3, 52-3

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•	integers	Throughout	21, 22, 28-38, 54-57, 59-66, 70-72, 77 **SB:** 5-1, 5-2, 6-1, 7-1, 8-1, 9-1, 10-1, 10-2, 16-1, 16-4, 17-4, 19-2 to 19-5, 20-2 to 20-5, 26-4, 27-2 to 27-6, 28-1 to 28-7, 44-1, 45-1 to 45-4, 45-6 to 45-9, 45-11 to 45-15, 46-1, 48-1 to 48-23, 49-1, 50-1, 53-1 to 53-4, 56-1, 58-3	Throughout
•	justify the reasonableness by estimation	27-30, 46, 48, 51-54 **SB:** 45-7, 45-8, 45-13, 49-1, 49-2, 50-1 to 50-3	12, 24-27, 36, 56, 65, 66 **SB:** 18-3, 18-4, 19-4, 45-3, 45-5, 45-6, 45-8 to 45-10, 49-1, 50-1, 51-1	6, 14, 33-35 **SB:** 35-2, 36-3, 37-3, 41-1, 41-2, 42-2, 47-5, 48-3, 49-1, 50-1, 55-1
M.O.6.1.5	apply the distributive, commutative, associative and identity properties to numeric expressions and use to prove equivalency	19-22, 55 **SB:** 5-1 to 5-8, 45-2, 45-12, 45-16	36, 65, 66 **SB:** 5-1, 5-2, 45-4, 45-6, 45-9	50, 54 **SB:** 38-7, 39-3, 39-4, 44-2
M.O.6.1.6	convert between fractions/ratios, mixed numbers, decimals, and percents in appropriate real-world problems		Throughout	**SB:** 12-1, 21-1, 22-1, 25-1, 29-1, 30-1 52-1, 52-2
M.O.6.1.7	compute the percent of a number to solve application problems and justify the reasonableness by estimation		67-72 **SB:** 29-1 to 29-3, 30-1 to 30-4, 53-1 to 53-4	**SB:** 29-1, 30-1, 53-1
M.O.6.1.8	demonstrate an understanding of the effect of multiplying and dividing, whole numbers, fractions and decimals by numbers including 0, 1 and values between 0 and 1	21, 31, 39, 49, 73-76, 78 **SB:** 5-2, 5-7, 44-2 to 44-6, 45-9, 45-10, 45-15	Throughout	Throughout

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M.O.6.1.9	develop and test hypotheses to derive the rules for addition, subtraction, multiplication and division of integers, justify by using real-world examples and use them to solve problems	Throughout	21, 22, 28, 38, 54-57, 59-66, 70-72, 77 **SB:** 5-1, 5-2, 6-1, 7-1, 8-1, 9-1, 10-1, 10-2, 16-1, 16-4, 17-4, 19-2 to 19-5, 20-2 to 20-5, 26-4, 27-2 to 27-6, 28-1 to 28-7, 44-1, 45-1 to 45-4, 45-6 to 45-9, 45-11 to 45-15, 46-1, 48-1 to 48-3, 49-1, 50-1, 53-1 to 53-4, 56-1, 58-3	Throughout
	STANDARD 2. ALGEBRA			
M.O.6.2.1	simplify numerical expressions and evaluate algebraic expressions using order of operations	22, 55 **SB:** 5-4, 5-6, 5-8, 45-2, 45-12, 45-16	36, 65, 66 **SB:** 5-2, 45-4, 45-6	50, 54 **SB:** 38-7, 39-3, 39-4, 44-2
M.O.6.2.2	use inductive reasoning to extend pattern to predict the nth term (e.g., powers and triangular numbers)			**SB:** 44-6
M.O.6.2.3	create algebraic expressions that correspond to real-world situations; use the expressions to solve problems	76		
M.O.6.2.4	determine the rule, output or input; given an input/output model using one operation, write an algebraic expression for the rule and use to identify other input/output values	76-78 **SB:** 44-4, 44-5		31, 34, 74 **SB:** 44-5, 44-6
M.O.6.2.5	solve real-world proportion problems involving rates, probability and measurements using multiple strategies, justify selection of strategies		71-75, 78 **SB:** 53-2 to 53-4, 57-1 to 57-5, 58-4	57-61 **SB:** 12-1, 44-5, 52-2 to 52-5, 57-1

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M.O.6.2.6	write and solve one-step equations using number sense, properties of operations and the idea of maintaining equality to represent and solve real-world problems	Throughout	Throughout	Throughout
	STANDARD 3. GEOMETRY			
M.O.6.3.1	analyze characteristics using defining properties of:			
•	lines			2-4, 19 **SB:** 31-1, 32-1 to 32-5
•	angles			5, 6, 8, 19, 23-27, 63 **SB:** 31-2, 33-1, 34-3, 37-1 to 37-3, 52-6, 54-1, 55-1 to 55-3, 60-3
•	polygons			Throughout
•	triangles			8, 25, 26, 63, 64 **SB:** 34-3, 55-3
•	compare these geometric figures			7-12 **SB:** 34-1 to 34-7, 34-10
M.O.6.3.2	use inductive reasoning with the measures of interior angles in polygons and derive the formula to determine the sum of eh measures of the interior angles			25-27, 63 **SB:** 34-3, 52-6, 55-1 to 55-3, 60-6
M.O.6.3.3	apply the concepts of parallel, perpendicular, intersecting, and skew lines to real-world situations (I.e. roads and routes)			4 **SB:** 32-5
M.O.6.3.4	create designs using line and rotational symmetry			17 **SB:** 60-1
M.O.6.3.5	predict, describe, and perform transformations on two-dimensional shapes:			17, 20 **SB:** 60-1, 60-4, 60-5
•	translations			20 **SB:** 60-4

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•	rotations			20 SB: 60-4
•	reflections			20 SB: 60-4
M.O.6.3.6	use geometric representations to solve real-world problems			Throughout
M.O.6.3.7	plot polygons on coordinate grids, determine lengths and areas from the graph			15 SB: 38-5
	STANDARD 4. MEASUREMENT			
M.O.6.4.1	determine an approximation for pi using actual measurements			
M.O.6.4.2	develop and test hypotheses to determine formulas for:			
•	perimeter of polygons including composite figures			41, 42 SB: 38-2, 38-3, 38-8, 38-11
•	area of parallelograms			44-51 SB: 38-5, 38-6, 38-8 to 38-11
•	area of triangles			47, 48, 51 SB: 38-7, 38-10
•	area of composite figures made of parallelograms and triangles			44, 45, 48, 49, 51 SB: 38-5, 38-7, 38-10
•	circumference of a circle			14 SB: 35-2
•	area of a circle			SB: 38-12
•	volume of a rectangular prism			52, 53 SB: 39-1 to 39-3, 39-5
M.O.6.4.3	investigate, model and describe surface area of rectangular prisms and cylinders; develop strategies to determine the surface area of rectangular prisms			54 SB: 39-4
M.O.6.4.4	develop strategies to determine volume of cylinders; solve real-world problems involving column of cylinders, justify the results			

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M.O.6.4.5	given a two-dimensional polygon, construct a scale drawing given the scale factor			
	STANDARD 5. DATA ANALYSIS AND PROBABILITY			
M.O.6.5.1	collect, organize, display, read, interpret and analyze real-world data using appropriate graphs and tables (with and without technology)	7, 8, 10, 11, 28, 58, 62, 76-78 SB: 3-1 to 3-3, 43-1, 44-4, 44-5, 45-13, 46-3, 46-5, 49-1, 59-7	7, 37, 38, 48, 55, 58, 63, 72 SB: 6-1, 11-1, 27-4, 28-3, 28-7, 43-1, 45-7, 45-14, 48-1 to 48-3, 49-1, 50-1, 53-3, 57-2	10, 22, 31, 34, 66, 68-76 SB: 44-5, 44-6, 46-1, 47-1 to 47-3, 47-5, 47-6, 48-1 to 48-5
M.O.6.5.2	identify a real-life situation using statistical measures (mean, median, mode, range, outliers) over time, to make a hypotheses as to the outcome; design and implement a method to collect, organize and analyze data; analyze the results to make a conclusion; evaluate the validity of the hypotheses based upon collected data, design a mode of presentation using words, graphs, models, and/or tables (with and without technology)	59-62 SB: 46-1 to 46-5	SB: 46-1	65, 66, 72, 73, 75 SB: 46-1, 47-5, 47-6, 48-1 to 48-3, 48-5
M.O.6.5.3	perform simple probability events using manipulatives; predict the outcome given events using experimental and theoretical probability; express experimental and theoretical probability as a ratio, decimal or percent		73-75, 78 SB: 57-1 to 57-5, 58-4	SB: 57-1, 58-1
M.O.6.5.4	determine combinations and permutations of given real-world situations by multiple strategies, including creating lists		76, 77 SB: 58-1 to 58-3	SB: 58-1