



## 5<sup>th</sup> - 7<sup>th</sup> Grade Span Correlation to Process Standards

	Mathematics Curriculum Framework	Lesson Number	Lesson Title
<b>NUMBER, NUMBER SENSE AND OPERATIONS</b>			
A.	Represent and compare numbers less than 0 through familiar applications and extending the number line.	MM1-570	Identifying Integers and Absolute Value
		MM1-575	Comparing and Ordering Integers
		MPA-043	Reading and Writing Integers
		MPA-044	Finding Opposite and Absolute Values of Integers
		MPA-045	Comparing and Ordering Integers
B.	Compare, order and convert among fractions, decimals and percents.	MM1-110	Comparing and Ordering Fractions with Like Denominators
		MM1-135	Comparing and Ordering Fractions with Like and Unlike Denominators
		MM1-275	Comparing Decimal Numbers
		MM1-285	Ordering Decimals According to the Tenths, Hundredths and Thousandths
		MM1-358	Converting Fractions and Mixed Numbers with Denominators of Powers of Ten to Decimals
		MM1-360	Expressing Percent as a Ratio
		MM1-365	Converting Decimals to Fractions and Fractions to Decimals
		MM1-370	Converting Decimals to Percents and Percents to Decimals
		MM1-375	Converting Fractions to Percents and Percents to Fractions
		MM1-380	Converting Fractions to Decimals and Percents
		MPA-016	Comparing and Ordering Decimals
		MPA-031	Comparing and Ordering Fractions and Decimals
		MPA-081	Converting Fractions, Decimals, and Percents I
		MPA-082	Converting Fractions, Decimals, and Percents II
C.	Develop meaning for percents, including percents greater than 100 and less than 1.	MPA-081	Converting Fractions, Decimals, and Percents I
		MPA-082	Converting Fractions, Decimals, and Percents II
D.	Use models and pictures to relate concepts of ratio, proportion and percent.	MM1-360	Expressing Percent as a Ratio
		MPA-078	Expressing Ratios as Fractions and Determining Equivalency
		MPA-079	Unit rates
		MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps
E.	Use order of operations, including use of parenthesis and exponents to solve multi-step problems, and verify and interpret the results.	MM1-080	Identifying the Order of Operations Using Multiplication, Addition, and Subtraction
		MM1-085	Identifying the Order of Operations for Multiplication, Addition, and Subtraction Using Parentheses and Exponents
		MPA-008	Order of Operations
F.	Apply number system properties when performing computations.	MM1-025	Identifying the Properties of Addition
		MM1-045	Identifying and Using Properties of Multiplication to Solve Problems
		MPA-002	Adding, Subtracting, Multiplying, and Dividing Whole Numbers

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G.	Apply and explain the use of prime factorizations, common factors, and common multiples in problem situations.	MM1-088	Applying the Divisibility Rules for 2, 3, 4, 5, 6, 9 and 10
		MM1-090	Identifying Prime and Composite Numbers
		MM1-095	Expressing a Number as a Product of Prime Numbers
		MM1-105	Identifying the Greatest Common Factor and the Least Common Multiple
		MPA-024	Using Divisibility Rules
		MPA-025	Identifying Prime and Composite Numbers
		MPA-026	Using Prime Factorization
		MPA-027	Finding the Greatest Common Factor
		MPA-030	Finding Least Common Multiple of Two or More Numbers
H.	Use and analyze the steps in standard and non-standard algorithms for computing with fractions, decimals and integers.	MM1-145	Adding and Subtracting Fractions with Like and Unlike Denominators
		MM1-150	Adding Mixed Numbers with Like Denominators
		MM1-155	Subtracting Mixed Numbers with Like Denominators
		MM1-160	Adding and Subtracting Mixed Numbers with Unlike Denominators
		MM1-165	Multiplying Fractions
		MM1-170	Multiplying Fractions by Simplifying the Problem
		MM1-175	Multiplying Mixed Numbers
		MM1-180	Dividing Fractions
		MM1-185	Dividing Mixed Numbers
		MM1-190	Finding the Fraction of a Given Number
		MM1-300	Adding and Subtracting Decimals
		MM1-310	Multiplying Decimals
		MM1-311	Using a One-Digit Divisor, Express the Remainder as a Decimal
		MM1-313	Using a Two-Digit Divisor, Express the Remainder as a Decimal
		MM1-315	Dividing Decimals by Whole Number Divisors
		MM1-320	Performing Mathematical Operations with Decimal Numbers in Application Problems
		MM1-325	Dividing with Decimal Divisors
		MM1-330	Dividing with a Decimal Divisor and Dividend
		MM1-335	Using Zeros as Placeholders when Dividing with Decimal Numbers in the Dividend
		MM1-350	Identifying and Using Scientific Notation to Express Large Numbers
		MM1-355	Solving Multiple-Step Problems
		MM1-580	Adding Integers with Like and Unlike Signs
		MM1-585	Subtracting Integers with Like and Unlike Signs
		MM1-590	Multiplying Integers with Like and Unlike Signs
		MM1-595	Dividing Integers with Like and Unlike Signs
		MPA-018	Adding and Subtracting Decimals
		MPA-019	Multiplying Decimals
		MPA-020	Multiplying Decimals by Powers of Ten
		MPA-022	Dividing Decimals
		MPA-034	Adding and Subtracting Fractions
		MPA-035	Adding and Subtracting Mixed Numbers with Unlike Denominators
		MPA-036	Multiplying Fractions and Mixed Numbers and Simplifying
		MPA-037	Dividing Fractions and Mixed Numbers and Simplifying
		MPA-047	Adding Integers with Like Signs
		MPA-048	Adding Integers with Unlike Signs
		MPA-050	Subtracting Integers with Unlike Signs
		MPA-051	Multiplying Integers with Like and Unlike Signs
		MPA-052	Dividing Integers with Like and Unlike Signs
		MPA-053	Adding, Subtracting, Multiplying, and Dividing Integers
		MPA-117	Modeling Integer Arithmetic Using Cups and Counters

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		MPA-119	Dividing Decimals (an Introduction)
		MPA-122	Modeling Multiplication and Division of Decimals
		MPA-123	Modeling Multiplication and Division of Fractions
		Throughout	
I.	Use a variety of strategies, including proportional reasoning, to estimate, compute, solve and explain solutions to problems involving integers, fractions, decimals and percents.	MM1-195	Identifying the Mathematical Question Given in a Word Problem
		MM1-220	Writing and Forming Proportions
		MM1-225	Solving Proportions
		MM1-305	Estimating Products by Rounding to the Nearest Whole Number
		MM1-340	Rounding Quotients
		MM1-355	Solving Multiple-Step Problems
		MPA-003	Using Four-Step Plan for Problem Solving
		MPA-004	Using Rounding to Estimate
		MPA-005	Estimating Products and Quotients Using Patterns
		MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
		MPA-007	Solving Problems Using Logical Reasoning Skills
		MPA-017	Rounding Decimals and Estimating Computations Using Decimals
		MPA-023	Rounding Quotients Involving Decimals
		MPA-033	Estimating Computations with Fractions and Mixed Numbers
		MPA-078	Expressing Ratios as Fractions and Determining Equivalency
		MPA-079	Unit rates
		MPA-080	Solving Proportions
		MPA-116	Solving Real-Life Problems by Using Guess-and-Check and Working Backwards
		Throughout	
<b>MEASUREMENT</b>			
A.	Select appropriate units to measure angles, circumference, surface area, mass and volume, using: • U.S. customary units; e.g., degrees, square feet, pounds, and other units as appropriate;		
		MM1-460	Measuring and Classifying Angles
		MM1-510	Determining the Area of Parallelograms and Triangles
		MM1-515	Defining a Circle
		MM1-520	Finding the Surface Area of a Rectangular Prism
		MM1-525	Finding the Volume of Rectangular and Triangular Prisms
		MM1-530	Finding the Volume of a Cylinder
		MM1-535	Converting Customary Units of Measurement for Length
		MM1-540	Converting Customary Unit of Measurement for Capacity and Weight
		MPA-055	Finding the Perimeter of a Figure
		MPA-056	Classifying Angles
		MPA-057	Identifying and Applying Supplementary and Complementary Angles
		MPA-062	Converting Units in Customary System
		MPA-067	Finding the Area of Rectangles and Parallelograms
		MPA-069	Finding the Area of Triangles and Trapezoids
		MPA-070	Finding the Circumference of a Circle
		MPA-071	Finding the Area of a Circle
		MPA-073	Finding the Surface Area of Rectangular Prisms
		MPA-074	Finding the Surface Area of Cylinders
		MPA-075	Finding the Volume of Rectangular Prisms
		MPA-076	Finding the Volume of Cylinders
		MPA-105	Determining the Measure of Angles Made by Parallel Lines and a Transversal
		MPA-115	Finding the Volumes of Prisms, Cylinders, Pyramids, and Cones Using Models
		MPA-130	Developing a Sense of Relative Sizes of Measures

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	• metric units; e.g., square meters, kilograms and other units as appropriate.	MM1-460	Measuring and Classifying Angles
		MM1-510	Determining the Area of Parallelograms and Triangles
		MM1-515	Defining a Circle
		MM1-520	Finding the Surface Area of a Rectangular Prism
		MM1-525	Finding the Volume of Rectangular and Triangular Prisms
		MM1-530	Finding the Volume of a Cylinder
		MM1-545	Converting Metric Units of Measurement for Length
		MM1-550	Converting Metric Units of Measurement for Mass and Capacity
		MPA-055	Finding the Perimeter of a Figure
		MPA-056	Classifying Angles
		MPA-057	Identifying and Applying Supplementary and Complementary Angles
		MPA-061	Converting Metric Units of Length, Capacity, and Mass
		MPA-067	Finding the Area of Rectangles and Parallelograms
		MPA-069	Finding the Area of Triangles and Trapezoids
		MPA-070	Finding the Circumference of a Circle
		MPA-071	Finding the Area of a Circle
		MPA-073	Finding the Surface Area of Rectangular Prisms
		MPA-074	Finding the Surface Area of Cylinders
		MPA-075	Finding the Volume of Rectangular Prisms
		MPA-076	Finding the Volume of Cylinders
		MPA-105	Determining the Measure of Angles Made by Parallel Lines and a Transversal
		MPA-115	Finding the Volumes of Prisms, Cylinders, Pyramids, and Cones Using Models
		MPA-130	Developing a Sense of Relative Sizes of Measures
B.	Convert units of length, area, volume, mass and time within the same measurement system.	MM1-535	Converting Customary Units of Measurement for Length
		MM1-540	Converting Customary Unit of Measurement for Capacity and Weight
		MM1-545	Converting Metric Units of Measurement for Length
		MM1-550	Converting Metric Units of Measurement for Mass and Capacity
		MPA-061	Converting Metric Units of Length, Capacity, and Mass
		MPA-062	Converting Units in Customary System
C.	Identify appropriate tools and apply appropriate techniques for measuring angles, perimeter or circumference and area of triangles, quadrilaterals, circles and composite shapes, and surface area and volume of prisms and cylinders.	MM1-460	Measuring and Classifying Angles
		MPA-130	Developing a Sense of Relative Sizes of Measures
D.	Select a tool and measure accurately to a specified level of precision.	<i>Future Release Lesson</i>	<i>MPA-134 Distinguishing Between Precision and Accuracy and Use Significant Digits in Computational Problems</i>
E.	Use problem solving techniques and technology as needed to solve problems involving length, weight, perimeter, area, volume, time and temperature.	MM1-555	Determining Elapsed Time from A.M. to P.M. and P.M. to A.M.
		MM1-560	Identifying Time Zones and Determining Elapsed Time Between Zones
		MM1-605	Converting Fahrenheit and Celsius
		Throughout	
F.	Analyze and explain what happens to area and perimeter or surface area and volume when the dimensions of an object are changed.	MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids
G.	Understand and demonstrate the independence of perimeter and area for two-dimensional shapes and of surface area and volume for three-dimensional shapes.	MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids
		Throughout	
D.	Select a tool and measure accurately to a specified level of precision.	<i>Future Release Lesson</i>	<i>MPA-134 Distinguishing Between Precision and Accuracy and Use Significant Digits in Computational Problems</i>
E.	Use problem solving techniques and technology as needed to solve	MM1-555	Determining Elapsed Time from A.M. to P.M. and P.M. to A.M.

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	problems involving length, weight, perimeter, area, volume, time and temperature.		
		MM1-560	Identifying Time Zones and Determining Elapsed Time Between Zones
		MM1-605	Converting Fahrenheit and Celsius
		Throughout	
<b>GEOMETRY AND SPATIAL SENSE</b>			
A.	Identify and label angle parts and the regions defined within the plane where the angle resides.	MM1-455	Identifying Basic Terms Used in Geometry
		MM1-460	Measuring and Classifying Angles
		MPA-056	Classifying Angles
		MPA-057	Identifying and Applying Supplementary and Complementary Angles
		MPA-105	Determining the Measure of Angles Made by Parallel Lines and a Transversal
B.	Draw circles, and identify and determine the relationships among the radius, diameter, center and circumference	MM1-515	Defining a Circle
		MPA-070	Finding the Circumference of a Circle
C.	Specify locations and plot ordered pairs on a coordinate plane.	MM1-642	Exploring the Coordinate Plane and Graphing Ordered Pairs
		MPA-046	Graphing Points on a Coordinate Plane
D.	Identify, describe and classify types of line pairs, angles, two-dimensional figures and three-dimensional objects using their properties.	MM1-455	Identifying Basic Terms Used in Geometry
		MM1-460	Measuring and Classifying Angles
		MPA-056	Classifying Angles
		MPA-057	Identifying and Applying Supplementary and Complementary Angles
		MPA-058	Identifying Polygons
		MPA-059	Classifying Triangles and Quadrilaterals
		MPA-072	Identifying 3-D Figures
		MPA-105	Determining the Measure of Angles Made by Parallel Lines and a Transversal
		MPA-106	Identifying a Solid Figure From a Net
		MPA-107	Constructing Three-Dimensional Figures and Examining Their Dimensions
E.	Use proportions to express relationships among corresponding parts of similar figures.	MM1-475	Using Proportions to Solve for Unknown Lengths of Sides of Similar Figures
		MPA-121	Identifying Similar and Congruent Polygons Using Proportions
F.	Describe and use the concepts of congruence, similarity and symmetry to solve problems.	MM1-475	Using Proportions to Solve for Unknown Lengths of Sides of Similar Figures
		MM1-480	Identifying and Labeling Triangles According to Their Sides and Angles
		MPA-058	Identifying Polygons
		MPA-059	Classifying Triangles and Quadrilaterals
		MPA-121	Identifying Similar and Congruent Polygons Using Proportions
G.	Describe and use properties of triangles to solve problems involving angle measures and side lengths of right triangles.	MM1-475	Using Proportions to Solve for Unknown Lengths of Sides of Similar Figures
		MM1-480	Identifying and Labeling Triangles According to Their Sides and Angles
		MPA-059	Classifying Triangles and Quadrilaterals
		MPA-066	Solving Problems Using the Pythagorean Theorem
		MPA-121	Identifying Similar and Congruent Polygons Using Proportions
H.	Predict and describe results (size, position, orientation) of transformations of two-dimensional figures.	MM1-500	Using Translations, Rotations and Reflections to Transform Shapes
		MPA-108	Graphing Translations and Reflections on the Coordinate Plane
I.	Identify and draw three-dimensional objects from different views (top, side, front and perspective).	HA1-893	Constructing Solids from Different Perspectives
J.	Apply properties of equality and proportionality to solve problems involving congruent or similar figures; e.g., create a scale drawing.	MM1-475	Using Proportions to Solve for Unknown Lengths of Sides of Similar Figures
		MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps

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		MPA-121	Identifying Similar and Congruent Polygons Using Proportions
<b>PATTERNS, FUNCTIONS AND ALGEBRA</b>			
A.	Describe, extend and determine the rule for patterns and relationships occurring in numeric patterns, computation, geometry, graphs and other applications.	MM1-020	Identifying and Finding Number Patterns Using Whole Numbers
		MPA-104	Recognizing Patterns
		HA1-447	Identifying Number Patterns
		HA1-448	Finding the $n$ th Term of a Pattern
B.	Represent, analyze and generalize a variety of patterns and functions with tables, graphs, words and symbolic rules.	MM1-020	Identifying and Finding Number Patterns Using Whole Numbers
		MPA-104	Recognizing Patterns
		HA1-447	Identifying Number Patterns
		HA1-448	Finding the $n$ th Term of a Pattern
C.	Use variables to create and solve equations and inequalities representing problem situations.	MM1-600	Introducing Variables in Algebra
		MM1-615	Translating Words into Algebra
		MM1-620	Using the Order of Operations in Algebraic Expressions
		MM1-625	Solving Algebraic Equations Using the Inverse Operations of Addition and Subtraction
		MM1-630	Solving Algebraic Equations Using the Inverse Operations of Multiplication and Division
		MM1-635	Calculating Distance, Rate, or Time by Solving Equations
		MM1-640	Solving Algebraic Word Problems
		MPA-009	Solving One-Step Equations Using a Box
		MPA-010	Solving One-Step Equations of Whole Numbers Using Addition and Subtraction
		MPA-011	Solving One-Step Equations of Whole Numbers Using Multiplication and Division
		MPA-012	Solving One-Step Equations of Whole Numbers Using All Operations
		MPA-038	Solving One-Step Equations with Fractions Using Addition and Subtraction
		MPA-039	Solving One-Step Equations with Fractions Using Multiplication and Division
		MPA-040	Solving One-Step Equations with Decimals Using All Four Operations
		MPA-041	Writing Simple Algebraic Expressions from Phrases
		MPA-042	Solving Problems Using an Equation
		MPA-054	Solving One-Step Equations with Integers Using all Four Operations
		MPA-100	Solving Two-Step Equations
		MPA-101	Solving Equations by Combining Like Terms
		MPA-109	Solving and Graphing Linear Inequalities on a Number Line
		HA1-185	Solving Inequalities Using the Addition and Subtraction Properties
		HA1-190	Solving Inequalities Using the Multiplication and Division Properties
		HA1-195	Solving Inequalities Using More Than One Property
		Throughout	
D.	Use symbolic algebra to represent and explain mathematical relationships.	MM1-615	Translating Words into Algebra
		MPA-041	Writing Simple Algebraic Expressions from Phrases
		Throughout	
E.	Use rules and variables to describe patterns, functions and other relationships.	Throughout	
F.	Use representations, such as tables, graphs and equations, to model situations and to solve problems, especially those that involve linear relationships.	MPA-102	Graphing Equations by Plotting Points
		MPA-103	Distinguishing Between Relations and Functions
		Throughout	
G.	Write, simplify and evaluate algebraic expressions.	MM1-615	Translating Words into Algebra
		MPA-041	Writing Simple Algebraic Expressions from Phrases
		HA1-005	Evaluating Algebraic Expressions

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		HA1-065	Evaluating Expressions Containing Exponents
		HA1-070	Evaluating Formulas for Given Values of the Variables
		HA1-075	Simplifying Algebraic Expressions by Combining Like Terms
		HA1-076	Basic Distributive Property
		HA1-085	Simplifying Expressions Using the Properties of Real Numbers
		HA1-095	Translating Word Phrases into Algebraic Expressions
<b>DATA ANALYSIS AND PROBABILITY</b>			
A.	Read, create and use line graphs, histograms, circle graphs, box-and-whisker plots, stem-and-leaf plots, and other representations when appropriate.	MM1-390	Understanding Data in Bar Graphs, Line Graphs, and Stem-and-Leaf Plots
		MM1-400	Interpreting Double Bar Graphs
		MM1-405	Interpreting and Constructing Circle Graphs
		MM1-410	Interpreting Box-and-Whisker Plots
		MM1-425	Classifying Information from a Mathematical Story
		MM1-430	Using Graphs to Solve Story Problems
		MM1-435	Using Pictographs, Bar Graphs and Line Graphs to Solve Problems
		MPA-092	Reading and Interpreting Bar, Line, and Circle Graphs
		MPA-093	Choosing Appropriate Scales and Intervals for Data
		MPA-094	Interpreting and Constructing Line Plots
		MPA-096	Constructing Stem-and-Leaf Plots
		MPA-097	Constructing Box-and-Whisker Plots
		MPA-098	Making Predictions from Graphs and Choosing the Correct Graph
		MPA-129	Choosing Appropriate Scales and Intervals for Data (an Introduction)
		MPA-131	Interpreting and Creating Histograms
		MPA-132	Interpreting and Creating Scatter Plots
B.	Interpret data by looking for patterns and relationships, draw and justify conclusions, and answer related questions.	Throughout	
C.	Evaluate interpretations and conclusions as additional data are collected, modify conclusions and predictions, and justify new findings.	Throughout	
D.	Compare increasingly complex displays of data, such as multiple sets of data on the same graph.		
E.	Collect, organize, display and interpret data for a specific purpose or need.	MM1-385	Collecting Data
F.	Determine and use the range, mean, median and mode to analyze and compare data, and explain what each indicates about the data.	MM1-415	Defining and Calculating the Range and the Mean
		MM1-420	Defining and Calculating the Median and the Mode
		MPA-095	Find the Mean, Median, and Mode
		HA1-540	Finding the Mean, Median, and Mode from Data and Frequency Distribution Tables
		HA1-541	Analyzing Data Using the Measures of Central Tendency and the Range
G.	Evaluate conjectures and predictions based upon data presented in tables and graphs, and identify misuses of statistical data and displays.	MPA-098	Making Predictions from Graphs and Choosing the Correct Graph
		MPA-099	Recognizing Misleading Statistics and Graphs
<b>MATHEMATICAL PROCESSES</b>			
A.	Clarify problem-solving situation and identify potential solution processes; e.g., consider different strategies and approaches to a problem, restate problem from various perspectives.	Throughout	
B.	Apply and adapt problem-solving strategies to solve a variety of problems, including unfamiliar and non-routine problem situations.	Throughout	
C.	Use more than one strategy to solve a problem, and recognize there	Throughout	

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	are advantages associated with various methods.		
D.	Recognize whether an estimate or an exact solution is appropriate for a given problem situation.	MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
		<i>Future Release Lesson</i>	<i>MPA-133 Distinguishing Between Exact and Approximate Answers</i>
E.	Use deductive thinking to construct informal arguments to support reasoning and to justify solutions to problems.	MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
F.	Use inductive thinking to generalize a pattern of observations for particular cases, make conjectures, and provide supporting arguments for conjectures	<i>Grade Level Content Under Review</i>	
G.	Relate mathematical ideas to one another and to other content areas; e.g., use area models for adding fractions, interpret graphs in reading, science and social studies.	Throughout	
H.	Use representations to organize and communicate mathematical thinking and problem solutions.	Throughout	
I.	Select, apply, and translate among mathematical representations to solve problems; e.g., representing a number as a fraction, decimal or percent as appropriate for a problem.	Throughout	
J.	Communicate mathematical thinking to others and analyze the mathematical thinking and strategies of others.	Throughout	
K.	Recognize and use mathematical language and symbols when reading, writing and conversing with others.	Throughout	

MM1-Fundamentals of Mathematics

MPA- Pre-Algebra

HA1-Algebra 1

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