



7th Grade Mathematics Framework Correlation

	Mathematics Curriculum Framework	Lesson Number	Lesson Title
ALGEBRAIC REASONING: PATTERNS AND FUNCTIONS			
1.1.	Understand and describe patterns and functional relationships.		
1.1.a	Analyze physical phenomena and patterns to identify relationships and make generalizations.	MPA-104	Recognizing Patterns
		HA1-447	Identifying Number Patterns
1.2.	Represent and analyze quantitative relationships in a variety of ways.		
1.2.a	Describe the effects of characteristics of mathematical relationships on the way the relationships are represented.	MPA-041	Writing Simple Algebraic Expressions from Phrases
		MPA-042	Solving Problems Using an Equation
		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-095	Find the Mean, Median, and Mode
		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-099	Recognizing Misleading Statistics and Graphs
		MPA-129	Choosing Appropriate Scales and Intervals for Data (an Introduction)
		MPA-131	Interpreting and Creating Histograms
		MPA-132	Interpreting and Creating Scatter Plots
1.3.	Use operations, properties and algebraic symbols to determine equivalence and solve problems.		
1.3.a	Solve problems using a variety of algebraic methods.	MPA-007	Solving Problems Using Logical Reasoning Skills
		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-042	Solving Problems Using an Equation
		MPA-054	Solving One-Step Equations with Integers Using all Four Operations
		MPA-080	Solving Proportions
		MPA-116	Solving Real-Life Problems by Using Guess-and-Check and Working Backwards
		Throughout	
1.3.b	Maintain equivalence in equations to determine solutions.	MPA-008	Order of Operations
		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

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		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-042	Solving Problems Using an Equation
		MPA-054	Solving One-Step Equations with Integers Using all Four Operations
		MPA-080	Solving Proportions
NUMERICAL AND PROPORTIONAL REASONING			
2.1.	Understand that a variety of numerical representations can be used to describe quantitative relationships.	MPA-001	Identifying, Comparing, and Ordering Whole Numbers Through Billions
		MPA-002	Adding, Subtracting, Multiplying, and Dividing Whole Numbers
		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
2.1.a	Represent real-world situations and solutions to problems using the appropriate symbolic form (fractions, decimals or percents).	MPA-016	Comparing and Ordering Decimals
		MPA-017	Rounding Decimals and Estimating Computations Using Decimals
		MPA-018	Adding and Subtracting Decimals
		MPA-019	Multiplying Decimals
		MPA-020	Multiplying Decimals by Powers of Ten
		MPA-022	Dividing Decimals
		MPA-023	Rounding Quotients Involving Decimals
		MPA-028	Reducing Fractions to Lowest Terms/Simplest Form
		MPA-029	Converting Fractions and Decimals
		MPA-031	Comparing and Ordering Fractions and Decimals
		MPA-032	Converting Improper Fractions and Mixed Numbers
		MPA-033	Estimating Computations with Fractions and Mixed Numbers
		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-081	Converting Fractions, Decimals, and Percents I
		MPA-082	Converting Fractions, Decimals, and Percents II
		MPA-083	Finding Number Given Percent and Total
		MPA-084	Finding Percent Given Number and Total
		MPA-085	Finding Total Given Number and Percent
		MPA-086	Solving Problems Using Percent
		MPA-087	Finding Percent Increase and Decrease
		MPA-088	Solving Real-World Problems Involving Percent
		MPA-119	Dividing Decimals (an Introduction)
		MPA-122	Modeling Multiplication and Division of Decimals
		MPA-123	Modeling Multiplication and Division of Fractions
		MPA-126	Solving Real-World Problems Involving Sales Tax
		MPA-127	Solving Real-World Problems Involving Discounts
		MPA-128	Solving Real-World Problems Involving Simple Interest
2.1.b	Understand the use of scientific notation as related to powers of ten as an efficient method for writing and comparing very large numbers.	MPA-021	Converting Between Standard and Scientific Notation
2.1.c	Use percents to make comparisons between groups of unequal size.	MM1-405	Interpreting and Constructing Circle Graphs
2.2.	Use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.		
2.2.a	Extend the operations of addition, subtraction, multiplication and division to negative numbers.	MPA-117	Modeling Integer Arithmetic Using Cups and Counters
		MPA-047	Adding Integers with Like Signs

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		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-054	Solving One-Step Equations with Integers Using all Four Operations
GEOMETRY AND MEASUREMENT			
3.1.	Use properties and characteristics of two- and three-dimensional shapes and geometric theorems to describe relationships, communicate ideas and solve problems.		
3.1.a	Describe and classify polygons according to their transformational properties.	MPA-058	Identifying Polygons
		MPA-059	Classifying Triangles and Quadrilaterals
		MPA-060	Determining Which Figures Tessellate
3.2.	Use spatial reasoning, location and geometric relationships to solve problems.		
3.2.a	Understand how 3-dimensional objects can be represented in 2 dimensions using base plans (footprints), orthogonal views, nets and isometric drawings.	MPA-072	Identifying 3-D Figures
		MPA-106	Identifying a Solid Figure From a Net
		MPA-107	Constructing Three-Dimensional Figures and Examining Their Dimensions
		HA1-893	Constructing Solids from Different Perspectives
3.3.	Develop and apply units, systems, formulas and appropriate tools to estimate and measure.		
3.3.a	Solve geometric and measurement problems through the use of a variety of tools, techniques and strategies.	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-062	Converting Units in Customary System
		MPA-067	Finding the Area of Rectangles and Parallelograms
		MPA-068	Finding the Area of Irregular Figures
		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-075	Finding the Volume of Rectangular Prisms
		MPA-105	Determining the Measure of Angles Made by Parallel Lines and a Transversal
		MPA-107	Constructing Three-Dimensional Figures and Examining Their Dimensions
		MPA-130	Developing a Sense of Relative Sizes of Measures
WORKING WITH DATA: PROBABILITY AND STATISTICS			
4.1.	Collect, organize and display data using appropriate statistical and graphical methods.		
4.1.a	Select the appropriate visual representation of data based on the kind of data collected and the purpose for their use.	MM1-400	Interpreting Double Bar Graphs
		MM1-410	Interpreting Box-and-Whisker Plots
		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-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

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		MPA-132	Interpreting and Creating Scatter Plots
		HA1-886	Unions and Intersections of Sets Using Venn Diagrams
4.2.	Analyze data sets to form hypotheses and make predictions.		
4.2.a	Understand that measures of central tendency and spread can be used to describe data sets and justify conclusions.	MPA-095	Find the Mean, Median, and Mode
		MM1-415	Defining and Calculating the Range and the Mean
		MM1-420	Defining and Calculating the Median and the Mode
		MM1-410	Interpreting Box-and-Whisker Plots
4.3.	Understand and apply basic concepts of probability.		
4.3.a	Compare and determine experimental and theoretical probabilities.	MPA-089	Using Tree Diagrams
		MPA-091	Finding the Number of Combinations of a Set of Objects
		MPA-090	Finding the Probability of Simple Real-Life Events
		MPA-112	Constructing Sample Spaces for Compound Events (Dependent and Independent)
		MPA-113	Finding the Probability of Compound Events Through Experimentation
		MPA-114	Finding the Odds of Events and Experimental Probability from a Math Model

MM1-Fundamentals of Mathematics
MPA- Pre-Algebra
HA1-Algebra 1

Note: Standards were taken from the Connecticut Mathematics Curriculum Framework document for Mathematics Grades PreK-12 adopted by the Connecticut State Department of Education in September 2005.