AVENTA LEARNING

Alignment Document

State of Connecticut
And
Aventa Learning Integrated Math

Integrated Math
2005-2007 Benchmark Blueprint

State Standard Number	State Standard Area / Description	Unit Name	Course Topic Description
1	Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies.		
1.1	Understand and describe patterns and functional relationships.	Algebraic Sense	Number Patterns
1.1.a	Describe relationships and make generalizations about patterns and functions.	Algebraic Sense	Intro to Algebraic Expressions
		Algebraic Sense	Number Patterns
1.2	Represent and analyze quantitative relationships in a variety of ways.	Algebraic Sense	Number Patterns
1.2.a	Represent and analyze linear and nonlinear functions and relations symbolically and with tables and graphs.	Algebraic Sense	Number Patterns
		Algebraic Sense	Solving Two-Step Equations
		Algebraic Sense	Graphing Inequalities
1.3	Use operations, properties and algebraic symbols to determine equivalence and solve problems.	Algebraic Sense	The Communicative Property
		Algebraic Sense	The Associative Property
		Algebraic Sense	The Distributive Property
1.3.a	Manipulate equations, inequalities and functions to solve problems.	Algebraic Sense	Solving Equations
		Algebraic Sense	Inequalities

2	Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies.		
2.1	Understand that a variety of numerical representations can be used to describe quantitative relationships.	Number Sense	Rational Numbers
2.1.a	Extend the understanding of number to include integers, rational numbers and real numbers.	Number Sense	Rational Numbers
		Number Sense	Integers
2.1.b	Interpret and represent large sets of numbers with the aid of technologies.		
2.2	Use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.		
2.2.a	Develop strategies for computation and estimation using properties of number systems to solve problems.	Operations	Number Sense Problem Solving
		Operations	Estimation
		Number Sense	Single-Step Estimation
		Number Sense	Overview
2.2.b	Solve proportional reasoning problems.	Operations	Ratio
3	Shapes and structures can be analyzed, visualized, measured and transformed using a variety of strategies, tools and technologies.		
3.1	Use properties and characteristics of two- and three-dimensional shapes and geometric theorems to describe relationships, communicate ideas and solve problems.	Geometric Figures	Points, Lines, & the Plane
		Geometric Figures	Polygons
		Geometric Figures	Prisms, Cones and Pyramids

3.1.a	Investigate relationships among plane and solid geometric figures using geometric models, constructions and tools.	Geometric Figures	Perpendicular and Parallel Lines
		Geometric Figures	Angles
		Geometric Figures	Polygons
		Geometric Figures	Prisms, Cones and Pyramids
		Geometric Figures	Points, Lines, & the Plane
3.1.b	Develop and evaluate mathematical arguments using reasoning and proof.		
3.2	Use spatial reasoning, location and geometric relationships to solve problems.	Geometric Figures	Polygons
		Measurement	Area
3.2.a	Verify geometric relationships using algebra, coordinate geometry, and transformations.	Geometric Figures	Angles
		Geometric Figures	Points, Lines, & the Plane
		Geometric Movement	Geometric Problem Solving
		Geometric Movement	Transformations
		Geometric Movement	The Coordinate Plane
		Geometric Movement	Overview
3.3	Develop and apply units, systems, formulas and appropriate tools to estimate and measure.	Geometric Movement	The Coordinate Plane
3.3.a	Solve a variety of problems involving 1-, 2- and 3-dimensional measurements using geometric relationships and trigonometric ratios.	Geometric Figures	Points, Lines, & the Plane
		Geometric Figures	Polygons
		Geometric Figures	Triangles
		Measurement	Volume

4	Data can be analyzed to make informed decisions using a variety of strategies, tools and technologies.		
4.1	Collect, organize and display data using appropriate statistical and graphical methods	Introduction to Probability	Theoretical Probability
		Introduction to Probability	Mean, Median, Mode
		Introduction to Probability	Data Concerns
		Introduction to Probability	Data Samples
		Probability 2	Scatter Plots
4.1.a	Create the appropriate visual or graphical representation of real data.	Introduction to Probability	Theoretical Probability
		Probability 2	Scatter Plots
4.2	Analyze data sets to form hypotheses and make predictions.	Introduction to Probability	Theoretical Probability
		Introduction to Probability	Experimental Probability
		Introduction to Probability	Data Samples
4.3	Understand and apply basic concepts of probability.	Introduction to Probability	Theoretical Probability
		Introduction to Probability	Experimental Probability
		Introduction to Probability	Mean, Median, Mode
		Introduction to Probability	Data Concerns
		Introduction to Probability	Data Samples
4.3.a	Understand and apply the principles of probability in a variety of situations.	Introduction to Probability	Theoretical Probability
		Introduction to Probability	Experimental Probability
		Introduction to Probability	Data Samples
		Probability 2	Overview
		Probability 2	Permutations
		Probability 2	Combinations