

Diocese of Bridgeport
Curriculum Map

Course: Mathematics

Grade Level: 6 (Adv. Gr. 5)

	Content	Skills	Suggested Assessments*	Connecticut Content Standards
	Patterns	<ul style="list-style-type: none"> • Identify, analyze, and implement patterns • Find and extend arithmetic, and geometric patterns • Utilize problem solving strategies 	<ul style="list-style-type: none"> • Determine next item in a given sequence • Create own sequence and or pattern 	<ul style="list-style-type: none"> • Appropriate computational strategies facilitate problem solving
	Number Sense	<ul style="list-style-type: none"> • Verbalize relationships of numbers, in tables, graphs, equations, and inequalities • Model, read and write rational numbers through thousands • Identify and determine integers. • Compare round and order rational numbers • Estimate sums, differences, products , and quotients of rational numbers • Express place value patterns using powers of ten • Multiply and divide numbers by powers of ten • Utilize problem solving strategies • Model larger and smaller decimal products and quotients 	<ul style="list-style-type: none"> • Use tables, graphs, to create equations and inequalities • Place rational numbers in order from least to greatest • Solve problems using rational numbers as well as powers of ten 	<ul style="list-style-type: none"> • Appropriate computational strategies facilitate problem solving. • Place value patterns may be expressed using exponents to write powers of ten. • Whole numbers, fractions decimals, and integers may be modeled on number lines, scales and the coordinate plane. And used to solve problems. • Mathematical relationships may be represented and analyzed with the help of tables, graphs, equations and inequalities.

	Content	Skills	Suggested Assessments*	Connecticut Content Standards
	Number Theory	<ul style="list-style-type: none"> • Identify a number as prime or composite • Express a number as a factor of prime numbers • Recognize divisibility patterns • Identify GCF • Utilize problem solving strategies 	<ul style="list-style-type: none"> • Use prime factorization to find prime, composite numbers, GCF, and LCM 	<ul style="list-style-type: none"> • Appropriate computational strategies facilitate problem solving • Whole numbers, fractions decimals, and integers may be modeled on number lines, scales and the coordinate plane. And used to solve problems.
	Rational Numbers	<ul style="list-style-type: none"> • Model and simplify fractions, ratios, mixed numbers, and improper fractions • Identify and determine integers. • Define and find LCM • Identify equivalent fractions • Convert between fraction and decimal form • Use bar notation to express repeating decimals • Estimate by rounding fractions and mixed numbers to the nearest half or whole • Multiply and divide mixed numbers and fractions • Utilize problem solving strategies 	<ul style="list-style-type: none"> • Change improper fractions to mixed numbers and vice versa • Use multiplication, division, addition, or subtraction to answer problem solving with fractions • Change between fraction and decimal form 	<ul style="list-style-type: none"> • Appropriate computational strategies facilitate problem solving. • Whole numbers, fractions decimals, and integers may be modeled on number lines, scales and the coordinate plane. And used to solve problems. • The division interpretation of fractions can be used to write equivalent decimal forms. • With fractions and decimals products or quotients may be larger or smaller than either factor.
	Ratios, Rates, and Percents	<ul style="list-style-type: none"> • Define and solve problems involving ratios, rates, and percents • Define and find the unit rate • Model and find percent • Estimate percent of a number • Solve proportions using cross products • Utilize problem solving strategies 	<ul style="list-style-type: none"> • Find the missing variable in a proportion by using cross multiplication • Use division to find the unit rate • Solve word problems using percents and ratios • Illustrate proportion with scale drawings 	<ul style="list-style-type: none"> • Appropriate computational strategies facilitate problem solving • Percent is an expression of frequency in terms parts per hundred. • Ratios and rates can be used to compare quantities. • When there is a relationship between two variables the rate of change may be constant or varying.

	Content	Skills	Suggested Assessments*	Connecticut Content Standards
	Measurement	<ul style="list-style-type: none"> Convert units of measure in Metric and Customary Units Examine patterns converting measures within the Metric System Add/Subtract measures of Time 	<ul style="list-style-type: none"> Perform operations using units of measure Convert units in the metric system using tables, charts, or conversion factors Measuring in real world situation 	<ul style="list-style-type: none"> Appropriate computational strategies facilitate problem solving Metric system of measurements is based on powers of ten and ratios with multiples of ten underlie unit conversions. Problems involving measurement can be solved through the use of appropriate tools, techniques and strategies.
3rd Marking Period	Geometry	<ul style="list-style-type: none"> Identify, classify, and draw polygons Classify and measure angles using a protractor Find the area and perimeter of geometric shapes using formulas Examine relationship between perimeter and area Be able to unfold a geometric shape Find volume and surface areas of 2 and 3 dimensional figures using formulas Identify and graph transformations Construct angle and segment bisectors Describe and define lines of symmetry Determine congruence and similarity Create and models to find perimeter and area of solids 	<ul style="list-style-type: none"> Find the area and perimeter of any polygon figure Identify and measure any angle given Find the volume and surface area of multi-dimensional figures Draw angle and segment bisectors Create lines of symmetry on various figures 	<ul style="list-style-type: none"> Appropriate computational strategies facilitate problem solving Triangles and some combinations of polygons are more stable than other polygons under stress. Angle measurement is based on rotation. The formulas for the area of triangles parallelograms, trapezoids, and circles are based on the rectangle. Problems involving measurement can be solved through the use of appropriate tools, techniques and strategies.

	Content	Skills	Suggested Assessments*	Connecticut Content Standards
	Algebra	<ul style="list-style-type: none"> • Express real world problems in terms of algebraic expressions • Write exponential numbers as products of factors and vice versa • Use order of operations • Solve and evaluate simple algebraic expressions, and equations. • Use powers and exponents in expression. • Identify and determine the use integers. • Graph rational numbers on a number line • Solving one step equations and inequalities. • Identifying the inverse property of operations • Utilize problem solving strategies 	<ul style="list-style-type: none"> • Apply use of order of operations to solve algebraic expressions • Translate word problems into algebraic expressions and inequalities • Display algebraic inequalities on a number line • Describe the difference between an equation and an expression. Give examples of each. 	<ul style="list-style-type: none"> • Appropriate computational strategies facilitate problem solving • When there is a relationship between two variables the rate of change may be constant or varying. • Relationships that are expressed in words may be translated into algebraic expressions, expressions, and inequalities. • Mathematical relationships may be represented and analyzed with the help of tables, graphs, equations and inequalities. • Sets of data can be displayed and compared using various systematic or graphical representations. • Measures of spread and measures of central tendency can be used to describe the shape of data sets. • Relationships that are expressed in words may be translated into algebraic expressions, equations or inequalities. • Simple one step equations can be solved using informal methods.

	Content	Skills	Suggested Assessments*	Connecticut Content Standards
	Probability and Statistics	<ul style="list-style-type: none"> • Choose appropriate scales and intervals for data. • Construct and interpret frequency charts line graphs, bar graphs, circle graphs, and stem-and-leaf. • Find and interpret the probability of an event using different methods. • Understand the concept of mean, median, and mode • Compute mean, median, and mode, range, and use of outliers. • Solve probability problems utilizing diagrams and tables. • To be able to use probability to make predications. 	<ul style="list-style-type: none"> • Find and interpret mean, median, and mode of any given set of data • Find the range and domain of any set of data • Analyze line, bar, circle graphs, and stem and leaf plots • Find the probability of an event. 	<ul style="list-style-type: none"> • Appropriate computational strategies facilitate problem solving. • Sets of data can be displayed and compared using various systematic or graphical representations. • Measures of spread and measures of central tendency can be used to describe the shape of data sets. • Probability can be expressed in various forms. • Probabilities are useful for prediction what will happen in a large number of trials, but will not determine, for certain the outcome of a single trial.

*Formal and informal assessments for skills may also encompass—1) testing; 2) class work (self-guided and group); 3) homework; 4) IOWA Test of Basic Skills; 5) use of computer curriculum to assess skills on map.