



GREAT NECK PUBLIC SCHOOLS

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Curriculum Profile: Math 6E

<u>Department</u>	Mathematics		
<u>Course Name</u>	Math 6E		
<u>Course Length</u>	One Year		
<u>High School Credits</u>	N/A		
<u>Description</u>	Math 6E focuses on the following areas: (1) connecting ratio and rate using concepts of ratio tables, unit rates, and cross multiplication with variables to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers; (3) Operations with signed integers as well as signed rational numbers (4) Writing and interpreting expressions (5) Writing, interpreting, and solving one and two-step equations; (6) deepening understanding of area, surface area and volume including algebraic representation and connections in geometric shapes; and (7) developing understanding of simple probabilities and statistical thinking.		
<u>Target/eligible students</u>	6th graders on the enriched mathematics track		
<u>State Learning Standards Link(s)</u>	NYS Math Standards		pgs. 78-88
<u>Primary texts and materials</u>	N-Gen Math 6 (Emathinstruction), Glencoe Mathematics Course 1, N-Gen Math 7 (Emathinstruction), Glencoe Mathematics Course II		
<u>Scope/Sequence</u>	*Standards/ Themes	Description (and location within the state learning standards document)	
<u>Unit 1: Whole Numbers</u>	NY-6.NS	Students will compute fluently with multi-digit numbers and find common factors and multiples.	pg. 80
<u>Unit 2: Fractions</u>	NY-6.NS	Students will interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions. Students will use all operations of fractions to demonstrate problem solving skills.	pg. 79
<u>Unit 3: Decimals</u>	NY-6.NS	Students will fluently add, subtract, multiply, and divide multi-digit decimals using a standard algorithm for each operation.	pg. 80
<u>Unit 4: Positive and Negative Numbers</u>	NY-6.NS NY-7.NS.1 NY-7.NS.1d NY-7.NS.2 NY-7.NS.2d NY-7.EE.3	Students will apply and extend previous understandings of numbers to the system of rational numbers including understanding that positive and negative numbers are used together to describe quantities of opposite values. Students will understand rational numbers as locations on the number line. Students will be able to understand ordering and the absolute value of rational numbers. Using their knowledge of rational numbers, students will be able to solve real-world mathematical problems by graphing points on a coordinate plane. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers. Represent addition and subtraction on a horizontal or vertical number line. Apply properties of operations as strategies to add and	pgs. 80-81

		subtract rational numbers. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. Convert a fraction to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats. Solve multi-step real-world and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically.	
<u>Unit 5: Expressions</u>	NY-6.EE NY-7.EE.1 NY-7.EE.2	Students will write and evaluate numerical expressions involving whole number exponents. Students will write, read, translate and evaluate expressions including variables. This will include application of properties to create equivalent expressions. Add, subtract, factor, and expand linear expressions with rational coefficients by applying the properties of operations. Understand that rewriting an expression in different forms in real-world and mathematical problems can reveal and explain how the quantities are related.	pg. 82
<u>Unit 6: Equations and Inequalities</u>	NY-6.EE NY-7.EE.4	Students will be able to write and solve one-step equations. Students will be able to use substitution to answer questions as well as isolate a variable to solve. Students will solve real world problems by writing equations in which they use variables to represent unknown numbers. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	pg. 83
<u>Unit 7: Rates and Ratios</u>	NY-6.RP NY-7.RP.1 NY-7.RP.2 NY-7.RP.3	Students will understand the concept of ratio to describe a relationship between two quantities. They will use ratio and rate reasoning to solve real-world mathematical problems using several methods including graphing, ratio tables, and with whole number measurements. Students will be able to compute unit rates associated with ratios of fractions. Recognize and represent proportional relationships between quantities. Use proportional relationships to solve multistep ratio and percent problems.	pg. 78
<u>Unit 8: Percents</u>	NY-6.RP	Students will find the percent of a quantity as a rate per 100. They will solve percent proportions finding the whole given the part and percent and finding a part of a whole given the percent.	pg. 78
<u>Unit 9: Geometry</u>	NY-6.G NY-7.G.6	Students will solve real-world mathematical problems including area, surface area and volume. Students will recognize how to decompose composite figures into triangles and quadrilaterals while solving real world problems and using the coordinate plane. Students will be able to find volumes of right rectangular prisms and represent those 3-D shapes as nets. Solve real-world and mathematical problems involving area of two-dimensional objects composed of triangles and trapezoids.	pg. 85
<u>Unit 10: Statistics</u>	NY-6.SP NY-7.SP.1	Students will be able to recognize statistical questions while collecting, analyzing and interpreting data by looking at the distribution, measures of center and measures of variation then displaying the data in a variety of plots and graphs. Construct and interpret box-plots,	pgs. 86-87

		find the interquartile range, and determine if a data point is an outlier.	
<u>Unit 11: Probability</u>	NY-6. SP	Students will investigate the likelihood or chance of simple events using theoretical and experimental probability.	pg. 88
<u>Additional Notes</u>			