

West Deptford Middle School Curriculum Map
Math - Grade 6

Unit/ Duration	Essential Questions	Content	Skills	Assessment	Standards
Unit 1: Number System 7 Weeks	<ul style="list-style-type: none"> • How are decimals and fractions related? • How can fractions be represented and simplified? • How can numbers be broken apart into fractions? • How can we compare and contrast numbers? • How can we decide when to use an exact answer and when to use an estimate? • How can you solve real world division of fraction word problems using 	<ul style="list-style-type: none"> • How to apply the quotient to real world connections • How to calculate the value of exponents • How to use prime factorization to find the GCF and LCM • The definition of reciprocal • The division algorithm 	<ul style="list-style-type: none"> • Differentiate between statistical questions and those that are not. • Divide by whole and decimal number divisors • Examine the distribution of a data set and explain the median, mean, and interquartile range. • Find prime factorization using exponents • Fluently use the standard algorithm to add, subtract, multiply and divide multi-digit decimals. 	<ul style="list-style-type: none"> • classwork practice page • cooperative learning tasks • exit ticket • games • Homework • manipulatives • notebook activities • quiz • Self Assessment • slate practice • teacher observation • unit assessment • Written Questions / Exercises with 	<ul style="list-style-type: none"> • MA.6.CCSS.Math.Content.6.NS.B • MA.6.CCSS.Math.Content.6.NS.B.2 • MA.6.CCSS.Math.Content.6.NS.B.3 • MA.6.CCSS.Math.Content.6.NS.C.5 • MA.6.CCSS.Math.Content.6.SP.A.1 • MA.6.CCSS.Math.Content.6.SP.A.2 • MA.6.CCSS.Math.Content.6.SP.A.3 • MA.6.CCSS.Math.Content.6.SP.B.5c • MA.6.CCSS.Math.Content.6.SP.B.5d • CRP.K-12.CRP4 • CAEP.9.2.8.B.3 • CRP.K-12.CRP8

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	<p>visual models and equations?</p> <ul style="list-style-type: none"> • How do mathematical ideas interconnect and build on one another to produce a coherent whole? • How do operations affect numbers? • How do we compare and contrast numbers? • How is dividing a whole number by a fraction alike/different from dividing a fraction by a whole number? • How is the value of an integer determined? • What are different 		<ul style="list-style-type: none"> • Interpret the quotient with remainders • Solve multiplication and division of fractions using a visual model. • Understand the meaning of vocabulary terms such as temp. above/below zero, elevation above/below sea level, credits/debits, and positive and negative values as they represent quantities in real-world. • Use appropriate method for sensible estimation • Use strategies to find GCF and 	<p>Short, Extended or Multiple-choice Answers</p>	
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	<p>ways rational numbers can be represented?</p> <ul style="list-style-type: none"> • What is number sense? • When do we divide pieces of a whole? • When do you need to utilize multiplication to divide fractions? 		LCM		
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Unit/ Duration	Essential Questions	Content	Skills	Assessment	Standards
Unit 2: Rational Numbers 7 Weeks	<ul style="list-style-type: none"> • How can the data representation influence conclusions? • How do the coordinate of an ordered pair determine the point's location on a coordinate 	<ul style="list-style-type: none"> • axis • box plot • coordinate pair • coordinate plane • coordinate system 	<ul style="list-style-type: none"> • calculate the mean, median, mode, and range of a set of data • display numerical data on various graphs • extend the number line to 	<ul style="list-style-type: none"> • Cooperative learning tasks • Games • Homework • Manipulatives • Notebook 	<ul style="list-style-type: none"> • MA.6.CCSS.Math.Content.6.RP.A • MA.6.CCSS.Math.Content.6.RP.A.1 • MA.6.CCSS.Math.Content.6.RP.A.2 • MA.6.CCSS.Math.Content.6.RP.A.3 • MA.6.CCSS.Math.Content.6.RP.A.3a • MA.6.CCSS.Math.Content.6.RP.A.3b • MA.6.CCSS.Math.Content.6.RP.A.3c • MA.6.CCSS.Math.Con

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	<p>plane?</p> <ul style="list-style-type: none"> • How do we compare and contrast numbers? • How is data used in the real world? • How is the value of an integer determined? • What are opposite numbers? • What is a reflection? • What is absolute value? • What is an ordered pair? • What is the coordinate grid? • What is the purpose of data display and statistical 	<ul style="list-style-type: none"> • data • dot plot • first quartile • graph • histogram • line plot • lower extreme • maximum • mean absolute deviation • mean, median, mode and range • measure of variation • origin • outlier • plot • rational number 	<p>represent all rational numbers</p> <ul style="list-style-type: none"> • find the area and perimeter of a geometric figure on a coordinate plane by finding the distance between the same x or y coordinate • find the distance between points with the same first or second coordinate through the use of absolute value • identify and graph integers on a number line. • locate and graph points on a coordinate plane (all 4 quadrants) • organize and display data using dot plot, 	<p>Activities</p> <ul style="list-style-type: none"> • Quiz • Slate Practice • Teacher observation • Unit assessment 	<ul style="list-style-type: none"> • tent.6.RP.A.3d • MA.6.CCSS.Math.Content.6.NS.C.6 • MA.6.CCSS.Math.Content.6.NS.C.6a • MA.6.CCSS.Math.Content.6.NS.C.6b • MA.6.CCSS.Math.Content.6.NS.C.6c • MA.6.CCSS.Math.Content.6.NS.C.7 • MA.6.CCSS.Math.Content.6.NS.C.7a • MA.6.CCSS.Math.Content.6.NS.C.7b • MA.6.CCSS.Math.Content.6.NS.C.7c • MA.6.CCSS.Math.Content.6.NS.C.7d • MA.6.CCSS.Math.Content.6.NS.C.8 • CRP.K-12.CRP4 • CAEP.9.2.8.B.3 • CRP.K-12.CRP8
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	<p>measures?</p> <ul style="list-style-type: none"> • When in the real world do you use absolute value? • Why do we need positive and negative numbers? 	<ul style="list-style-type: none"> • third quartile • upper extreme • x axis • x coordinate • y axis • y coordinate 	<p>histogram and box plots</p> <ul style="list-style-type: none"> • plot an ordered pair and understand how the opposite sign creates its reflection • recognize that a number and its opposite are equidistance from zero. • select and justify mean, median, or mode as the best representation of the data • use $<$ or $>$ to compare rational numbers in real world context 		
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Unit 3: Expressions and Factors 6 Weeks	<ul style="list-style-type: none"> • How can addition patterns in a sequence help determine algebraic rules? • How can change be best represented mathematically? • How can patterns, relationships and functions be used as tools to best describe and help explain real-life situations? • How do we figure out what the variable represents? • What are equivalent expressions? • What is an 	<ul style="list-style-type: none"> • absolute value • Algebraic expression • associative property • coefficient • commutative property • distributive property • equivalent • evaluate • expressions • greatest common factor • order of operations • substitution 	<ul style="list-style-type: none"> • apply properties to generate equivalent expressions • find a rule to extend a pattern • identify the parts of an expression (sum, term, product, factor, quotient, coefficient) • identify when two expressions are equivalent • identify, translate and write algebraic expressions • write an algebraic expression for a sequence • write and evaluate expressions in 	<ul style="list-style-type: none"> • Classwork practice page • Cooperative Learning Tasks • Games • Homework • Manipulatives • Notebook Activities • Quiz • Slate Practice • Teacher Observations • Unit Assessment 	<ul style="list-style-type: none"> • MA.6.CCSS.Math.Content.6.NS.B.4 • MA.6.CCSS.Math.Content.6.EE.A.1 • MA.6.CCSS.Math.Content.6.EE.A.2 • MA.6.CCSS.Math.Content.6.EE.A.2a • MA.6.CCSS.Math.Content.6.EE.A.2b • MA.6.CCSS.Math.Content.6.EE.A.2c • MA.6.CCSS.Math.Content.6.EE.A.3 • MA.6.CCSS.Math.Content.6.EE.A.4 • MA.6.CCSS.Math.Content.6.EE.B.6 • CRP.K-12.CRP4 • CAEP.9.2.8.B.3 • CRP.K-12.CRP8

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	<p>expression?</p> <ul style="list-style-type: none"> What is the greatest common factor? 	<ul style="list-style-type: none"> sum term value variable 	<p>exponents</p> <ul style="list-style-type: none"> write expressions from verbal descriptions using variables and numbers and understand order matters when writing subtraction and division 		
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Unit/ Duration	Essential Questions	Content	Skills	Assessment	Standards
Unit 4: Equations and Inequalities 7 Weeks	<ul style="list-style-type: none"> How can change be best represented mathematically? How can patterns, relations, and functions be used as tools to best describe and help explain real-life situations? What makes an 	<ul style="list-style-type: none"> absolute value addition property of equality algebraic expression base division property of equality equivalent 	<ul style="list-style-type: none"> find the solution set for a linear inequality when replacement values are given for the variables solve equations involving more than one operation solve inequalities by using addition 	<ul style="list-style-type: none"> Assessment Classwork practice page Cooperative learning tasks Games Homework Manipulatives Notebook 	<ul style="list-style-type: none"> MA.6.CCSS.Math.Content.6.EE.B.5 MA.6.CCSS.Math.Content.6.EE.B.6 MA.6.CCSS.Math.Content.6.EE.B.7 MA.6.CCSS.Math.Content.6.EE.B.8 MA.6.CCSS.Math.Content.6.EE.C MA.6.CCSS.Math.Content.6.EE.C.9 CRP.K-12.CRP4 CAEP.9.2.8.B.3 CRP.K-12.CRP8

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	<p>algebraic algorithm both effective and efficient?</p>	<p>equation</p> <ul style="list-style-type: none"> • evaluate • exponents • factors • inductive reasoning • linear equations • multiplication property of equality • order of operations • power • products • sequence • subtraction property of equality • terms • variable 	<p>and subtraction</p> <ul style="list-style-type: none"> • solve inequalities by using multiplication and division • solve linear inequalities involving more than one operation • solve problems by working backward • independently solve equations by using addition • independently solve equations by using multiplication and division 	<p>Activities</p> <ul style="list-style-type: none"> • Quiz • Slate practice • Teacher observation 	
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Unit 5: Ratio and Proportion 7 Weeks	<ul style="list-style-type: none"> • How can measurements be used to solve problems? • How can spatial relationships be described by careful use of geometric language? • How can the collection, organization, interpretation, and display of data be used to answer questions? • How can we best represent and verify geometric/algebraic relationships? • How do geometric 	<ul style="list-style-type: none"> • How can measurements be used to solve problems? • How can spatial relationships be described by careful use of geometric language? • How can the collection, organization, interpretation, and display of data be used to answer questions? • How can we best represent and verify geometric/algebraic relationships? • How do geometric 	<ul style="list-style-type: none"> • Collect, generate, organize, and display data: Data generated from surveys. • Develop and apply strategies and formulas for finding the surface area and volume of rectangular prisms and cylinders. • Identify a three-dimensional shape with a given net (i.e., a flat pattern that folds into a 3D shape). • Identify a three-dimensional shape with given projections (top, front and side 	<ul style="list-style-type: none"> • Classwork practice page • Cooperative Learning Tasks • Games • Homework • Manipulatives • Notebook Activities • Quiz • Slate Practice • Teacher Observations • Unit Assessment 	<ul style="list-style-type: none"> • MA.6.CCSS.Math.Content.6.G.A.1 • MA.6.CCSS.Math.Content.6.G.A.2 • MA.6.CCSS.Math.Content.6.G.A.3 • MA.6.CCSS.Math.Content.6.G.A.4 • MA.6.CCSS.Math.Content.6.SP.B.4 • MA.6.CCSS.Math.Content.6.SP.B.5 • MA.6.CCSS.Math.Content.6.SP.B.5a • MA.6.CCSS.Math.Content.6.SP.B.5b • CRP.K-12.CRP4 • CAEP.9.2.8.B.3 • CRP.K-12.CRP8

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	<p>relationships help us to solve problems and/or make sense of phenomena?</p> <ul style="list-style-type: none"> • What situations can be analyzed using transformations and symmetries? 	<p>relationships help us to solve problems and/or make sense of phenomena?</p> <ul style="list-style-type: none"> • What situations can be analyzed using transformations and symmetries? 	<p>views).</p> <ul style="list-style-type: none"> • Identify, describe, and draw the faces or shadows (projections) of three-dimensional geometric objects from different perspectives. • Read, interpret, select, construct, analyze, generate questions about, and draw inferences from displays of data: Bar graph, line graph, circle graph, table, histogram; Range, median, and mean; Calculators and computers used to record and process information. • Recognize, identify, and describe 		
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			<p>geometric relationships and properties as they exist in nature, art, and other real-world settings.</p> <ul style="list-style-type: none">• Select and use appropriate units to measure angles, area, surface area, and volume.• Use a translation, a reflection, or a rotation to map one figure onto another congruent figure.		
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