



Medford Lakes School District

Math Curriculum Guide - Grade 6

Written by: Kathy O'Brien

Text/Program: "Big Ideas"

SIXTH GRADE MATHEMATICS				
Chapter	Lessons	Chapter Content:	Domain/ Common Core State Standards	Suggested days for topic:
1	6	Numerical Expressions and Factors	Number System & Expressions and Equations/6.NS.2, 6.NS.4, 6.EE.1, 6.EE.2b	18 Scavenger Hunt, 6 activities, 6 lessons, 1 extension, Chapter Opener, Quiz, Review, Test
<i>Lessons: Essential Questions</i>		<i>Resources, Materials, & Games</i>		<i>Assessments</i>
1. <i>Whole Number Operations:</i> How do you know which operation to choose when solving a real-life problem? 2. <i>Powers and Exponents:</i> How can you use repeated factors in real-life situations? 3. <i>Order of Operations:</i> What is the effect of inserting parentheses into a numerical expression? 4. <i>Prime Factorization:</i> Without dividing, how can you tell when a number is divisible by another number? 5. <i>Greatest Common Factor:</i> How can you find the greatest common factor of two numbers? 6. <i>Least Common Multiple:</i>		<i>Resources</i> <ul style="list-style-type: none"> • Big Ideas Student Text • Big Ideas Record & Practice Journal • Big Ideas Resources by Chapter and Performance Tasks • Online account <i>Materials & Manipulatives</i> <ul style="list-style-type: none"> • Calculators • Colored Pencils • Index Cards • Checkers/Chess Board • Recycling Posters or Pictures • Square Tiles • Video of a Roller Coaster • Yarn, String, or Rope <i>Differentiation Opportunities</i> <ul style="list-style-type: none"> • Skills Review and Basic Skills Handbook • Lesson Tutorials (online) • Intensive Intervention Activities (online) • Differentiating the Lesson (online) • Enrichment and Extension <i>Online Resources</i> <ul style="list-style-type: none"> • Dynamic Classroom (technology) • Game Closet 		<i>Summative</i> What You Learned Before Chapter Test Quizzes Standards Assessment <i>Formative</i> Discovery Activity Observation and "What's Your Answer?" Responses Guided Practice Observation Lesson Summary Responses Homework



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<p>How can you find the least common multiple of two numbers?</p>	<ul style="list-style-type: none"> • Check It Out: Lesson Tutorials at www.bigideasmath.com 	
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SIXTH GRADE MATHEMATICS

Chapter 1	Lessons 6	Chapter Content: Numerical Expressions and Factors	Domain/ Common Core State Standards Number System & Expressions and Equations/6.NS.2, 6.NS.4, 6.EE.1, 6.EE.2b	Suggested days for topic: 18 Scavenger Hunt, 6 activities, 6 lessons, 1 extension, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources



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<ol style="list-style-type: none"> 1. <i>Whole Number Operations</i>: Students will perform computations with whole numbers and review how to check solutions. 2. <i>Powers and Exponents</i>: Students will write a product of repeated factors using an exponent. Student will use formal language to describe a power and look at the specific case of perfect squares. 3. <i>Order of Operations</i>: Students will use the order of operations to evaluate a numerical expression. 4. <i>Prime Factorization</i>: Students will use the divisibility rules to help write the prime factorization of numbers. 5. <i>Greatest Common Factor</i>: Students will find the greatest common factor by using lists of factors and prime factorization. 6. <i>Least Common Multiple</i>: Students will find the least common multiple by using lists of multiples and prime factorization. Students will use the least common multiple to add and subtract fractions. 	<p>power base exponent perfect square numerical expression evaluate order of operations factor pair prime factorization factor tree Venn diagram common factors greatest common factor (GCF) common multiples least common multiple (LCM) least common denominator (LCD)</p>	<p>Distributing and Factoring Using Area and Zip Zilch Zero at: http://illuminations.nctm.org/</p> <p>Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-6</p> <p>A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html</p>
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SIXTH GRADE MATHEMATICS

<p>Chapter 2</p>	<p>Lessons 6</p>	<p>Chapter Content: Fractions and Decimals</p>	<p>Domain/ Common Core State Standards</p>	<p>Suggested days for topic:20</p>
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			The Number System/6.NS.1, 6.NS.3	6 activities, 6 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments
1. <i>Multiplying Fractions:</i> What does it mean to multiply fractions? 2. <i>Dividing Fractions:</i> How can you divide by a fraction? 3. <i>Dividing Mixed Numbers:</i> How can you model division by a mixed number? 4. <i>Adding and Subtracting Decimals:</i> How can you add and subtract decimals? 5. <i>Multiplying Decimals:</i> How can you multiply decimals? 6. <i>Dividing Decimals:</i> How can you use base ten blocks to model decimal division?		<i>Resources</i> <ul style="list-style-type: none"> • Big Ideas Student Text • Big Ideas Record & Practice Journal • Big Ideas Resources by Chapter and Performance Tasks • Online account <i>Materials & Manipulatives</i> <ul style="list-style-type: none"> • Base-ten Blocks • Colored Pencils • Coins or Counters • Food Coloring, clear plastic bottle • Grid Paper • Number Cubes • Quarters, Yardstick • Travel Coffee Mug <i>Differentiation Opportunities</i> <ul style="list-style-type: none"> • Skills Review and Basic Skills Handbook • Lesson Tutorials (online) • Intensive Intervention Activities (online) • Differentiating the Lesson (online) • Enrichment and Extension <i>Online Resources</i> <ul style="list-style-type: none"> • Dynamic Classroom (technology) • Game Closet • Check It Out: Lesson Tutorials at www.bigideasmath.com 		<i>Summative</i> What You Learned Before Chapter Test Quizzes Standards Assessment <i>Formative</i> Discovery Activity Observation and "What's Your Answer?" Responses Guided Practice Observation Lesson Summary Responses Homework



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2	6	Fractions and Decimals	The Number System/6.NS.1, 6.NS.3	6 activities, 6 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources
<ol style="list-style-type: none"> <i>Multiplying Fractions:</i> Students will use visual models to multiply fractions. Students will formalize the process for multiplying fractions. <i>Dividing Fractions:</i> Students will use visual models to divide fractions. Students will use a formal rule to divide by a fraction. <i>Dividing Mixed Numbers:</i> Students will use visual models to divide mixed numbers. Students will use a formal rule to divide by a fraction. <i>Adding and Subtracting Decimals:</i> Students will use a formal rule to add and subtract decimals. <i>Multiplying Decimals:</i> Students will use a formal rule to multiply decimals. <i>Dividing Decimals:</i> Students will use a formal rule to divide decimals. 		reciprocal		<p>Sewing at: http://www.insidemathematics.org/performance-assessment-tasks</p> <p>Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-6</p> <p>A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html</p>



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Chapter	Lessons	Chapter Content:	Domain/ Common Core State Standards	Suggested days for topic:13
3	4	Algebraic Expressions and Properties	Expressions and Equations, The Number System/6.EE.2a, 6.EE.2c, 6.EE.3, 6.EE.4, 6.NS.4	4 activities, 4 lessons, 1 extension, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments
1. <i>Algebraic Expressions:</i> How can you write and evaluate an expression that represents a real-life problem? 2. <i>Writing Expressions:</i> How can you write an expression that represents an unknown quantity? 3. <i>Properties of Addition and Multiplication:</i> Does the order in which you perform an operation matter? 4. <i>The Distributive Property:</i> How do you use mental math to multiply two numbers?		<i>Resources</i> <ul style="list-style-type: none"> • Big Ideas Student Text • Big Ideas Record & Practice Journal • Big Ideas Resources by Chapter and Performance Tasks • Online account <i>Materials & Manipulatives</i> <ul style="list-style-type: none"> • Grid Paper • Bingo Chips • Blank Bingo Cards • Index Cards • Toothbrush/Toothpaste <i>Differentiation Opportunities</i> <ul style="list-style-type: none"> • Skills Review and Basic Skills Handbook • Lesson Tutorials (online) • Intensive Intervention Activities (online) • Differentiating the Lesson (online) • Enrichment and Extension <i>Online Resources</i> <ul style="list-style-type: none"> • Dynamic Classroom (technology) 		<i>Summative</i> What You Learned Before Chapter Test Quizzes Standards Assessment <i>Formative</i> Discovery Activity Observation and "What's Your Answer?" Responses Guided Practice Observation Lesson Summary Responses



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	<ul style="list-style-type: none"> • Game Closet • Check It Out: Lesson Tutorials at www.bigideasmath.com 	Homework
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SIXTH GRADE MATHEMATICS

Chapter 3	Lessons 4	Chapter Content: Algebraic Expressions and Properties	Domain/ Common Core State Standards Expressions and Equations, The Number System/6.EE.2a, 6.EE.2c, 6.EE.3, 6.EE.4, 6.NS.4,	Suggested days for topic: 13 4 activities, 4 lessons, 1 extension, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources



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<ol style="list-style-type: none"> 1. <i>Algebraic Expressions</i>: Students will write and evaluate an algebraic expression containing a variable. 2. <i>Writing Expressions</i>: Students will use variables to represent numbers in algebraic expressions. Students will write algebraic expressions. 3. <i>Properties of Addition and Multiplication</i>: Students will use the commutative property, associative property, addition property of zero, and multiplication properties of zero and one to create equivalent expressions 4. <i>The Distributive Property</i>: Students will use the distributive property to simplify algebraic expressions. Students will use the distributive property to factor expressions. 	<p>algebraic expressions terms variable coefficient constant equivalent expressions like terms factoring an expression</p>	<p>Algebra in Balance and Zip Zilch Zero at: http://illuminations.nctm.org/</p> <p>Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-6</p> <p>A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html</p>
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SIXTH GRADE MATHEMATICS				
Chapter	Lessons	Chapter Content:	Domain/ Common Core State Standards	Suggested days for topic:13
4	4	Areas of Polygons		



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			Geometry/6.G.1, 6.G.3	4 activities, 4 lessons, 1 extension, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments
<ol style="list-style-type: none"> <i>Areas of Parallelograms:</i> How can you derive a formula for the area of a parallelogram? <i>Areas of Triangles:</i> How can you derive a formula for the area of a triangle? <i>Areas of Trapezoids:</i> How can you derive a formula for the area of a trapezoid? <i>Polygons in the Coordinate Plane:</i> How can you find the lengths of line segments in a coordinate plane? 		<p><i>Resources</i></p> <ul style="list-style-type: none"> • Big Ideas Student Text • Big Ideas Record & Practice Journal • Big Ideas Resources by Chapter and Performance Tasks • Online account <p><i>Materials & Manipulatives</i></p> <ul style="list-style-type: none"> • Grid Paper, scissors • 5 Red Chips, 5 Blue Chips, Coin • Paper with 4 copies of a trapezoid drawn on it • Picture of Flatiron (or Fuller) Building in New York City • Right Triangle Pieces • Triangular Newspaper Hat (or video) • <i>Tic-Tac-Toe Game Boards*</i> <p><i>Differentiation Opportunities</i></p> <ul style="list-style-type: none"> • Skills Review and Basic Skills Handbook • Lesson Tutorials (online) • Intensive Intervention Activities (online) • Differentiating the Lesson (online) • Enrichment and Extension <p><i>Online Resources</i></p> <ul style="list-style-type: none"> • Dynamic Classroom (technology) • Game Closet • Check It Out: Lesson Tutorials at www.bigideasmath.com 		<p><i>Summative</i></p> <p>What You Learned Before</p> <p>Chapter Test</p> <p>Quizzes</p> <p>Standards Assessment</p> <p><i>Formative</i></p> <p>Discovery Activity</p> <p>Observation and "What's Your Answer?" Responses</p> <p>Guided Practice Observation</p> <p>Lesson Summary Responses</p> <p>Homework</p>



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Chapter 4	Lessons 4	Chapter Content: Areas of Polygons	Domain/ Common Core State Standards Geometry/6.G.1, 6.G.3	Suggested days for topic: 13 4 activities, 4 lessons, 1 extension, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources
1. <i>Areas of Parallelograms:</i> Students will use the formula to find the area of a parallelogram.		polygon		Finding Your Way Around at: http://illuminations.nctm.org/
2. <i>Areas of Triangles:</i> Students will use the formula to find the area of a triangle.		parallelogram		Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-6
3. <i>Areas of Trapezoids:</i> Students will use the formula to find the area of a trapezoid. Students will find the areas of composite figures.		triangle		A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html
4. <i>Polygons in the Coordinate Plane:</i> Students will draw polygons in the coordinate plane and find the length of their sides.		trapezoid		
		composite figures		



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SIXTH GRADE MATHEMATICS				
Chapter 5	Lessons 7	Chapter Content: Ratios and Rates	Domain/ Common Core State Standards Ratio and Proportional Relationships/6.RP.1, 6.RP2, 6.RP.3a-d	Suggested days for topic: 18 7 activities, 7 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments



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<ol style="list-style-type: none"> 1. <i>Ratios</i>: How can you represent a relationship between two quantities? 2. <i>Ratio Tables</i>: How can you find two ratios that describe the same relationship? 3. <i>Rates</i>: How can you use rates to describe changes in real-life problems? 4. <i>Comparing and Graphing Ratios</i>: How can you compare two ratios? 5. <i>Percents</i>: What is the connection between ratios, fractions, and percents? 6. <i>Solving Percent Problems</i>: How can you use mental math to find the percent of a number? 7. <i>Converting Measures</i>: How can you compare lengths between the customary and metric systems? 	<p><i>Resources</i></p> <ul style="list-style-type: none"> • Big Ideas Student Text • Big Ideas Record & Practice Journal • Big Ideas Resources by Chapter and Performance Tasks • Online account <p><i>Materials & Manipulatives</i></p> <ul style="list-style-type: none"> • Colored Pencils, Grid Paper • Small Balls, Calculators • Clear Plastic Containers • Clock with Second Hand • Coins, Eye Dropper • Food Coloring • Phone Book, Square Tiles • Transparent Ruler <p><i>Differentiation Opportunities</i></p> <ul style="list-style-type: none"> • Skills Review and Basic Skills Handbook • Lesson Tutorials (online) • Intensive Intervention Activities (online) • Differentiating the Lesson (online) • Enrichment and Extension <p><i>Online Resources</i></p> <ul style="list-style-type: none"> • Dynamic Classroom (technology) • Game Closet • Check It Out: Lesson Tutorials at www.bigideasmath.com 	<p><i>Summative</i></p> <p>What You Learned Before</p> <p>Chapter Test</p> <p>Quizzes</p> <p>Standards Assessment</p> <p><i>Formative</i></p> <p>Discovery Activity</p> <p>Observation and "What's Your Answer?" Responses</p> <p>Guided Practice Observation</p> <p>Lesson Summary Responses</p> <p>Homework</p>
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SIXTH GRADE MATHEMATICS				
Chapter 5	Lessons 7	Chapter Content: Ratios and Rates	Domain/ Common Core State Standards	Suggested days for topic:18



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			Ratio and Proportional Relationships/6.RP.1, 6.RP2, 6.RP.3a-d	7 activities, 7 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources
<ol style="list-style-type: none"> <i>Ratios:</i> Students will write and use ratios to describe relationships between two quantities. <i>Ratio Tables:</i> Students will create and use ratio tables to find equivalent ratios. <i>Rates:</i> Students will find rates, unit rates and equivalent rates. <i>Comparing and Graphing Ratios:</i> Students will compare ratios and unit rates. Students will graph ordered pairs to compare ratios and rates. <i>Percents:</i> Students will write fractions as percents and percents as fractions. Students will convert between percents and fractions. <i>Solving Percent Problems:</i> Students will find the percents of numbers. Students will find the whole given the part and the percent? <i>Converting Measures:</i> Students will use conversion factors to convert units of measure. 		ratio equivalent ratios ratio table rate unit rate equivalent rates percent U.S. customary system metric system conversion factor unit analysis		Hitting Your Mark and Bean Counting and Ratios at: http://illuminations.nctm.org/ Truffles and Sewing at: http://www.insidemathematics.org/performance-assessment-tasks Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-6 A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html



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Chapter	Lessons	Chapter Content:	Domain/ Common Core State Standards	Suggested days for topic:
6	5	Integers and the Coordinate Plane	The Number System/6.NS.5, 6.NS.6a-c, 6.NS.7a-d, 6.NS.8	15 5 activities, 5 lessons, 1 extension, Chapter Opener, Quiz, Review, Test
<i>Lessons: Essential Questions</i>		<i>Resources, Materials, & Games</i>		<i>Assessments</i>
1. <i>Integers:</i> How can you represent numbers that are less than 0? 2. <i>Comparing and Ordering Integers:</i> How can you use a number line to order real-life events? 3. <i>Fractions and Decimals on the Number Line:</i> How can you use a number line to compare positive and negative fractions and decimals? 4. <i>Absolute Value:</i> How can you describe how far an object is from sea level? 5. <i>The Coordinate Plane:</i> How can you graph and locate points that contain negative numbers in a coordinate plane?		<i>Resources</i> <ul style="list-style-type: none"> • Big Ideas Student Text • Big Ideas Record & Practice Journal • Big Ideas Resources by Chapter and Performance Tasks • Online account <i>Materials & Manipulatives</i> <ul style="list-style-type: none"> • Rulers, Deck of Cards • Grid Paper, Index Cards • Masking Tape Paper • Paper Punch • Piece of Rope • Protractor • String • Wooden Craft Sticks (2) <i>Differentiation Opportunities</i> <ul style="list-style-type: none"> • Skills Review and Basic Skills Handbook • Lesson Tutorials (online) • Intensive Intervention Activities (online) • Differentiating the Lesson (online) • Enrichment and Extension <i>Online Resources</i> <ul style="list-style-type: none"> • Dynamic Classroom (technology) 		<i>Summative</i> What You Learned Before Chapter Test Quizzes Standards Assessment <i>Formative</i> Discovery Activity Observation and "What's Your Answer?" Responses Guided Practice Observation Lesson Summary Responses Homework



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	<ul style="list-style-type: none"> • Game Closet • Check It Out: Lesson Tutorials at www.bigideasmath.com 	
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SIXTH GRADE MATHEMATICS				
Chapter 6	Lessons 5	Chapter Content: Integers and the Coordinate Plane	Domain/ Common Core State Standards The Number System/6.NS.5, 6.NS.6a-c, 6.NS.7a-d, 6.NS.8	Suggested days for topic: 15 5 activities, 5 lessons, 1 extension, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources



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<ol style="list-style-type: none"> 1. <i>Integers</i>: Students will use positive and negative integers to describe real-life situations. Students will write and graph integers on a number line. 2. <i>Comparing and Ordering Integers</i>: Students will compare and order integers. 3. <i>Fractions and Decimals on the Number Line</i>: Students will use a number line to compare rational numbers. 4. <i>Absolute Value</i>: Students will find the absolute value of rational numbers. 5. <i>The Coordinate Plane</i>: Students will describe the locations of points, plot points and find distances between points in the coordinate plane. Students will reflect points in the coordinate plane. 	<p>positive numbers negative numbers opposites integers absolute value coordinate plane origin quadrants</p>	<p>Percent Cards at: http://www.insidemathematics.org/performance-assessment-tasks</p> <p>Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-6</p> <p>A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html</p>
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SIXTH GRADE MATHEMATICS				
Chapter 7	Lessons 7	Chapter Content: Equations and Inequalities	Domain/ Common Core State Standards	Suggested days for topic:18



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			Expressions and Equations/6.EE.5, 6.EE.6, 6.EE.7, 6.EE.8, 6.EE.9	7 activities, 7 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments
<ol style="list-style-type: none"> <i>Writing Equations in One Variable:</i> How does rewriting a word problem help you solve the word problem? <i>Solving Equations Using Addition or Subtraction:</i> How can you use addition or subtraction to solve an equation? <i>Solving Equations Using Multiplication or Division:</i> How can you use multiplication or division to solve an equation? <i>Writing Equations in Two Variables:</i> How can you write an equation in two variables? <i>Writing and Graphing Inequalities:</i> How can you use a number line to represent solutions of an inequality? <i>Solving Inequalities Using Addition or Subtraction:</i> How can you use addition or subtraction to solve an inequality? <i>Solving Inequalities Using Multiplication or Division:</i> How can you use multiplication or division to solve an inequality? 		<p><i>Resources</i></p> <ul style="list-style-type: none"> Big Ideas Student Text Big Ideas Record & Practice Journal Big Ideas Resources by Chapter and Performance Tasks Online account <p><i>Materials & Manipulatives</i></p> <ul style="list-style-type: none"> Algebra Tiles Clear Gallon Jug File Folder Paper Index Cards Pan Balance Pencils of Lengths (approximately) 3", 4", 5", 6", 8" <p><i>Differentiation Opportunities</i></p> <ul style="list-style-type: none"> Skills Review and Basic Skills Handbook Lesson Tutorials (online) Intensive Intervention Activities (online) Differentiating the Lesson (online) Enrichment and Extension <p><i>Online Resources</i></p> <ul style="list-style-type: none"> Dynamic Classroom (technology) Game Closet Check It Out: Lesson Tutorials at www.bigideasmath.com 		<p><i>Summative</i></p> <p>What You Learned Before</p> <p>Chapter Test</p> <p>Quizzes</p> <p>Standards Assessment</p> <p><i>Formative</i></p> <p>Discovery Activity</p> <p>Observation and "What's Your Answer?" Responses</p> <p>Guided Practice Observation</p> <p>Lesson Summary Responses</p> <p>Homework</p>



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Chapter	Lessons	Chapter Content:	Domain/ Common Core State Standards	Suggested days for topic:
7	7	Equations and Inequalities	Expressions and Equations/6.EE.5, 6.EE.6, 6.EE.7, 6.EE.8, 6.EE.9	18 7 activities, 7 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources
<ol style="list-style-type: none"> <i>Writing Equations in One Variable:</i> Students will translate words into mathematical equations. <i>Solving Equations Using Addition or Subtraction:</i> Students will use the subtraction and addition properties of equality to solve equations. <i>Solving Equations Using Multiplication or Division:</i> Students will use the multiplication and division properties of equality to solve equations. <i>Writing Equations in Two Variables:</i> Students will write equations in two variables and determine whether an ordered pair is a solution of an equation. <i>Writing and Graphing Inequalities:</i> Students will translate words into mathematical inequalities and determine what numbers are solutions of an inequality. Students will graph an inequality. <i>Solving Inequalities Using Addition or Subtraction:</i> Students will use the subtraction and addition properties of inequality to solve inequalities. <i>Solving Inequalities Using Multiplication or Division:</i> Students will use the multiplication and 		equation solution inverse operations equation in two variables solution of an equation in two variables independent variables dependent variables inequality solution of an inequality solution set graph of an inequality		Bouncing Tennis Balls at: http://illuminations.nctm.org/ Gym at: http://www.insidemathematics.org/performance-assessment-tasks Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-6 A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html



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<p>division properties of inequality to solve inequalities.</p>		
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Chapter 8	Lessons 4	Chapter Content: Surface Area and Volume	Domain/ Common Core State Standards Geometry/6.G.2, 6.G.4	Suggested days for topic: 12 4 activities, 4 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments



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<ol style="list-style-type: none"> 1. <i>Three-Dimensional Figures:</i> How do you draw three-dimensional figures? 2. <i>Surface Area of Prisms:</i> How can you find the area of the entire surface of a prism? 3. <i>Surface Areas of Pyramids:</i> How can you use a net to find the surface area of a pyramid? 4. <i>Volumes of Rectangular Prisms:</i> How can you find the volume of a rectangular prism with fractional edge lengths? 	<p><i>Resources</i></p> <ul style="list-style-type: none"> • Big Ideas Student Text • Big Ideas Record & Practice Journal • Big Ideas Resources by Chapter and Performance Tasks • Online account <p><i>Materials & Manipulatives</i></p> <ul style="list-style-type: none"> • Grid Paper, Colored Pencils • Assorted Prisms and Pyramids, Cardboard Prisms • Common Containers (Crayon Box, Egg Carton) • Cube-Shaped Tissue Box, Unit Cubes • Picture of the Louvre Pyramid • Polygon Frames, Ream of Paper • Shoe Box, Square Pyramid, Tissue Box, Triangular Pyramid • Two Rectangular Prisms (different sizes) <p><i>Differentiation Opportunities</i></p> <ul style="list-style-type: none"> • Skills Review and Basic Skills Handbook • Lesson Tutorials (online) • Intensive Intervention Activities (online) • Differentiating the Lesson (online) • Enrichment and Extension <p><i>Online Resources</i></p> <ul style="list-style-type: none"> • Dynamic Classroom (technology) • Game Closet • Check It Out: Lesson Tutorials at www.bigideasmath.com 	<p><i>Summative</i></p> <p>What You Learned Before</p> <p>Chapter Test</p> <p>Quizzes</p> <p>Standards Assessment</p> <p><i>Formative</i></p> <p>Discovery Activity</p> <p>Observation and "What's Your Answer?" Responses</p> <p>Guided Practice Observation</p> <p>Lesson Summary Responses</p> <p>Homework</p>
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SIXTH GRADE MATHEMATICS				
Chapter 8	Lessons 4	Chapter Content: Surface Area and Volume	Domain/ Common Core State Standards	Suggested days for topic:12



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			Geometry/6.G.2, 6.G.4	4 activities, 4 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources
<p>1. <i>Three-Dimensional Figures:</i> Students will draw three-dimensional figures and find the number of faces, edges and vertices.</p> <p>2. <i>Surface Area of Prisms:</i> Students will use a net to find the surface area of a prism.</p> <p>3. <i>Surface Areas of Pyramids:</i> Students will use a net to find the surface area of a pyramid.</p> <p>4. <i>Volumes of Rectangular Prisms:</i> Students will use the formula for the volume of a rectangular prism to solve problems.</p>		<p>solid polyhedron face edge vertex prism pyramid surface area net volume</p>		<p>Building a Box at: http://illuminations.nctm.org/</p> <p>Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-6</p> <p>A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html</p>



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Chapter	Lessons	Chapter Content:	Domain/ Common Core State Standards	Suggested days for topic:
9	5	Statistical Measures	Statistics and Probability/6.SP.1, 6.SP.2, 6.SP.3, 6.SP.4, 6.SP.5a-c	14 5 activities, 5 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments
1. <i>Introduction to Statistics:</i> How can you tell whether a question is a statistical question? 2. <i>Mean:</i> How can you find an average value of a data set? 3. <i>Measures of Center:</i> In what other ways can you describe an average of a data set? 4. <i>Measure of Variation:</i> How can you describe the spread of a data set? 5. <i>Mean Absolute Deviation:</i> How can you use the distances between each data value and the mean of a data set to measure the spread of a data set?		<i>Resources</i> <ul style="list-style-type: none"> • Big Ideas Student Text • Big Ideas Record & Practice Journal • Big Ideas Resources by Chapter and Performance Tasks • Online account <i>Materials & Manipulatives</i> <ul style="list-style-type: none"> • Grid Paper • Counters or Pennies • Number Cubes • Ruler • Sticky Notes • Numbers Spinner (2)* • Spinner Labeled with Mean, Median, Mode, Range, IQR, MAD* <i>Differentiation Opportunities</i> <ul style="list-style-type: none"> • Skills Review and Basic Skills Handbook • Lesson Tutorials (online) • Intensive Intervention Activities (online) • Differentiating the Lesson (online) • Enrichment and Extension <i>Online Resources</i> <ul style="list-style-type: none"> • Dynamic Classroom (technology) • Game Closet 		<i>Summative</i> What You Learned Before Chapter Test Quizzes Standards Assessment <i>Formative</i> Discovery Activity Observation and "What's Your Answer?" Responses Guided Practice Observation Lesson Summary Responses Homework



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	<ul style="list-style-type: none"> • Check It Out: Lesson Tutorials at www.bigideasmath.com 	
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SIXTH GRADE MATHEMATICS				
Chapter 9	Lessons 5	Chapter Content: Statistical Measures	Domain/ Common Core State Standards Statistics and Probability/6.SP.1, 6.SP.2, 6.SP.3, 6.SP.4, 6.SP.5a, 6.SP.5c	Suggested days for topic: 14 5 activities, 5 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources



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<p>1. <i>Introduction to Statistics:</i> Students will recognize statistical questions and plot the response to a statistical question.</p> <p>2. <i>Mean:</i> Students will find the mean of a dataset with and without an outlier. Students will compare and interpret the means of datasets.</p> <p>3. <i>Measures of Center:</i> Students will find the median and mode for a data set.</p> <p>4. <i>Measure of Variation:</i> Students will use the range and the quartiles of a data set to describe the spread of the data.</p> <p>5. <i>Mean Absolute Deviation:</i> Students will use the mean absolute deviation of a data set to describe the spread of the data.</p>	<p>statistics statistical question mean outlier measure of center median mode measure of variation range quartiles first quartile third quartile interquartile range mean absolute deviation</p>	<p>Bouncing Tennis Balls and Celebrated Jumping Frog at: http://illuminations.nctm.org/</p> <p>Baseball Players at: http://www.insidemathematics.org/performance-assessment-tasks</p> <p>Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-6</p> <p>A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html</p>
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SIXTH GRADE MATHEMATICS				
Chapter 10	Lessons 4	Chapter Content: Data Displays	Domain/ Common Core State Standards Statistics and Probability/ 6.SP.2, 6.SP.4, 6.SP.5c, 6.SP.5d	Suggested days for topic: 13 4 activities, 4 lessons, 1 extension, Chapter Opener, Quiz, Review, Test



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Lessons: Essential Questions	Resources, Materials, & Games	Assessments
<ol style="list-style-type: none"> 1. <i>Stem-And-Leaf Plots:</i> How can you use place values to represent data graphically? 2. <i>Histograms:</i> How can you use intervals, tables, and graphs to organize data? 3. <i>Shape of Distributions:</i> How can you describe the shape of the distribution of a data set? 4. <i>Box and Whisker Plots:</i> How can you use quartiles to represent data graphically? 	<p><i>Resources</i></p> <ul style="list-style-type: none"> • Big Ideas Student Text • Big Ideas Record & Practice Journal • Big Ideas Resources by Chapter and Performance Tasks • Online account <p><i>Materials & Manipulatives</i></p> <ul style="list-style-type: none"> • Grid Paper • Number cubes • Tape measures • Index cards • Sticky notes • String <p><i>Differentiation Opportunities</i></p> <ul style="list-style-type: none"> • Skills Review and Basic Skills Handbook • Lesson Tutorials (online) • Intensive Intervention Activities (online) • Differentiating the Lesson (online) • Enrichment and Extension <p><i>Online Resources</i></p> <ul style="list-style-type: none"> • Dynamic Classroom (technology) • Game Closet • Check It Out: Lesson Tutorials at www.bigideasmath.com 	<p><i>Summative</i></p> <p>What You Learned Before</p> <p>Chapter Test</p> <p>Quizzes</p> <p>Standards Assessment</p> <p><i>Formative</i></p> <p>Discovery Activity</p> <p>Observation and "What's Your Answer?" Responses</p> <p>Guided Practice Observation</p> <p>Lesson Summary Responses</p> <p>Homework</p>
SIXTH GRADE MATHEMATICS		



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Chapter 10	Lessons 4	Chapter Content: Data Displays	Domain/ Common Core State Standards Statistics and Probability/ 6.SP.2, 6.SP.4, 6.SP.5c, 6.SP.5d	Suggested days for topic: 13 4 activities, 4 lessons, 1 extension, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Vocabulary		Additional Online Resources
<ol style="list-style-type: none"> <i>Stem-And-Leaf Plots:</i> Students will construct and interpret stem-and-leaf plots. <i>Histograms:</i> Students will construct and interpret histograms. <i>Shape of Distributions:</i> Students will describe and compare shapes of distributions. Students will choose appropriate measures of center and variation to represent data sets. <i>Box and Whisker Plots:</i> Students will construct and interpret box-and-whisker plots. 		stem-and-leaf plot stem leaf frequency table frequency histogram box-and-whisker plot five-number summary		Using NBA Statistics for Box and Whisker Plots at: http://illuminations.nctm.org/ Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-6 A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html