



Medford Lakes School District

Math Curriculum Guide - Grade 7

Written by: Kathy O'Brien

Text/Program: "Big Ideas"

SEVENTH GRADE MATHEMATICS				
Chapter	Lessons	Chapter Content:	Domain/ Common Core State Standards	Suggested days for topic:
1	5	Integers	The Number System/7.NS.1a-d, 7.NS.2a-d, 7.NS.3	15 5 activities, 5 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments
<ol style="list-style-type: none"> <i>Integers and Absolute Value:</i> How can you use integers to represent the velocity and the speed of an object? <i>Adding Integers:</i> Is the sum of two integers positive, negative, or zero? How can you tell? <i>Subtracting Integers:</i> How are adding integers and subtracting integers related? <i>Multiplying Integers:</i> Is the product of two integers positive, negative, or zero? How can you tell? <i>Dividing Integers:</i> Is the quotient of two integers positive, negative, or zero? How can you tell? 		<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"> Integer Counters Handkerchief Index Cards Paper Clips Pencils Yarn, String Two 3-inch Strips of Different Colored Paper <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 		<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 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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	<ul style="list-style-type: none"> • Check It Out: Lesson Tutorials at www.bigideasmath.com 	
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SEVENTH GRADE MATHEMATICS

Chapter 1	Lessons 5	Chapter Content: Integers	Domain/ Common Core State Standards The Number System/7.NS.1a-d, 7.NS.2a-d, 7.NS.3	Suggested days for topic: 15 5 activities, 5 lessons, 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 and Absolute Value</i>: Students will define the absolute value of a number. Students will find absolute values of numbers. 2. <i>Adding Integers</i>: Students will add integers without the use of a visual or concrete model. Students will show that the sum of a number and its opposite is zero. 3. <i>Subtracting Integers</i>: Students will subtract integers without the use of a visual or concrete model. 4. <i>Multiplying Integers</i>: Students will find products of integers with the same sign and the products of integers with different signs. 5. <i>Dividing Integers</i>: Students will find quotients of integers with the same sign and the quotients of integers with different signs. 	<p>integer absolute value opposites additive inverse</p>	<p>The Giant Cookie Dilemma, The Cost of Being Late and Using an Elevator to Evaluate Signed Number Expressions at: http://illuminations.nctm.org/</p> <p>Cereal at: http://www.insidemathematics.org/performance-assessment-tasks</p> <p>Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-7</p> <p>A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html</p>
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SEVENTH GRADE MATHEMATICS

Chapter 2	Lessons 4	Chapter Content: Rational Numbers	Domain/ Common Core State Standards	Suggested days for topic: 12
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		Number System 7.NS.1a-d, 7.NS.2a-d, 7.NS.3	4 activities, 4 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games	Assessments
<p>1. <i>Rational Numbers:</i> How can you use a number line to order rational numbers?</p> <p>2. <i>Adding Rational Numbers:</i> How can you use what you know about adding integers to add rational numbers?</p> <p>3. <i>Subtracting Rational Numbers:</i> How can you use what you know about subtracting integers to subtract rational numbers?</p> <p>4. <i>Multiplying and Dividing Rational Numbers:</i> Why is the product of two negative rational numbers positive?</p>		<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"> • Index Cards • Markers • Masking Tape • Pieces of Paper • Glass Bowl • Questions from Chapter • Toy Boat <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 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 2	Lessons 4	Chapter Content: Rational Numbers	Domain/ Common Core State Standards Number System 7.NS.1a-d, 7.NS.2a-d, 7.NS.3	Suggested days for topic: 12 4 activities, 4 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources
<ol style="list-style-type: none"> <i>Rational Numbers:</i> Students will understand that a rational number is an integer divided by an integer. Students will convert rational numbers to decimals, write decimals as fractions and order rational numbers. <i>Adding Rational Numbers:</i> Students will add rational numbers. <i>Subtracting Rational Numbers:</i> Students will subtract rational numbers. <i>Multiplying and Dividing Rational Numbers:</i> Students will multiply and divide rational numbers. 		rational number terminating decimal repeating decimal		The Giant Cookie Dilemma, The Cost of Being Late and Using an Elevator to Evaluate Signed Number Expressions at: http://illuminations.nctm.org/ Cereal at: http://www.insidemathematics.org/performance-assessment-tasks Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-7 A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html



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SEVENTH GRADE MATHEMATICS				
Chapter 3	Lessons 5	Chapter Content: Expressions and Equations	Domain/ Common Core State Standards Expressions and Equations/7.EE.1, 7.EE.2, 7.EE.4a	Suggested days for topic: 15 5 activities, 5 lessons, 1 extension activity, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments



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<ol style="list-style-type: none">1. <i>Algebraic Expressions</i>: How can you simplify an algebraic expression?2. <i>Adding and Subtracting Linear Expressions</i>: How can you use algebra tiles to add or subtract algebraic expressions? Extension: <i>Factoring Expressions</i>3. <i>Solving Equations Using Addition or Subtraction</i>: How can you use algebra tiles to solve addition or subtraction equations?4. <i>Solving Equations Using Multiplication or Division</i>: How can you use multiplication or division to solve equations?5. <i>Solving Two-Step Equations</i>: How can you use algebra tiles to solve a two-step equation?	<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• Envelope• Index Cards• Pencils (2)• Color-coded Spinner with Operations Symbols <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:
3	5	Expressions and Equations	Expressions and Equations/7.EE.1, 7.EE.2, 7.EE.4a	15 5 activities, 5 lessons, 1 extension activity, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources
<ol style="list-style-type: none"> <i>Algebraic Expressions:</i> Students will simplify algebraic expressions by combining like terms. <i>Adding and Subtracting Linear Expressions:</i> Students will use a horizontal or vertical format to add and subtract linear expressions. Students will factor linear expressions. <i>Solving Equations Using Addition or Subtraction:</i> Students will write equations and use the addition and subtraction properties of equality to solve equations. <i>Solving Equations Using Multiplication or Division:</i> Students will write equations and use the multiplication and division properties of equality to solve equations. 		like terms simplest form linear expression factoring an expression equivalent equations		One Grain of Rice at: http://illuminations.nctm.org/ Toy Train at: http://www.insidemathematics.org/performance-assessment-tasks Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-7 A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html



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<p>5. <i>Solving Two-Step Equations:</i> Students will solve two-step equations by undoing operations in reverse order.</p>		
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SEVENTH GRADE MATHEMATICS				
Chapter 4	Lessons 4	Chapter Content: Inequalities	Domain/ Common Core State Standards Expressions and Equations 7.EE.4b	Suggested days for topic: 12 4 activities, 4 lessons, Chapter Opener, Quiz, Review, Test



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Lessons: Essential Questions	Resources, Materials, & Games	Assessments
<p>1. <i>Writing and Graphing Inequalities:</i> How can you use a number line to represent solutions of an inequality?</p> <p>2. <i>Solving Inequalities Using Addition or Subtraction:</i> How can you use addition or subtraction to solve an inequality?</p> <p>3. <i>Solving Inequalities Using Multiplication or Division:</i> How can you use multiplication or division to solve an inequality?</p> <p>4. <i>Solving Two-Step Equations:</i> How can you use addition, subtraction, multiplication and division to solve two step inequalities?</p>	<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"> • Pre-made Number Lines Per Pair of Students (10) • Index Cards • Tangram Pieces <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: Inequalities	Domain/ Common Core State Standards Expressions and Equations 7.EE.4b	Suggested days for topic:12 4 activities, 4 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources
<ol style="list-style-type: none"> 1. <i>Writing and Graphing Inequalities:</i> Students will write and graph inequalities. Students will determine whether a value is a solution of an inequality. 2. <i>Solving Inequalities Using Addition or Subtraction:</i> Students will use the addition and subtraction properties of inequality to solve inequalities. 3. <i>Solving Inequalities Using Multiplication or Division:</i> Students will use the multiplication and division properties of inequality to solve inequalities. 4. <i>Solving Two-Step Equations:</i> Students will solve and graph two-step inequalities. 		inequality solution of an inequality solution set graph of an inequality		Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-7 A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html



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SEVENTH GRADE MATHEMATICS

Chapter 5	Lessons 6	Chapter Content: Ratios and Proportions	Domain/ Common Core State Standards Ratios and Proportional Relationships 7.RP.1, 7.RP.2a-d, 7.RP.3	Suggested days for topic: 17 6 activities, 6 lessons, 1 extension activity, 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 and Rates:</i> How do rates help you describe real-life problems? 2. <i>Proportions:</i> How can proportions help you decide when things are "fair"? <p>Extension: Graphing Proportional Relationships</p> <ol style="list-style-type: none"> 3. <i>Writing Proportions:</i> How can you write a proportion that solves a problem in real life? 4. <i>Solving Proportions:</i> How can you use ratio tables and cross products to solve proportions? 5. <i>Slope:</i> How can you compare two rates graphically? 6. <i>Direct Variation:</i> How can you use a graph to show the relationship between two quantities that vary directly? How can you use an equation? 	<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"> • Index Cards, Baseball bat • Calculators • Containers Filled with Water (2) • Decks of Cards, Food Coloring • Grid Paper, Measuring Tape • Square Tiles, Stopwatch • String, Wind-up Toy <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 5	Lessons 6	Chapter Content: Ratios and Proportions	Domain/ Common Core State Standards Ratios and Proportional Relationships 7.RP.1, 7.RP.2a-d, 7.RP.3	Suggested days for topic:17 6 activities, 6 lessons, 1 extension activity, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources
<ol style="list-style-type: none"> 1. <i>Ratios and Rates:</i> Students will find ratios, rates and unit rates from words, tables and graphs. 2. <i>Proportions:</i> Students will use equivalent ratios and the Cross Products property to determine whether two ratios form a proportion. Students will graph and interpret graphs of proportional relationships. 3. <i>Writing Proportions:</i> Students will write and use mental math to solve proportions. 4. <i>Solving Proportions:</i> Students will solve proportions using the Cross Products property. Students will use a point on a graph to write and solve proportions. 5. <i>Slope:</i> Students will determine the slope a line from a graph. Students will interpret the slopes of lines as rates. 6. <i>Direct Variation:</i> Students will identify direct variation from graphs or equations. Students will use direct variation models to solve problems. 		ratio rate unit rate complex fraction proportion proportional cross products slope direct variation constant of proportionality		<p>Space Shuttle, How Much is a Million, Now and Then and The Cost of Being Late at: http://illuminations.nctm.org/</p> <p>Cereal and Cat Food at: http://www.insidemathematics.org/performance-assessment-tasks</p> <p>Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-7</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 6	Lessons 7	Chapter Content: Percents	Domain/ Common Core State Standards Ratios and Proportional Relationships/7.RP.3 Expressions and Equations/7.EE.3	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>Percents and Decimals:</i> How does the decimal point move when you rewrite a percent as a decimal and when you rewrite a decimal as a percent? 2. <i>Comparing and Ordering Fractions, Decimals, and Percents:</i> How can you order numbers that are written as fractions, decimals, and percents? 3. <i>The Percent Proportion:</i> How can you use models to estimate percent questions? 4. <i>The Percent Equation:</i> How can you use an equivalent form of the percent proportion to solve a percent problem? 5. <i>Percents of Increase and Decrease:</i> What is a percent of decrease? What is a percent of increase? 6. <i>Discounts and Markups:</i> How can you find discounts and selling prices? 7. <i>Simple Interest:</i> How can you find the amount of simple interest earned on a savings account? How can you find the amount of interest owed on a loan? 	<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"> • Index Cards, Calculator • Deck of Cards • Egg Carton • Newspaper • Whiteboard <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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SEVENTH GRADE MATHEMATICS

Chapter 6	Lessons 7	Chapter Content: Percents	Domain/ Common Core State Standards Ratios and Proportional Relationships/7.RP.3 Expressions and Equations/7.EE.3	Suggested days for topic: 18 7 activities, 7 lessons, Chapter Opener, Quiz, Review, Test
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Lessons: Objectives	Key Vocabulary	Additional Online Resources
<p>1. <i>Percents and Decimals</i>: Students will convert decimals to percents and percents to decimals.</p> <p>2. <i>Comparing and Ordering Fractions, Decimals, and Percents</i>: Students will compare and order percents, decimals and fractions.</p> <p>3. <i>The Percent Proportion</i>: Students will use the percent proportion to solve three types of percent problems.</p> <p>4. <i>The Percent Equation</i>: Students will use the percent equation to solve three types of percent problems.</p> <p>5. <i>Percents of Increase and Decrease</i>: Students will use the percent of change formula to find percents of increase and decrease.</p> <p>6. <i>Discounts and Markups</i>: Students will find the discounts and markups of items.</p> <p>7. <i>Simple Interest</i>: Students will use the simple interest formula to find interest, annual interest rates and the amounts paid on loans.</p>	<p>percent of change percent of increase percent of decrease percent error discount markup interest principal simple interest</p>	<p>Where is Everybody, Using an Elevator to Evaluate Signed Number Expressions, The Giant Cookie Dilemma and The Cost of Being Late at: http://illuminations.nctm.org/</p> <p>Toy Train at: http://www.insidemathematics.org/performance-assessment-tasks</p> <p>Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-7</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 7	Lessons 5	Chapter Content: Constructions and Scale Drawings	Domain/ Common Core State Standards Geometry 7.G.1, 7.G.2, 7.G.5	Suggested days for topic:17 5 activities, 5 lessons, 1 Extension Activity, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments
<ol style="list-style-type: none"> 1. <i>Adjacent and Vertical Angles:</i> What can you conclude about the angles formed by two intersecting lines? 2. <i>Complementary and Supplementary Angles:</i> How can you classify two angles as complementary or supplementary? 3. <i>Triangles:</i> How can you construct triangles? Extension: Angle Measures of Triangles 4. <i>Quadrilaterals:</i> How can you classify quadrilaterals? 5. <i>Scale Drawings:</i> How can you enlarge or reduce a drawing proportionally? 		<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"> • Geoboard, Geoboard Dot Paper • Geometry Software • Maps from the Internet • Protractor, Ruler, Straws • File Folders, Picture of Ohio State Flag • Game Cards <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 7	Lessons 5	Chapter Content: Constructions and Scale Drawings	Domain/ Common Core State Standards Geometry 7.G.1, 7.G.2, 7.G.5	Suggested days for topic: 17 5 activities, 5 lessons, 1 Extension Activity, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources
<ol style="list-style-type: none"> <i>Adjacent and Vertical Angles:</i> Students will identify vertical and adjacent angles. Students will find angle measures using adjacent and vertical angles. <i>Complementary and Supplementary Angles:</i> Students will classify pairs of angles as complementary, supplementary or neither. Students will find angle measures using complementary and supplementary angles. <i>Triangles:</i> Students will classify and construct triangles using angles and sides. Students will find missing angle measures in triangles. <i>Quadrilaterals:</i> Students will classify and construct quadrilaterals. Students will find an angle measure of a quadrilateral. <i>Scale Drawings:</i> Students will use scale drawings to find actual distance. Students will find scale factors. Students will use scale drawings to find perimeters and areas. 		adjacent angles vertical angles congruent angles complementary angles supplementary angles congruent sides kite scale drawing scale model scale scale factor		Scaling the City at: http://illuminations.nctm.org/ Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-7 A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html



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SEVENTH GRADE MATHEMATICS				
Chapter 8	Lessons 4	Chapter Content: Circles and Area	Domain/ Common Core State Standards Geometry/7.G.4, 7.G.6	Suggested days for topic:12 4 activities, 4 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments
<ol style="list-style-type: none"> <i>Circles and Circumference:</i> How can you find the circumference of a circle? <i>Perimeters of Composite Figures:</i> How can you find the perimeter of a composite figure? <i>Areas of Circles:</i> How can you find the area of a circle? <i>Areas of Composite Figures:</i> How can you find the area of a composite figure? 		<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"> • Pieces of Paper • File Folders • Tangrams <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 		<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>



Medford Lakes School District

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Written by: Kathy O'Brien

Text/Program: "Big Ideas"

	<ul style="list-style-type: none"> • Check It Out: Lesson Tutorials at www.bigideasmath.com 	Homework
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SEVENTH GRADE MATHEMATICS				
Chapter 8	Lessons 4	Chapter Content: Circles and Area	Domain/ Common Core State Standards Geometry/7.G.4, 7.G.6	Suggested days for topic: 12 4 activities, 4 lessons, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources



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<ol style="list-style-type: none">1. <i>Circles and Circumference:</i> Students will find the radius, diameter and circumference of a circle.2. <i>Perimeters of Composite Figures:</i> Students will find perimeters of composite figures.3. <i>Areas of Circles:</i> Students will find areas of semi-circles and circles.4. <i>Areas of Composite Figures:</i> Students will divide composite figures into familiar geometric shapes to find the total area.	circle center radius diameter circumference pi semicircle composite figure	The Giant Cookie Dilemma at: http://illuminations.nctm.org/ Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-7 A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html
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SEVENTH GRADE MATHEMATICS



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Chapter 9	Lessons 5	Chapter Content: Surface Area and Volume	Domain/ Common Core State Standards Geometry 7.G.4, 7.G.6	Suggested days for topic:16 5 activities, 5 lessons, 1 extension activity, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments
<ol style="list-style-type: none"> 1. <i>Surface Area of Prisms:</i> How can you find the surface area of a prism? 2. <i>Surface Area of Pyramids:</i> How can you find the surface area of a pyramid? 3. <i>Surface Area of Cylinders:</i> How can you find the surface area of a cylinder? 4. <i>Volume of Prisms:</i> How can you find the volume of a prism? 5. <i>Volume of Pyramids:</i> How can you find the volume of a pyramid? <p>Extension: Cross Sections of Three-Dimensional Figures</p>		<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"> • Cans, Cardboard Cylinder • Masking Tape, Ruler • Scissors, Sheets of Paper, Unit Cubes • Bingo Chips, Flashlight, Marbles • Picture of Transamerica Pyramid Building from Internet • Ream of Paper, Solid Box • Variety of Containers, 3-Dingo Cards <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 		<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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	<ul style="list-style-type: none"> • Check It Out: Lesson Tutorials at www.bigideasmath.com 	
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SEVENTH GRADE MATHEMATICS				
Chapter 9	Lessons 5	Chapter Content: Surface Area and Volume	Domain/ Common Core State Standards Geometry 7.G.4, 7.G.6	Suggested days for topic: 16 5 activities, 5 lessons, 1 extension activity, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources



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<ol style="list-style-type: none"> 1. <i>Surface Area of Prisms:</i> Students will find the surface areas of rectangular and triangular prisms. 2. <i>Surface Area of Pyramids:</i> Students will find the surface areas of square and triangular prisms. 3. <i>Surface Area of Cylinders:</i> Students will find the surface areas of cylinders. 4. <i>Volume of Prisms:</i> Students will find volumes of prisms. 5. <i>Volume of Pyramids:</i> Students will find volumes of pyramids. Students will describe the cross sections of three-dimensional figures. 	<p>lateral surface area regular pyramid slant height cross section</p>	<p>The Giant Cookie Dilemma and Tree Talk at: http://illuminations.nctm.org/</p> <p>Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-7/</p> <p>A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html</p>
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SEVENTH GRADE MATHEMATICS				
Chapter 10	Lessons 7	Chapter Content: Probability and Statistics	Domain/ Common Core State Standards	Suggested days for topic: 20



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			Statistics and Probability 7.SP.1, 7.SP.2, 7.SP.3, 7.SP.4, 7.SP.5, 7.SP.6, 7.SP.7a-b, 7.SP.8a-C	7 activities, 7 lessons, 2, Extensions, Chapter Opener, Quiz, Review, Test
Lessons: Essential Questions		Resources, Materials, & Games		Assessments
<ol style="list-style-type: none"> <i>Outcomes and Events:</i> In an experiment, how can you determine the number of possible results? <i>Probability:</i> How can you describe the likelihood of an event? <i>Experimental and Theoretical Probability:</i> How can you use relative frequencies to find probabilities? <i>Compound Events:</i> How can you find the number of possible outcomes of one or more events? <i>Independent and Dependent Events:</i> What is the difference between dependent and independent events? <i>Samples and Populations:</i> How can you determine whether a sample accurately represents the population? <i>Comparing Populations:</i> How can you compare data sets that represent two populations? 		<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"> Calculators, Coins, Dimes Packing Peanuts, Paper Clip Combination Lock, Cups Deck of Cards, Hot Cocoa Mix Marbles, Number Cube, Paper Bag, Pennies Unit Cubes, Pieces of Paper, Tea Bag <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>
SEVENTH GRADE MATHEMATICS				



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Chapter 10	Lessons 7	Chapter Content: Probability and Statistics	Domain/ Common Core State Standards Statistics and Probability 7.SP.1, 7.SP.2, 7.SP.3, 7.SP.3, 7.SP.4, 7.SP.5, 7.SP.6, 7.SP.7a- b, 7.SP.8a-C	Suggested days for topic:20 7 activities, 7 lessons, 2, Extensions, Chapter Opener, Quiz, Review, Test
Lessons: Objectives		Key Vocabulary		Additional Online Resources
	<ol style="list-style-type: none"> 1. <i>Outcomes and Events:</i> Students will identify and count the outcomes of an experiment. 2. <i>Probability:</i> Students will compute the probability of an event. 3. <i>Experimental and Theoretical Probability:</i> Students will compute the experimental probability and theoretical probability of an event. 4. <i>Compound Events:</i> Students will find the number of outcomes of compound events using tree diagrams, tables or a formula. Students will find the probability of a compound event. 5. <i>Independent and Dependent Events:</i> Students will compute theoretical probabilities of independent and dependent events. Students will use simulations to find experimental probabilities. 6. <i>Samples and Populations:</i> Students will identify biased and unbiased samples. Students will use multiple samples to make predictions about populations. 7. <i>Comparing Populations:</i> Students will compare two populations using measures of center, measures of variation, and overlap. 	<p>experiment outcomes event favorable outcomes probability relative frequency experimental probability theoretical probability sample space Fundamental Counting Principle compound event independent events dependent events simulation population sample unbiased sample biased sample</p>	<p>How Much is a Million and Tree Talk at: http://illuminations.nctm.org/</p> <p>Fair Game and Ducklings at: http://www.insidemathematics.org/performance-assessment-tasks</p> <p>Online math skill practice at: https://www.ixl.com/standards/new-jersey/math/grade-7</p> <p>A library of interactive, web-based virtual manipulatives at: http://nlvm.usu.edu/en/nav/vlibrary.html</p>	



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