

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
ALGEBRA 1 RC

Algebra 1 RC Pacing Chart

<p>Pacing Guide</p> <p>Algebra I RC is a full year course that meets on a rotating basis for three (3) 55-minute blocks and one (1) 40-minute block for every five (5) day cycle.</p>	<p>Unit 1 (Chapter 1): Expressions, Equations, and Functions. 1 week</p> <p>Unit 2 (Chapter 2): Properties of Real Numbers. 1 week</p> <p>Unit 3 (Chapter 3): Solving Linear Equations. 3 weeks</p> <p>Unit 4 (Chapter 4): Graphing Linear Equations. 3 weeks</p> <p>Unit 5 (Chapter 5): Writing Linear Equations. 3 weeks</p> <p>Unit 6 (Chapter 6): Solving and Graphing Linear Inequalities. 3 weeks</p> <p>Unit 7 (Chapter 7): Systems of Linear Equations and Inequalities. 3 weeks</p> <p>Unit 8 (Chapter 8): Exponents and Exponential Functions. 3 weeks</p> <p>Unit 9 (Chapter 9): Polynomials and Factoring. 4 weeks</p> <p>Unit 10 (Chapter 10): Quadratic Equations and Functions. 2 weeks</p> <p>Unit 11 (Chapter 11): Radicals and Geometry Connections. 3 weeks</p> <p>Unit 12 (Chapter 12): Rational Equations and Functions. 2 weeks</p> <p>Unit 13 (Chapter 13): Probability and Data Analysis. 3 weeks</p>
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21st Century Skills Standards: 9.1 Personal Finance Literacy 9.2 Career Awareness	9.1.12.D.3: Summarize how investing builds wealth and assists in meeting long-and short-term financial goals. 9.1.12.D.5: Justify the use of savings and investment options to meet targeted goals. 9.1.12.D.10: Differentiate among various investment products and savings vehicles and how to use them most effectively. 9.2.12.C.1: Review career goals and determine steps necessary for attainment. 9.2.12.C.4: Analyze how economic conditions and social changes influence employment trends and future education.
Technology Standards	8.1.12.A.4: Construct a spreadsheet, enter data, and use mathematical or logical functions to manipulate data, generate charts and graphs, and interpret the results.
Interdisciplinary Connections	Science HS-PS4-1 The wavelength and frequency of a wave are related to one another by the speed of travel of the wave, which depends on the type of wave and the medium through which it is passing. HS-PS1-8 Spontaneous radioactive decays follow a characteristic exponential decay law. Nuclear lifetimes allow radiometric dating to be used to determine the ages of rocks and other materials.
NJSLS Mathematical Practices – These practices are demonstrated throughout the curriculum.	1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.
NJSLS Career Ready Practices – These practices are demonstrated throughout the curriculum	CRP2. Apply appropriate academic and technical skills. CRP4. Communicate clearly and effectively and with reason. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP9. Model integrity, ethical leadership and effective management. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

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Differentiation/Accommodations/Modifications

Note: Each district should review the various strategies noted below and determine which are applicable for their population within varied grade levels and languages and make edits where needed.

Gifted and Talented	English Language Learners	Students with Disabilities	Students at Risk of School Failure
<p><i>(content, process, product and learning environment)</i></p> <p>Extension Activities:</p> <ul style="list-style-type: none"> • Conduct research and provide presentation of mathematical topics. • Design surveys to generate and analyze data to be used in discussion. • Use of higher level questioning techniques. • Provide assessments at a higher level of thinking. 	<p>Modifications for Classroom:</p> <p>Modifications for Homework/Assignments</p> <ul style="list-style-type: none"> • Modified assignments. • Extended time for assignment completion as needed. • Use graphing calculator. • Highlight formulas. 	<p><i>(appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 team)</i></p> <p>Modifications for Classroom:</p> <ul style="list-style-type: none"> • Ask students to restate information, directions, and assignments. • Repetition and practice. • Model skills / techniques to be mastered. • Extended time to complete class work. • Provide copy of class notes. • Preferential seating to be mutually determined by the student and teacher. • Students may request books online, on tape/CD, as available and appropriate. • Assign peer helper in the class setting. • Provide regular parent / school communication 	<p>Modifications for Classroom:</p> <ul style="list-style-type: none"> • Ask students to restate information, directions, and assignments. • Repetition and practice. • Model skills / techniques to be mastered. • Extended time for class work. • Provide copy of class notes. • Preferential seating to be mutually determined by the student and teacher. • Students may request books online, on tape/CD, as available and appropriate. • Assign peer helper in the class setting. • Provide oral reminders and check student work during independent work time. • Assist student with long and short term planning of assignments • Provide regular parent / school communication. • Assign peer helper in the class setting.

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		<ul style="list-style-type: none"> • Provide oral reminders and check student work during independent work time. • Assist student with long and short term planning of assignments <p>Modifications for Homework</p> <ul style="list-style-type: none"> • Extended time to complete assignments. • Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases. • Provide the student with clearly stated (written) expectations and grading criteria for assignments. <p>Modification for Assessments</p> <ul style="list-style-type: none"> • Extended time on classroom tests and quizzes. • Student may take / complete tests in an alternate setting as needed. • Restate, reread, and clarify directions/questions. • Distribute study guide for classroom tests. • Establish procedures for accommodations / modifications for assessments. 	<ul style="list-style-type: none"> • Provide oral reminders and check student work during independent work time. • Assist student with long and short term planning of assignments <p>Modifications for Homework</p> <ul style="list-style-type: none"> • Extended time to complete assignments. • Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases. • Provide the student with clearly stated (written) expectations and grading criteria for assignments. <p>Modification for Assessments</p> <ul style="list-style-type: none"> • Extended time on classroom tests and quizzes. • Student may take / complete tests in an alternate setting as needed. • Restate, reread, and clarify directions/questions. • Distribute study guide for classroom tests. • Establish procedures for accommodations / modifications for assessments.
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CONTENT: Chapter 1			
Theme: Expressions, Equations, and Functions			
Essential Questions: What is a variable? What rules are used to simplify expressions with exponents? How is the order of operations applied when simplifying an expression? What inverse operations are used in order to solve a one-step or multi-step equation? How do you interpret data on a graph? What is a function?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> • Section 1.1 (Evaluate expressions) • Section 1.2 (Apply Order of Operations) • Section 1.3 (Write Expressions) • Section 1.4 (Write Equations and Inequalities) • Section 1.5 (Use a Problem Solving Plan) • Section 1.6 (Represent Functions as Rules and Tables) • Section 1.7 (Represent Functions as Graphs) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> • Evaluate expressions • Apply order of operations • Write expressions • Write equations and inequalities • Use a problem solving plan • Represent functions as rules and tables • Represent functions as graphs 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.1, CED.2, CED.3 F.IF.1 N.Q.1, N.Q.2, N.Q.3 CED.1 SSE.1 REI.3
			Time Frame: Algebra 1 RC: 5 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: TI-83/84 plus / TI-30XS Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 2			
Theme: Properties of Real Numbers			
Essential Questions: What is an integer? What is a rational number? How is the distributive property applied? How do you find the square root of a number?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> • Section 2.1 (Use Integers and Real Numbers) • Section 2.2 (Add Real Numbers) • Section 2.3 (Subtract Real Numbers) • Section 2.4 (Multiply Real Numbers) • Section 2.5 (Apply the Distributive Property) • Section 2.6 (Divide Real Numbers) • Section 2.7 (Find Square Roots and Compare Real Numbers) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> • Add Real Numbers • Subtract Real Numbers • Multiply Real Numbers • Apply the Distributive Property • Divide Real Numbers • Find Square Roots and Compare Real Numbers 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> • Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.1, CED.2, CED.3 F.IF.1 N.Q.1, N.Q.2, N.Q.3 CED.1 SSE.1 REI.3
			Time Frame: Algebra 1 RC: 5 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: TI-83/84 plus / TI-30XS Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 3			
Theme: Solving Linear Equations			
Essential Questions: What are the four inverse operations? How are inverse operations used to solve equations? How can you check that your solution is correct?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 3.1-3.4 Solving: <ul style="list-style-type: none"> -One-step equations -Two-step equations -Multi-step equations -With variables on both sides 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Solve one-step equations Solve two-step equations Solve multi-step equations Solve equations with variables on both sides Check their solution 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 N.Q.1 CED.1 CED.4 REI.3
			Time Frame: Algebra 1 RC: 6 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: TI-83/84 plus / TI-30XS Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 3			
Theme: Solving Linear Equations			
Essential Questions: What is a ratio? What is a proportion? How do you solve a proportion?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 3.5 (Write Ratios and Proportions) Section 3.6 (Solve Proportions Using Cross Products) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Simplify ratios Use the cross-product property to solve a proportion Analyze situations in real-life using proportions 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 N.Q.1 CED.1 CED.4 REL.3
			Time Frame: Algebra 1 RC: 3 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: TI-83/84 plus / TI-30XS Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 3			
Theme: Solving Linear Equations			
Essential Questions: What is the proportion used to solve percent problems?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 3.7 (Solve Percent Problems) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Use the cross-product property to solve a proportion Analyze situations in real-life using proportions and percents 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 N.Q.1 CED.1 CED.4 REI.3
			Time Frame: Algebra 1 RC: 2 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: TI-83/84 plus / TI-30XS Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 3			
Theme: Solving Linear Equations			
Essential Questions: How do you rewrite equations in terms of a variable?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 3.8 (Formulas and Functions) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Represent situations using algebraic symbols Analyze situations using algebraic symbols 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 N.Q.1 CED.1 CED.4 REL.3
			Time Frame: Algebra 1 RC: 3 days
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CONTENT: Chapter 4			
Theme: Graphing Linear Equations and Functions			
Essential Questions: How do you plot points in the coordinate plane? What do the two numbers in an ordered pair represent? How do you read a point off of a graph? Where are the four quadrants located? What is a scatter plot?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 4.1 (Plot Points in the Coordinate Plane) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Plot points in the coordinate plane Label the four quadrants Identify the ordered pair of a point plotted on a coordinate plane Identify what a scatter plot is and whether it has a positive or negative correlation 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.IF.6 F.IF.7 F.IF.7a
			Time Frame: Algebra 1 RC: 2 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: TI-83/84 plus / TI-30XS Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 4			
Theme: Graphing Linear Equations and Functions			
Essential Questions: What is slope-intercept form? How can a table of values be used to graph a linear equation? How are horizontal and vertical lines graphed? What are the four types of slopes?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 4.2 (Graphing Linear Equations) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Use a table of values to graph a linear equation Identify what type of slope the line has after graphing Check whether an ordered pair is a solution to a linear equation 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.IF.6 F.IF.7 F.IF.7a Time Frame: Algebra 1 RC: 3 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: TI-83/84 plus / TI-30XS Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 4			
Theme: Graphing Linear Equations and Functions			
Essential Questions: What is standard form? How can intercepts be used to graph a linear equation?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 4.3 (Graphing using intercepts) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Use intercepts to graph a linear equation Identify what type of slope the line has after graphing Check whether an ordered pair is a solution to a linear equation Identify the x-intercept and y-intercept of a graph 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.IF.6 F.IF.7 F.IF.7a Time Frame: Algebra 1 RC: 3 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: TI-83/84 plus / TI-30XS Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 4			
Theme: Graphing Linear Equations and Functions			
Essential Questions: What ratio is used to represent slope? What formula is used to find slope? How do you read a graph to determine its slope? What kind of slope do horizontal and vertical lines have?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 4.4 (Find Slope and Rate of Change) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Find the slope of a line using rise over run Find the slope of a line using the slope formula Read the slope of a graph Determine a line's slope based on its sign 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.IF.6 F.IF.7 F.IF.7a
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CONTENT: Chapter 4			
Theme: Graphing Linear Equations and Functions			
Essential Questions: What is direct variation? How do you graph a direct variation model?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 4.6 (Model Direct Variation) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Graph direct variation models 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.IF.6 F.IF.7 F.IF.7a Time Frame: Algebra 1 RC: 2 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: TI-83/84 plus / TI-30XS Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 4			
Theme: Graphing Linear Equations and Functions			
Essential Questions: What is slope-intercept form? What is a y-intercept? How is an equation rewritten in slope-intercept form?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 4.7 (Graph Linear Functions) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Rewrite an equation in slope-intercept form Graph an equation in slope-intercept form Identify the slope of a line based on a given graph 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.IF.6 F.IF.7 F.IF.7a Time Frame: Algebra 1 RC: 3 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: TI-83/84 plus / TI-30XS Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 5			
Theme: Writing Linear Equations			
Essential Questions: What is slope-intercept form? Where is the y-intercept located on a graph? How is slope determined using a graph? How is an equation written when given slope and a point? How is an equation written when given two points?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 5.1 (Writing equations in slope-intercept form) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Write an equation in slope-intercept form when given: Slope and y-intercept Slope and a point A graph 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.LE.2
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 5			
Theme: Writing Linear Equations			
Essential Questions: What is slope-intercept form? Where is the y-intercept located on a graph? How is slope determined using a graph? How is an equation written when given slope and a point? How is an equation written when given two points?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 5.2 (Use Linear Equations Written in Slope-intercept Form) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Write an equation in slope-intercept form when given: Slope and a point Two Points 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.LE.2
			Time Frame: Algebra 1 RC: 3 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 5			
Theme: Writing Linear Equations			
Essential Questions: What is point-slope form? How do you find the slope of a line given two points? What is slope-intercept form?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 5.3 (Write Linear Equations in Point-slope form) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Write an equation in point-slope form when given: Slope and y-intercept Slope and a point Two points 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.LE.2
			Time Frame: Algebra 1 RC: 2 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 5			
Theme: Writing Linear Equations			
Essential Questions: How do you write an equation in standard form?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 5.4 (Write Linear Equations in Standard form) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Rewrite an equation in standard form 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.LE.2
			Time Frame: Algebra 1 RC: 2 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 5			
Theme: Writing Linear Equations			
Essential Questions: What types of slopes do parallel lines have? What types of slopes do perpendicular lines have? How do you write equations of parallel and perpendicular lines?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 5.5 (Write Equations of Parallel and Perpendicular Lines) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Identify the relationship between the slopes of parallel and perpendicular lines Write equations of parallel and perpendicular lines 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.LE.2
			Time Frame: Algebra 1 RC: 3 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 6			
Theme: Solving and Graphing Linear Inequalities			
Essential Questions: What is a linear inequality? How are solutions graphed on number line? What determines an open or closed circle when graphing a solution on a number line? What must you do when dividing or multiplying by a negative when solving a linear inequality?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 6.1 (Solving linear inequalities using addition and subtraction) Section 6.2 (Solving linear inequalities using multiplication and division) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Solve a one-step inequality using addition, subtraction, multiplication, and division Recall that when multiplying or dividing by a negative, the inequality sign must be switched Decide when an open or closed are used based on the solution Graph the solution to a linear inequality on a number line 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.1 REI.3 REI.12
			Time Frame: Algebra 1 RC: 2 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 6			
Theme: Solving and Graphing Linear Inequalities			
Essential Questions: What is a linear inequality? How are solutions graphed on number line? What determines an open or closed circle when graphing a solution on a number line? What must you do when dividing or multiplying by a negative when solving a linear inequality?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 6.3 (Solve multi-step linear inequalities) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Solve a multi-step inequality using addition, subtraction, multiplication, and division Recall that when multiplying or dividing by a negative, the inequality sign must be switched Decide when an open or closed are used based on the solution Graph the solution to a linear inequality on a number line 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.1 REI.3 REI.12
			Time Frame: Algebra 1 RC: 2 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 6			
Theme: Solving and Graphing Linear Inequalities			
Essential Questions: What is a compound inequality? What are the two types of compound inequalities? What do the two types of compound inequalities look like on a number line?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 6.4 (Solving compound inequalities) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Using a given graph on a number line, identify whether the compound inequality represents an “and” or “or” inequality Solve and graph an “and” inequality Solve and graph an “or” inequality 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.1 REI.3 REI.12
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 6			
Theme: Solving and Graphing Linear Inequalities			
Essential Questions: What many solutions does an absolute value equation have? What steps have to be taken to solve an absolute value inequality?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 6.5 (Solving absolute value equations) Section 6.6 (Solving absolute value inequalities) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Solve an absolute value equation Graph the solutions to an absolute value equation on a number line Solve an absolute value inequality Decide whether an absolute value inequality represents an “and” or “or” compound inequality Write the final answer to an “and” absolute value inequality as a compound inequality 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.1 REI.3 REI.12
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 6			
Theme: Solving and Graphing Linear Inequalities			
Essential Questions: How is a linear inequality graphed? What is a half plane? How do you decide whether the linear inequality is a dotted or solid line?			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 6.7 (Graph Linear Inequalities in two variables) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Graph a linear inequality in two variables Decide if the line is dotted or solid Test an ordered pair in order to shade the appropriate half plane Apply linear inequalities to real-life problems 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 PFL 9.3.ST.SM.3 NJSLS MA 9-12 CED.1 REL.3 REL.12 Time Frame: Algebra 1 RC: 3 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 7			
Theme: Systems of Linear Equations and Inequalities			
Essential Questions: What are three different techniques used to solve a system of equations? How does solving a system of equations relate to a real-world scenario? How does a system of inequalities differ from a system of equations?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 7.1 (Solve Linear Systems by Graphing) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Solve a system of linear equations by graphing. Model a real-life problem using a system of equations. Check a solution to a system of equations. 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 CED.3 REI.6 REI.12 Time Frame: Algebra 1 RC: 2 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 7			
Theme: Systems of Linear Equations and Inequalities			
Essential Questions: What are three different techniques used to solve a system of equations? How does solving a system of equations relate to a real-world scenario? How does a system of inequalities differ from a system of equations?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 7.2 (Solve Linear Systems by Substitution) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Solve a system of equations using substitution method. Model a real-life problem using a system of equations. 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSL MA 9-12 CED.2 CED.3 REI.5 REI.6 REI.12
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 7			
Theme: Systems of Linear Equations and Inequalities			
Essential Questions: What are three different techniques used to solve a system of equations? How does solving a system of equations relate to a real-world scenario? How does a system of inequalities differ from a system of equations?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 7.3 Solving Linear Systems by Linear Combinations (Elimination Method) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Solve a system of equations using elimination method Model a real-life problem using a system of equations. 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 CED.3 REI.5 REI.6 <hr/> Time Frame: Algebra 1 RC: 4 days <hr/> Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 7			
Theme: Systems of Linear Equations and Inequalities			
Essential Questions: How do you graph a linear inequality? How many linear inequalities exist in a system? How is the solution identified in a system of linear inequalities?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 7.6 (Solve Systems of Linear Inequalities) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Graph a linear inequality by recalling: -whether the line is dotted or solid -how to test an ordered pair and shade an appropriate half-plane Graph two linear inequalities on the same graph and identify their intersection 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 CED.3 REI.5 REI.6
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 8			
Theme: Exponents and Exponential Functions			
Essential Questions: How do you use properties of exponents to simplify an exponential expression? What real-life situations can be modeled by an exponential growth function? What real-life situations can be modeled by an exponential decay function? What is the difference between growth factor and decay factor?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 8.1 (Apply Exponent Properties Involving Products) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Use properties of exponents to multiply exponential expressions 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 SSE.3c
			Time Frame: Algebra 1 RC: 2 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 8			
Theme: Exponents and Exponential Functions			
Essential Questions: How do you use properties of exponents to simplify an exponential expression? What real-life situations can be modeled by an exponential growth function? What real-life situations can be modeled by an exponential decay function? What is the difference between growth factor and decay factor?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 8.2 (Apply Exponent Properties Involving Quotients) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Use properties of exponents to multiply exponential expressions 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 SSE.3c N.RN.1
			Time Frame: Algebra 1 RC: 2 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 8			
Theme: Exponents and Exponential Functions			
Essential Questions: How do you use properties of exponents to simplify an exponential expression? What real-life situations can be modeled by an exponential growth function? What real-life situations can be modeled by an exponential decay function? What is the difference between growth factor and decay factor?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 8.3 (Define and Use Zero and Negative Exponents) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Use the division properties of exponents to evaluate powers and simplify expressions. Evaluate zero and negative exponents 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 SSE.3c
			Time Frame: Algebra 1 RC: 3 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 8			
Theme: Exponents and Exponential Functions			
Essential Questions: How do you use properties of exponents to simplify an exponential expression? What real-life situations can be modeled by an exponential growth function? What real-life situations can be modeled by an exponential decay function? What is the difference between growth factor and decay factor?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 8.4 (Use Scientific Notation) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Convert numbers in decimal form to scientific notation Convert numbers in scientific notation to decimal form Use rules of exponents to simplify numbers in scientific notation that are multiplied or divided Rewrite a number in proper scientific notation 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 SSE.3c
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 8			
Theme: Exponents and Exponential Functions			
Essential Questions: How do you use properties of exponents to simplify an exponential expression? What real-life situations can be modeled by an exponential growth function? What real-life situations can be modeled by an exponential decay function? What is the difference between growth factor and decay factor?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 8.5 (Exponential Growth Functions) Section 8.6 (Exponential Decay Functions) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Write and use models for exponential growth and decay Graph models for exponential growth using a graphing calculator Apply exponential growth and decay models to real-life situations 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.2 F.IF.7e F.BF.3 F.LE.1 F.LE.2 F.LE.5 Time Frame: Algebra 1 RC: 4 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 9			
Theme: Polynomials and Factoring			
Essential Questions: How do you perform operations with polynomials? What are different techniques of factoring polynomials? How can you use factoring to solve a quadratic equation?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 9.1 (Add and Subtract Polynomials) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Add and subtract polynomials Use polynomials to model real-life situations. 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 APR.1 F.IF.7c
			Time Frame: Algebra 1 RC: 3 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 9			
Theme: Polynomials and Factoring			
Essential Questions: How do you perform operations with polynomials? What are different techniques of factoring polynomials? How can you use factoring to solve a quadratic equation?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 9.2 (Multiply Polynomials) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Multiply polynomials by applying rules of exponents Apply polynomial multiplication in real-life situations. 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 APR.1
			Time Frame: Algebra 1 RC: 3 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 9			
Theme: Polynomials and Factoring			
Essential Questions: How do you perform operations with polynomials? What are different techniques of factoring polynomials? How can you use factoring to solve a quadratic equation?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 9.3 (Special Products of Polynomials) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Use special product patterns for the product of a sum and a difference, and for the square of a binomial. Use special products as real-life models. 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 SSE.2 APR.1 APR.4 Time Frame: Algebra 1 RC: 3 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 9			
Theme: Polynomials and Factoring			
Essential Questions: How do you perform operations with polynomials? What are different techniques of factoring polynomials? How can you use factoring to solve a quadratic equation?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 9.4 (Solve Polynomials Equations in Factored Form) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Solve a polynomial equation in factored form. Relate factors and x-intercepts. 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 APR.3 CED.1 REI.4b F.IF.8a Time Frame: Algebra 1 RC: 2 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 9			
Theme: Polynomials and Factoring			
Essential Questions: How do you perform operations with polynomials? What are different techniques of factoring polynomials? How can you use factoring to solve a quadratic equation?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 9.5 Factoring a Quadratic Trinomial (ac method, when $a = 1$) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Factor a quadratic expression of the form $x^2 + bx + c$ when $a=1$ using the AC method 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.1 REI.4b F.IF.8a SSE.3a Time Frame: Algebra 1 RC: 3 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 9			
Theme: Polynomials and Factoring			
Essential Questions: How do you perform operations with polynomials? What are different techniques of factoring polynomials? How can you use factoring to solve a quadratic equation?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 9.6 Factoring a Quadratic Trinomial (ac method, when $a \neq 1$) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Factor a quadratic expression of the form $ax^2 + bx + c$ when $a \neq 1$ using the AC method 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 CED.1 REI.4b F.IF.8a SSE.3a APR.3 Time Frame: Algebra 1 RC: 4 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 10			
Theme: Quadratic Equations and Functions			
Essential Questions: How do we graph a quadratic function? What do the roots of a quadratic function represent? What are different ways to solve a quadratic function? How do you determine the number of solutions a quadratic function has?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 10.2 (Graph $y = ax^2 + bx + c$) Section 10.3 (Solve Quadratic Equations by Graphing) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Graph quadratic functions using a graphing calculator 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 REI.4b
			Time Frame: Algebra 1 RC: 3 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 10			
Theme: Quadratic Equations and Functions			
Essential Questions: How do we graph a quadratic function? What do the roots of a quadratic function represent? What are different ways to solve a quadratic function? How do you determine the number of solutions a quadratic function has?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 10.6 (Solve Quadratic Equations using the Quadratic Formula) Section 10.7 (Interpret the Discriminant) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Decide whether a quadratic equation is factorable Use the quadratic formula to find the roots of a quadratic equation Use the discriminant to determine how many roots a quadratic equation has 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 REI.4b
			Time Frame: Algebra 1 RC: 5 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 11			
Theme: Radicals and Geometry Connections			
Essential Questions: What is a square root function and how is it graphed? What is a radical? How do you simplify a radical? How many solutions do radical equations have? How is the Pythagorean theorem applied to find a missing side in a right triangle? What is the converse of the Pythagorean theorem used to determine?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 11.1 (Graph Square Root Functions) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Use a graphing calculator to graph a square root function 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 REL.4b
			Time Frame: Algebra 1 RC: 2 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 11			
Theme: Radicals and Geometry Connections			
Essential Questions: What is a square root function and how is it graphed? What is a radical? How do you simplify a radical? What is a perfect square? How many solutions do radical equations have? How is the Pythagorean theorem applied to find a missing side in a right triangle? What is the converse of the Pythagorean theorem used to determine?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 11.2 (Simplify Radical Expressions) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Simplify radical expressions Identify and evaluate perfect square roots, where applicable 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 REI.4b
			Time Frame: Algebra 1 RC: 3 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 11			
Theme: Radicals and Geometry Connections			
Essential Questions: What is a square root function and how is it graphed? What is a radical? How do you simplify a radical? What is a perfect square? How are inverses applied to solve radical equations? How many solutions do radical equations have?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 11.3 (Solve Radical Equations) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Simplify radical expressions Identify and evaluate perfect square roots, where applicable Solve radical equations 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 REI.4b
			Time Frame: Algebra 1 RC: 3 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 11			
Theme: Radicals and Geometry Connections			
Essential Questions: What is a square root function and how is it graphed? What is a radical? How do you simplify a radical? What is a perfect square? How are inverses applied to solve radical equations? How many solutions do radical equations have? How is the Pythagorean theorem applied to find missing side lengths in right triangles? What is the converse of the Pythagorean theorem used to determine?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 11.4 (Apply the Pythagorean Theorem and its Converse) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Simplify radical expressions Identify and evaluate perfect square roots, where applicable Solve radical equations when applying the Pythagorean theorem and its converse 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 REI.4b
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 11			
Theme: Radicals and Geometry Connections			
Essential Questions: What is a square root function and how is it graphed? What is a radical? What is a perfect square? How is the distance formula derived from the Pythagorean theorem? What does the midpoint formula tell you about two points?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 11.5 (Apply the Distance and Midpoint Formula) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Simplify radical expressions Apply the distance formula to find the distance between two points Apply the midpoint formula to find the midpoint of two points 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 REI.4b
			Time Frame: Algebra 1 RC: 3 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 12			
Theme: Rational Equations and Functions			
Essential Questions: What is a polynomial? How do you divide two polynomials? What is a rational expression? How are rational expressions simplified when multiplying and dividing?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 12.3 (Divide Polynomials) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Divide polynomials using synthetic division Divide polynomials using long division 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 REI.4b
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 12			
Theme: Rational Equations and Functions			
Essential Questions: What is a polynomial? How do you divide two polynomials? What is a rational expression? How are rational expressions simplified when multiplying and dividing?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 12.4 (Simplify Rational Expressions) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Simplify rational expressions using rules of exponents 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 REI.4b Time Frame: Algebra 1 RC: 4 days Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 12			
Theme: Rational Equations and Functions			
Essential Questions: What is a polynomial? How do you divide two polynomials? What is a rational expression? How are rational expressions simplified when multiplying and dividing?			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 12.5 (Multiply and Divide Rational Expressions) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Multiply rational expressions using rules of exponents Divide rational expressions using rules of exponents 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 REI.4b
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 13			
Theme: Probability and Data Analysis			
Essential Questions: What is a biased sample? What is a biased question? How do you identify populations and sampling methods? How to analyze central tendency? How to analyze real-life data using Histograms, Box-and-Whisker Plots, and Stem-and-Leaf Plots			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 13.1 (Find Probabilities and Odds) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Find the probability of an event occurring Find the odds of an event occurring Apply probability and odds to real-life situations 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 S.IC.1 S.IC.3
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 13			
Theme: Probability and Data Analysis			
Essential Questions: What is a biased sample? What is a biased question? How do you identify populations and sampling methods? How to analyze central tendency? How to analyze real-life data using Histograms, Box-and-Whisker Plots, and Stem-and-Leaf Plots			
Content (<i>As a result of this learning segment, students will know...</i>) <ul style="list-style-type: none"> Section 13.5 (Analyze Surveys and Samples) 	Skills (<i>As a result of this learning segment, students will be able to...</i>) <ul style="list-style-type: none"> Conduct a survey to a sample population based on a topic of interest Analyze the data collected 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 S.IC.1 S.IC.3
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 13			
Theme: Probability and Data Analysis			
Essential Questions: What is a biased sample? What is a biased question? How do you identify populations and sampling methods? How to analyze central tendency? How to analyze real-life data using Histograms, Box-and-Whisker Plots, and Stem-and-Leaf Plots			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 13.7 (Interpret Stem-and-Leaf Plots and Histograms) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Construct a stem-and-leaf plot based on given information Interpret data using a given stem-and-leaf plot Construct a histogram based on given information Interpret data and answer questions based on a given histogram 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 S.IC.1 S.IC.3
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 13			
Theme: Probability and Data Analysis			
Essential Questions: What is a biased sample? What is a biased question? How do you identify populations and sampling methods? How to analyze central tendency? How to analyze real-life data using Histograms, Box-and-Whisker Plots, and Stem-and-Leaf Plots			
Content <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> Section 13.8 (Interpret Box-and-Whisker Plots) 	Skills <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> Construct a box-and-whisker plot based on given information Interpret data using a given box-and-whisker plot 	Assessments (The above Essential Questions will be assessed with the following formative and summative measures:) <ul style="list-style-type: none"> Homework Warm up exercises Exit Tickets Group activities Section quizzes Chapter tests Cumulative tests Projects / Presentations Midterm exam Final Exam 	Standards: TECH.8.1.12.A.CS1 NJSLS MA 9-12 S.IC.1 S.IC.3
			Time Frame: Algebra 1 RC: 4 days
			Materials: Textbook: 2007 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-59556-3 Calculators: Ti 30xs, Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.