

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

Algebra 1 Curriculum Guide

|                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Pacing Guide</b></p> <p><b>Algebra I 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.</b></p> | <p><b>Unit 1 (Chapter 1):</b> Connections to Algebra. 2 weeks</p> <p><b>Unit 2 (Chapter 3):</b> Solving Linear Equations. 3 weeks</p> <p><b>Unit 3 (Chapter 4):</b> Graphing Linear Equations and Functions. 4 weeks</p> <p><b>Unit 4 (Chapter 5):</b> Writing Linear Equations. 3 weeks</p> <p><b>Unit 5 (Chapter 6):</b> Solving and Graphing Linear Inequalities. 3 weeks</p> <p><b>Unit 6 (Chapter 7):</b> Systems of Linear Equations and Inequalities. 4 weeks</p> <p><b>Unit 7 (Chapter 8):</b> Exponents and Exponential Functions. 4 weeks</p> <p><b>Unit 8 (Chapter 9):</b> Quadratic Equations and Functions. 5 weeks</p> <p><b>Unit 9 (Chapter 10):</b> Polynomials and Factoring. 5 weeks</p> <p><b>Unit 10 (Sec. 1.6, 6.7, online materials):</b> Probability and Data Analysis. 2 weeks</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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

|                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>21<sup>st</sup> Century Skills Standards:</b></p> <p><b>9.1</b> Personal Finance Literacy</p> <p><b>9.2</b> Career Awareness</p> | <p><b>9.1.12.A.2:</b> Differentiate between taxable and nontaxable income.</p> <p><b>9.1.12.D.3:</b> Summarize how investing builds wealth and assists in meeting long-and short-term financial goals.</p> <p><b>9.1.12.D.5:</b> Justify the use of savings and investment options to meet targeted goals.</p> <p><b>9.2.12.C.1:</b> Review career goals and determine steps necessary for attainment.</p> <p><b>9.2.12.C.4:</b> Analyze how economic conditions and social changes influence employment trends and future education.</p> <p><b>9.2.12.C.5:</b> Research career opportunities in the United States and abroad that require knowledge of world languages and diverse cultures.</p> |
| <p><b>Technology Standards</b></p>                                                                                                     | <p><b>8.1.12.A.CS1:</b> Understand and use technology systems.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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

|                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Interdisciplinary Connections</b></p>                                                                                        | <p>SCIENCE<br/>         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.<br/>         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.</p>                                                                                                                                                                      |
| <p><b>NJSLS Mathematical Practices –<br/>         These practices are demonstrated<br/>         throughout the curriculum.</b></p> | <ol style="list-style-type: none"> <li>1. Make sense of problems and persevere in solving them.</li> <li>2. Reason abstractly and quantitatively.</li> <li>3. Construct viable arguments and critique the reasoning of others.</li> <li>4. Model with mathematics.</li> <li>5. Use appropriate tools strategically.</li> <li>6. Attend to precision.</li> <li>7. Look for and make use of structure.</li> <li>8. Look for and express regularity in repeated reasoning.</li> </ol>                                                                                                                          |
| <p><b>NJSLS Career Ready Practices –<br/>         These practices are demonstrated<br/>         throughout the curriculum</b></p>  | <p>CRP2. Apply appropriate academic and technical skills.<br/>         CRP4. Communicate clearly and effectively and with reason.<br/>         CRP6. Demonstrate creativity and innovation.<br/>         CRP7. Employ valid and reliable research strategies.<br/>         CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.<br/>         CRP9. Model integrity, ethical leadership and effective management.<br/>         CRP11. Use technology to enhance productivity.<br/>         CRP12. Work productively in teams while using cultural global competence.</p> |

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

**Differentiation/Accommodations/Modifications**

| <b>Gifted and Talented</b>                                                                                                                                                                                                                                                                                                                                                                                | <b>English Language Learners</b>                                                                                                                                                                                                                                                                 | <b>Students with Disabilities</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Students at Risk of School Failure</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>(content, process, product and learning environment)</i></p> <p><b>Extension Activities:</b><br/>           Conduct research and provide presentation of mathematical topics.<br/>           Design surveys to generate and analyze data to be used in discussion.<br/>           Use of higher level questioning techniques.<br/>           Provide assessments at a higher level of thinking.</p> | <p><b>Modifications for Classroom:</b></p> <p><b>Modifications for Homework/Assignments</b><br/>           Modified assignments.<br/><br/>           Extended time for assignment completion as needed.<br/><br/>           Use graphing calculator.<br/><br/>           Highlight formulas.</p> | <p><i>(appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 team)</i></p> <p><b>Modifications for Classroom:</b><br/>           Ask students to restate information, directions, and assignments.<br/>           Repetition and practice.<br/>           Model skills / techniques to be mastered.<br/>           Extended time to complete class work.<br/>           Provide copy of classnotes.<br/>           Preferential seating to be mutually determined by the student and teacher.<br/>           Students may request books online, on tape/CD, as available and appropriate.<br/>           Assign peer helper in the class setting.<br/>           Provide regular parent / school communication<br/>           Provide oral reminders and check student work during independent work time.<br/>           Assist student with long and short term planning of assignments</p> <p><b>Modifications for Homework</b><br/>           Extended time to complete assignments.</p> | <p><b>Modifications for Classroom:</b><br/>           Ask students to restate information, directions, and assignments.<br/>           Repetition and practice.<br/>           Model skills / techniques to be mastered.<br/>           Extended time to complete class work.<br/>           Provide copy of classnotes.<br/>           Preferential seating to be mutually determined by the student and teacher.<br/>           Students may request books online, on tape/CD, as available and appropriate.<br/>           Assign peer helper in the class setting.<br/>           Provide oral reminders and check student work during independent work time.<br/>           Assist student with long and short term planning of assignments<br/>           Provide regular parent / school communication.<br/>           Assign peer helper in the class setting.<br/>           Provide oral reminders and check student work during independent work time.<br/>           Assist student with long and short term planning of assignments</p> <p><b>Modifications for Homework</b></p> |

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

|  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |  | <p>Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases.<br/>         Provide the student with clearly stated (written) expectations and grading criteria for assignments.</p> <p><b>Modification for Assessments</b></p> <p>Extended time on classroom tests and quizzes.<br/>         Student may take / complete tests in an alternate setting as needed.</p> <p>Restate, reread, and clarify directions/questions.<br/>         Distribute study guide for classroom tests.</p> <p>Establish procedures for accommodations / modifications for assessments.</p> | <p>Extended time to complete assignments.<br/>         Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases.<br/>         Provide the student with clearly stated (written) expectations and grading criteria for assignments.</p> <p><b>Modification for Assessments</b></p> <p>Extended time on classroom tests and quizzes.</p> <p>Student may take / complete tests in an alternate setting as needed.<br/>         Restate, reread, and clarify directions/questions.<br/>         Distribute study guide for classroom tests.</p> <p>Establish procedures for accommodations / modifications for assessments.</p> |
|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Theme:</b> Connections to Algebra                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Essential Questions:</b><br>What is a variable?<br>What rules are used to simplify expressions with exponents?<br>How is the order of operations applied when simplifying an expression?<br>What inverse operations are used in order to solve a one-step or multi-step equation?<br>How do you interpret data on a graph?<br>What is a function?                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>Content</b> (<i>As a result of this learning segment, students will know...</i>)</p> <ul style="list-style-type: none"> <li>• Section 1.1 (Variables in Algebra)</li> <li>• Section 1.2 (Exponents and Powers)</li> <li>• Section 1.3 (Order of Operations)</li> <li>• Section 1.4 (Equations and Inequalities)</li> <li>• Section 1.5 (A Problem Solving Plan Using Models)</li> <li>• Section 1.6 (Tables and Graphs)</li> <li>• Section 1.7 (An Introduction to Functions)</li> </ul> | <p><b>Skills</b> (<i>As a result of this learning segment, students will be able to...</i>)</p> <ul style="list-style-type: none"> <li>• Evaluate expressions</li> <li>• Apply order of operations</li> <li>• Write expressions</li> <li>• Write equations and inequalities</li> <li>• Use a problem solving plan</li> <li>• Represent functions as rules and tables</li> <li>• Represent functions as graphs</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <p><b>Standards:</b><br/>       NJSL MA 9-12<br/>       CED.A.1, CED.A.2, CED.A.3<br/>       F.IF.A.1<br/>       N.Q.A.1, N.Q.A.2, N.Q.A.3<br/>       SSE.A.1<br/>       REI.B.3<br/>       TECH 8.1.12.A.CS1</p> <hr/> <p><b>Time Frame:</b><br/>       3-4 days</p> <hr/> <p><b>Materials:</b><br/>       Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br/>       Calculators: TI-83/84 plus / TI-30XS</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 3                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Theme:</b> Solving Linear Equations                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Essential Questions:</b><br>What are the four inverse operations?<br>How are inverse operations used to solve equations?<br>How can you check that your solution is correct?                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Content</b> ( <i>As a result of this learning segment, students will know...</i> )<br><br><ul style="list-style-type: none"> <li>• Section 3.1-3.4</li> <li>Solving:           <ul style="list-style-type: none"> <li>-One-step equations</li> <li>-Two-step equations</li> <li>-Multi-step equations</li> <li>-With variables on both sides</li> </ul> </li> </ul> | <b>Skills</b> ( <i>As a result of this learning segment, students will be able to...</i> )<br><br><ul style="list-style-type: none"> <li>• Solve one-step equations</li> <li>• Solve two-step equations</li> <li>• Solve multi-step equations</li> <li>• Solve equations with variables on both sides</li> <li>• Check their solution</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>N.Q.A.1<br>CED.A.1, CED.A.4<br>REI.B.3<br>PFL 9.2.12.C.4<br><br><b>Time Frame:</b><br>3-4 days<br><br><b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i><br>Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: TI-83/84 plus / TI-30XS<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                       |                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 3                                                                                                                                                             |                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Theme:</b> Solving Linear Equations                                                                                                                                                |                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Essential Questions:</b><br>How do you rewrite equations in terms of a variable?                                                                                                   |                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>Content</b> (<i>As a result of this learning segment, students will know...</i>)</p> <ul style="list-style-type: none"> <li>Section 3.7<br/>(Formulas and Functions)</li> </ul> | <p><b>Skills</b> (<i>As a result of this learning segment, students will be able to...</i>)</p> <ul style="list-style-type: none"> <li>Represent situations using algebraic symbols</li> <li>Analyze situations using algebraic symbols</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <p><b>Standards:</b><br/>         TECH 8.1.12.A.CS1<br/>         NJSLS MA 9-12<br/>         N-Q.A.1<br/>         CED.A.1, CED.A.4<br/>         REI.B.3<br/>         PFL9.2.12.C.4</p> <hr/> <p><b>Time Frame:</b><br/>         1-2 days</p> <hr/> <p><b>Materials:</b><br/>         Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6</p> <p>Calculators: TI-83/84 plus / TI-30XS</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |



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

|                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 3                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Theme:</b> Solving Linear Equations                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Essential Questions:</b><br>How do you solve proportions using cross-products?<br>What is a rate?<br>What is a ratio?<br>How do you write a percent as a decimal?<br>How do you write a decimal as a percent? |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Content</b> ( <i>As a result of this learning segment, students will know...</i> )<br><br><ul style="list-style-type: none"> <li>• Section 3.8<br/>(Rates, Ratios, and Percents)</li> </ul>                   | <b>Skills</b> ( <i>As a result of this learning segment, students will be able to...</i> )<br><br><ul style="list-style-type: none"> <li>• Solve proportions</li> <li>• Simplify ratios</li> <li>• Convert percents to decimals</li> <li>• Convert decimals to percents</li> <li>• Apply percents in real-life problems</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>N-Q.A.1<br>CED.A.1<br>CED.A.4<br>REI.B.3<br>PFL 9.2.12.C.5<br><br><b>Time Frame:</b><br>2-3 days<br><br><b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i><br>Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: TI-83/84 plus / TI-30XS<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 4                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Theme:</b> Graphing Linear Equations and Functions                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Essential Questions:</b><br>How do you plot points in the coordinate plane?<br>What do the two numbers in an ordered pair represent?<br>How do you read a point off of a graph?<br>Where are the four quadrants located?<br>What is a scatter plot? |                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>• Section 4.1<br/>           (Coordinates and Scatter Plots)</li> </ul>                                              | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>• Plot points in the coordinate plane</li> <li>• Label the four quadrants</li> <li>• Identify the ordered pair of a point plotted on a coordinate plane</li> <li>• Identify what a scatter plot is and whether it has a positive or negative correlation</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>CED.A.2<br>F.IF.C.6, C.7, C.7a<br>PFL 9.1.12.A.2, 9.1.12.D.3, 9.1.12.D.5<br><br><b>Time Frame:</b><br>1-2 days<br><br><b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: TI-83/84 plus / TI-30XS<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 4                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Theme:</b> Graphing Linear Equations and Functions                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Essential Questions:</b><br>What is slope-intercept form?<br>How can a table of values be used to graph a linear equation?<br>How are horizontal and vertical lines graphed?<br>What are the four types of slopes? |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Content</b> (<i>As a result of this learning segment, students will know...</i>)</p> <ul style="list-style-type: none"> <li>Section 4.2<br/>(Graphing Linear Equations)</li> </ul>                              | <p><b>Skills</b> (<i>As a result of this learning segment, students will be able to...</i>)</p> <ul style="list-style-type: none"> <li>Use a table of values to graph a linear equation</li> <li>Identify what type of slope the line has after graphing</li> <li>Check whether an ordered pair is a solution to a linear equation</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <p><b>Standards:</b><br/>       TECH 8.1.12.A.CS1<br/>       NJSL MA 9-12<br/>       CED.A.2<br/>       F.IF.A.6, F.IF.A.7, F.IF.7a<br/>       PFL 9.1.12.A.2, 9.1.12.D.3,<br/>       9.1.12.D.5</p> <p><b>Time Frame:</b><br/>       2-3 days</p> <p><b>Materials:</b><br/>       Textbook: 2004 <i>McDougal Littell</i><br/>       Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6</p> <p>Calculators: TI-83/84 plus / TI-30XS</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 4                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Theme:</b> Graphing Linear Equations and Functions                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Essential Questions:</b><br>What is standard form?<br>How can intercepts be used to graph a linear equation?                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>Content</b> <i>(As a result of this learning segment, students will know...)</i></p> <ul style="list-style-type: none"> <li>• Section 4.3<br/>           (Quick graphs using intercepts)</li> </ul> | <p><b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i></p> <ul style="list-style-type: none"> <li>• Use intercepts to graph a linear equation</li> <li>• Identify what type of slope the line has after graphing</li> <li>• Check whether an ordered pair is a solution to a linear equation</li> <li>• Identify the x-intercept and y-intercept of a graph</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <p><b>Standards:</b><br/>         TECH 8.1.12.A.CS1<br/>         NJSLS MA 9-12<br/>         CED.A.2<br/>         F.IF.A.6, F.IF.A.7, F.IF.7a<br/>         PFL 9.1.12.A.2, 9.1.12.D.3,<br/>         9.1.12.D.5</p> <hr/> <p><b>Time Frame:</b><br/>         2-3 days</p> <hr/> <p><b>Materials:</b><br/>         Textbook: 2004 <i>McDougal Littell</i><br/>         Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6</p> <p>Calculators: TI-83/84 plus / TI-30XS</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 4                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                           |
| <b>Theme: Graphing Linear Equations and Functions</b>                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                           |
| <b>Essential Questions:</b><br>What ratio is used to represent slope?<br>What formula is used to find slope?<br>How do you read a graph to determine its slope?<br>What kind of slope do horizontal and vertical lines have? |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                           |
| <p><b>Content</b> (<i>As a result of this learning segment, students will know...</i>)</p> <ul style="list-style-type: none"> <li>Section 4.4<br/>(Slope of a line)</li> </ul>                                               | <p><b>Skills</b> (<i>As a result of this learning segment, students will be able to...</i>)</p> <ul style="list-style-type: none"> <li>Find the slope of a line using rise over run</li> <li>Find the slope of a line using the slope formula</li> <li>Read the slope of a graph</li> <li>Determine a line's slope based on its sign</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <p><b>Standards:</b><br/>       TECH 8.1.12.A.CS1<br/>       NJSL MA 9-12<br/>       CED.A.2<br/>       F.IF.A.6, F.IF.A.7, F.IF.7a<br/>       PFL 9.1.12.A.2, 9.1.12.D.3, 9.1.12.D.5</p>                                                                 |
|                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             | <p><b>Time Frame:</b><br/>       1-2 days</p>                                                                                                                                                                                                             |
|                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             | <p><b>Materials:</b><br/>       Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6</p> <p>Calculators: TI-83/84 plus / TI-30XS</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 4                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Theme:</b> Graphing Linear Equations and Functions                                                                                                                                                 |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Essential Questions:</b><br>What is slope-intercept form?<br>What is a y-intercept?<br>How is an equation rewritten in slope-intercept form?                                                       |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>Content</b> (<i>As a result of this learning segment, students will know...</i>)</p> <ul style="list-style-type: none"> <li>Section 4.6<br/>(Graphing lines in slope-intercept form)</li> </ul> | <p><b>Skills</b> (<i>As a result of this learning segment, students will be able to...</i>)</p> <ul style="list-style-type: none"> <li>Rewrite an equation in slope-intercept form</li> <li>Graph an equation in slope-intercept form</li> <li>Identify the slope of a line based on a given graph</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <p><b>Standards:</b><br/>       TECH 8.1.12.A.CS1<br/>       NJSLS MA 9-12<br/>       CED.A.2<br/>       F.IF.A.6, F.IF.A.7, F.IF.7a<br/>       PFL 9.1.12.A.2, 9.1.12.D.3, 9.1.12.D.5</p> <p><b>Time Frame:</b><br/>       1-2 days</p> <p><b>Materials:</b><br/>       Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6</p> <p>Calculators: TI-83/84 plus / TI-30XS</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 4                                                                                                                                                              |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Theme:</b> Graphing Linear Equations and Functions                                                                                                                                  |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>What is a relation?<br>What is a function?<br>How do you determine whether a relation is a function?                                                    |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>Content</b> (<i>As a result of this learning segment, students will know...</i>)</p> <ul style="list-style-type: none"> <li>Section 4.8<br/>(Functions and Relations)</li> </ul> | <p><b>Skills</b> (<i>As a result of this learning segment, students will be able to...</i>)</p> <ul style="list-style-type: none"> <li>Determine whether a relation is a function:<br/>           Graphically<br/>           Using a list of ordered pairs<br/>           In a real-life situation</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <p><b>Standards:</b><br/>         TECH 8.1.12.A.CS1<br/>         NJSLS MA 9-12<br/>         CED.A.2<br/>         F.IF.A.6, F.IF.A.7, F.IF.7a<br/>         PFL 9.1.12.A.2, 9.1.12.D.3,<br/>         9.1.12.D.5</p> <p><b>Time Frame:</b><br/>         1-2 days</p> <p><b>Materials:</b><br/>         Textbook: 2004 <i>McDougal Littell</i><br/>         Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6</p> <p>Calculators: TI-83/84 plus / TI-30XS</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 5                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Theme:</b> Writing Linear Equations                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Essential Questions:</b><br>What is slope-intercept form?<br>Where is the y-intercept located on a graph?<br>How is slope determined using a graph?<br>How is an equation written when given slope and a point?<br>How is an equation written when given two points? |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i> <ul style="list-style-type: none"> <li>• Section 5.1<br/>(Writing equations in slope-intercept form)</li> </ul>                                                                     | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i> <ul style="list-style-type: none"> <li>• Write an equation in slope-intercept form when given:<br/>Slope and y-intercept<br/>Slope and a point<br/>Two points</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>CED.A.2<br>F-LE.A.2<br>PFL 9.1.12.A.2, 9.1.12.D.3,<br>9.1.12.D.5<br><br><b>Time Frame:</b><br>1 day<br><br><b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i><br>Algebra 2 by Larson, ISBN-13: 978-0-618-25020-2<br><br>Graphing calculators: Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |



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

|                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 5                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Theme:</b> Writing Linear Equations                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Essential Questions:</b><br>What is slope-intercept form?<br>Where is the y-intercept located on a graph?<br>How is slope determined using a graph?<br>How is an equation written when given slope and a point?<br>How is an equation written when given two points?                                                                                                |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>Content</b> (<i>As a result of this learning segment, students will know...</i>)</p> <ul style="list-style-type: none"> <li>• Section 5.1<br/>(Writing linear equations in slope-intercept form)</li> <li>• Section 5.2<br/>(Writing linear equations given slope and a point)</li> <li>• Section 5.3<br/>(Writing linear equations using two points)</li> </ul> | <p><b>Skills</b> (<i>As a result of this learning segment, students will be able to...</i>)</p> <ul style="list-style-type: none"> <li>• Write an equation in slope-intercept form when given:<br/>Slope and y-intercept<br/>Slope and a point<br/>Two points</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <p><b>Standards:</b><br/>         TECH 8.1.12.A.CS1<br/>         NJSL MA 9-12<br/>         CED.A.2<br/>         F-LE.A.2<br/>         PFL 9.1.12.A.2, 9.1.12.D.3,<br/>         9.1.12.D.5</p> <p><b>Time Frame:</b><br/>         2-3 days</p> <p><b>Materials:</b><br/>         Textbook: 2004 <i>McDougal Littell</i><br/>         Algebra 2 by Larson, ISBN-13: 978-0-618-25020-2</p> <p>Graphing calculators: Ti-83/84 plus.</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 5                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Theme:</b> Writing Linear Equations                                                                                                                                                               |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Essential Questions:</b><br>What is point-slope form?<br>How do you find the slope of a line given two points?<br>What is slope-intercept form?                                                   |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p><b>Content</b> (<i>As a result of this learning segment, students will know...</i>)</p> <ul style="list-style-type: none"> <li>Section 5.5<br/>(Point-slope form of a linear equation)</li> </ul> | <p><b>Skills</b> (<i>As a result of this learning segment, students will be able to...</i>)</p> <ul style="list-style-type: none"> <li>Write an equation in point-slope form when given:<br/><br/>           Slope and y-intercept<br/>           Slope and a point<br/>           Two points</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <p><b>Standards:</b><br/>           TECH 8.1.12.A.CS1<br/>           NJSL MA 9-12<br/>           CED.A.2<br/>           F-LE.A.2<br/>           PFL 9.1.12.A.2, 9.1.12.D.3,<br/>           9.1.12.D.5</p> <hr/> <p><b>Time Frame:</b><br/>           1-2 days</p> <hr/> <p><b>Materials:</b><br/>           Textbook: 2004 <i>McDougal Littell</i><br/>           Algebra 2 by Larson, ISBN-13: 978-0-618-25020-2</p> <p>Graphing calculators: Ti-83/84 plus.</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 5                                                                                                                                                                           |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Theme:</b> Writing Linear Equations                                                                                                                                                              |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>How do you write an equation in standard form?                                                                                                                       |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Content</b> ( <i>As a result of this learning segment, students will know...</i> )<br><br><ul style="list-style-type: none"> <li>Section 5.6<br/>(Standard form of a linear equation)</li> </ul> | <b>Skills</b> ( <i>As a result of this learning segment, students will be able to...</i> )<br><br><ul style="list-style-type: none"> <li>Rewrite an equation in standard form</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>CED.A.2<br>F-LE.A.2<br>PFL 9.1.12.A.2, 9.1.12.D.3,<br>9.1.12.D.5                                                                                                                |
|                                                                                                                                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>1-2 days                                                                                                                                                                                                             |
|                                                                                                                                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 2 by Larson, ISBN-13: 978-0-618-25020-2<br><br>Graphing calculators: Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 6                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Theme:</b> Solving and Graphing Linear Inequalities                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Essential Questions:</b><br>What is a linear inequality?<br>How are solutions graphed on number line?<br>What determines an open or closed circle when graphing a solution on a number line?<br>What must you do when dividing or multiplying by a negative when solving a linear inequality? |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Content</b> (<i>As a result of this learning segment, students will know...</i>)</p> <ul style="list-style-type: none"> <li>• Section 6.1<br/>(Solving one-step linear inequalities)</li> <li>• Section 6.2<br/>(Solving multi-step linear inequalities)</li> </ul>                        | <p><b>Skills</b> (<i>As a result of this learning segment, students will be able to...</i>)</p> <ul style="list-style-type: none"> <li>• Solve a one-step and multi-step inequality</li> <li>• Recall that when multiplying or dividing by a negative, the inequality sign must be switched</li> <li>• Decide when an open or closed are used based on the solution</li> <li>• Graph the solution to a linear inequality</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <p><b>Standards:</b><br/>         TECH 8.1.12.A.CS1<br/>         NJSL MA 9-12<br/>         CED.A.1<br/>         REI.B.3<br/>         REI.D.12<br/>         PFL 9.1.12.A.2, 9.1.12.D.3,<br/>         9.1.12.D.5</p> <hr/> <p><b>Time Frame:</b><br/>         1-2 days</p> <hr/> <p><b>Materials:</b><br/>         Textbook: 2004 <i>McDougal Littell</i><br/>         Algebra 2 by Larson, ISBN-13: 978-0-618-25020-2</p> <p>Graphing calculators: Ti-83/84 plus.</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 6                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Theme:</b> Solving and Graphing Linear Inequalities                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Essential Questions:</b><br>What is a compound inequality?<br>What are the two types of compound inequalities?<br>What do the two types of compound inequalities look like on a number line? |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>Content</b> (<i>As a result of this learning segment, students will know...</i>)</p> <ul style="list-style-type: none"> <li>Section 6.3<br/>(Solving compound inequalities)</li> </ul>    | <p><b>Skills</b> (<i>As a result of this learning segment, students will be able to...</i>)</p> <ul style="list-style-type: none"> <li>Using a given graph on a number line, identify whether the compound inequality represents an “and” or “or” inequality</li> <li>Solve and graph an “and” inequality</li> <li>Solve and graph an “or” inequality</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <p><b>Standards:</b><br/>       TECH 8.1.12.A.CS1<br/>       NJSLS MA 9-12<br/>       CED.A.1<br/>       REI.B.3<br/>       REI.D.12<br/>       PFL 9.1.12.A.2, 9.1.12.D.3,<br/>       9.1.12.D.5</p> <hr/> <p><b>Time Frame:</b><br/>       2-4 days</p> <hr/> <p><b>Materials:</b><br/>       Textbook: 2004 <i>McDougal Littell</i> Algebra 2 by Larson, ISBN-13: 978-0-618-25020-2</p> <p>Graphing calculators: Ti-83/84 plus.</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 6                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Theme:</b> Solving and Graphing Linear Inequalities                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Essential Questions:</b><br>What many solutions does an absolute value equation have?<br>What steps have to be taken to solve an absolute value inequality?                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>Content</b> (<i>As a result of this learning segment, students will know...</i>)</p> <ul style="list-style-type: none"> <li>Section 6.4<br/>(Solving absolute value equations and inequalities)</li> </ul> | <p><b>Skills</b> (<i>As a result of this learning segment, students will be able to...</i>)</p> <ul style="list-style-type: none"> <li>Solve an absolute value equation</li> <li>Graph the solutions to an absolute value equation on a number line</li> <li>Solve an absolute value inequality</li> <li>Decide whether an absolute value inequality represents an “and” or “or” compound inequality</li> <li>Write the final answer to an “and” absolute value inequality as a compound inequality</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <p><b>Standards:</b><br/>         TECH 8.1.12.A.CS1<br/>         NJSLS MA 9-12<br/>         CED.A.1<br/>         REI.B.3<br/>         REI.D.12<br/>         PFL 9.1.12.A.2, 9.1.12.D.3,<br/>         9.1.12.D.5</p> <hr/> <p><b>Time Frame:</b><br/>         2- 4 days</p> <hr/> <p><b>Materials:</b><br/>         Textbook: 2004 <i>McDougal Littell</i><br/>         Algebra 2 by Larson, ISBN-13: 978-0-618-25020-2</p> <p>Graphing calculators: Ti-83/84 plus.</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 7                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Theme:</b> Systems of Linear Equations and Inequalities                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Essential Questions:</b><br>What are three different techniques used to solve a system of equations?<br>How does solving a system of equations relate to a real-world scenario?<br>How does a system of inequalities differ from a system of equations? |                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>• Section 7.1 Solving Linear Systems by Graphing</li> </ul>                                                              | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>• Solve a system of linear equations by graphing.</li> <li>• Model a real-life problem using a system of equations.</li> <li>• Check a solution to a system of equations.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>CED.A.2, A.3<br>REI.C.6<br>REI.D.12<br><br><b>Time Frame:</b><br>1-2 days<br><br><b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 7                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Theme:</b> Systems of Linear Equations and Inequalities                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Essential Questions:</b><br>What are three different techniques used to solve a system of equations?<br>How does solving a system of equations relate to a real-world scenario?<br>How does a system of inequalities differ from a system of equations? |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>Content</b> <i>(As a result of this learning segment, students will know...)</i></p> <ul style="list-style-type: none"> <li>Section 7.2 Solving Linear Systems by Substitution.</li> </ul>                                                           | <p><b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i></p> <ul style="list-style-type: none"> <li>Solve a system of equations using substitution method.</li> <li>Model a real-life problem using a system of equations.</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <p><b>Standards:</b><br/>         TECH 8.1.12.A.CS1<br/>         NJSLS MA 9-12<br/>         CED.A.2 and A3<br/>         REI.C.5 and C6<br/>         REI.D.12</p> <hr/> <p><b>Time Frame:</b><br/>         3-4 days</p> <hr/> <p><b>Materials:</b><br/>         Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6</p> <p>Calculators: Ti 30xs, Ti-83/84 plus.</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |



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

|                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 7                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Theme:</b> Systems of Linear Equations and Inequalities                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Essential Questions:</b><br>What are three different techniques used to solve a system of equations?<br>How does solving a system of equations relate to a real-world scenario?<br>How does a system of inequalities differ from a system of equations? |                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>• Section 7.3 Solving Linear Systems by Linear Combinations (Elimination Method)</li> </ul>                              | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>• Solve a system of equations using elimination method.</li> <li>• Model a real-life problem using a system of equations.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>CED.A.2 and A3<br>REI.C.5 and C6<br><br><b>Time Frame:</b><br>3-4 days<br><br><b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>CONTENT:</b> Chapter 7                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Theme:</b> Systems of Linear Equations and Inequalities                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Essential Questions:</b><br>What are three different techniques used to solve a system of equations?<br>How does solving a system of equations relate to a real-world scenario?<br>How does a system of inequalities differ from a system of equations? |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 7.4 Applications of Linear Systems</li> </ul>                                                                    | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Model a real-life problem using a system of equations.</li> <li>Choose the best method to solve a system of linear equations.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSL MA 9-12<br>CED.A.2 and A3<br>REI.C.5 and C6                                                                                                                                                 |  |
|                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>1-2 days                                                                                                                                                                                                             |  |
|                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |  |

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

|                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 7                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Theme:</b> Systems of Linear Equations and Inequalities                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Essential Questions:</b><br>What are three different techniques used to solve a system of equations?<br>How does solving a system of equations relate to a real-world scenario?<br>How does a system of inequalities differ from a system of equations? |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>• Section 7.5 Special Types of Linear Systems</li> </ul>                                                                 | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>• Identify linear systems as having one solution, no solution, or infinitely many solutions.</li> <li>• Model real-life problems using a linear system.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>CED.A.2 and A3<br>REI.C.5 and C6<br><br><b>Time Frame:</b><br>1-2 days<br><br><b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>CONTENT:</b> Chapter 7                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Theme:</b> Systems of Linear Equations and Inequalities                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Essential Questions:</b><br>What are three different techniques used to solve a system of equations?<br>How does solving a system of equations relate to a real-world scenario?<br>How does a system of inequalities differ from a system of equations? |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 7.6 Solving Systems of Linear Inequalities</li> </ul>                                                            | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Solve a system of linear inequalities by graphing.</li> <li>Use a system of linear inequalities to model a real-life situation.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSL MA 9-12<br>CED.A.2 and A3<br>REI.C.5 REI.D.12                                                                                                                                               |  |
|                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |  |
|                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell Algebra 1</i> by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |  |

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

|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 8                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Theme:</b> Exponents and Exponential Functions                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>How do you use properties of exponents to simplify an exponential expression?<br>What real-life situations can be modeled by an exponential growth function?<br>What real-life situations can be modeled by an exponential decay function?<br>What is the difference between growth factor and decay factor? |                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 8.1 Multiplication Properties of Exponents</li> </ul>                                                                                                                                             | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Use properties of exponents to multiply exponential expressions</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSL MA 9-12<br>SSE.B.3c                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 8                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Theme:</b> Exponents and Exponential Functions                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>How do you use properties of exponents to simplify an exponential expression?<br>What real-life situations can be modeled by an exponential growth function?<br>What real-life situations can be modeled by an exponential decay function?<br>What is the difference between growth factor and decay factor? |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 8.2 Zero and Negative Exponents</li> </ul>                                                                                                                                                        | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Evaluate powers that have zero and negative exponents.</li> <li>Graph exponential functions.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>SSE.B.3c<br>N-RN.A.1                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>CONTENT:</b> Chapter 8                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Theme:</b> Exponents and Exponential Functions                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Essential Questions:</b><br>How do you use properties of exponents to simplify an exponential expression?<br>What real-life situations can be modeled by an exponential growth function?<br>What real-life situations can be modeled by an exponential decay function?<br>What is the difference between growth factor and decay factor? |                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 8.3 Division Properties of Exponents</li> </ul>                                                                                                                                                   | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Use the division properties of exponents to evaluate powers and simplify expressions.</li> <li>Use the division properties of exponents to find a probability.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>SSE.B.3c<br>N-RN.A.1                                                                                                                                                            |  |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |  |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |  |

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

|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 8                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Theme:</b> Exponents and Exponential Functions                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>How do you use properties of exponents to simplify an exponential expression?<br>What real-life situations can be modeled by an exponential growth function?<br>What real-life situations can be modeled by an exponential decay function?<br>What is the difference between growth factor and decay factor? |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 8.4 Scientific Notation</li> </ul>                                                                                                                                                                | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Use scientific notation to represent numbers.</li> <li>Use scientific notation to describe real-life situations.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>SSE.B.3c<br>N-RN.A.1                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>1-2 days                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |



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

|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>CONTENT:</b> Chapter 8                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |  |
| <b>Theme:</b> Exponents and Exponential Functions                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |  |
| <b>Essential Questions:</b><br>How do you use properties of exponents to simplify an exponential expression?<br>What real-life situations can be modeled by an exponential growth function?<br>What real-life situations can be modeled by an exponential decay function?<br>What is the difference between growth factor and decay factor? |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |  |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 8.5 Exponential Growth Functions</li> </ul>                                                                                                                                                       | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Write and use models for exponential growth.</li> <li>Graph models for exponential growth.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>CED.A.2<br>F.IF.C.7e<br>F.IF.BF.5<br>F.LE.A.1,A.2.<br>F.LE.B.5<br>9.2.12.C.1<br>9.2.12.C.4<br>9.1.12.D.3<br>9.1.12.D.5                                                      |  |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                         |  |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |  |

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

|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>CONTENT:</b> Chapter 8                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Theme:</b> Exponents and Exponential Functions                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Essential Questions:</b><br>How do you use properties of exponents to simplify an exponential expression?<br>What real-life situations can be modeled by an exponential growth function?<br>What real-life situations can be modeled by an exponential decay function?<br>What is the difference between growth factor and decay factor? |                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 8.6 Exponential Decay Functions</li> </ul>                                                                                                                                                        | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Write and use models for exponential decay.</li> <li>Graph models for exponential decay.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>CED.A.2<br>F.IF.C.7e<br>F.IF.BF.5<br>F.LE.A.1,A.2.<br>F.LE.B.5                                                                                                                  |  |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |  |
|                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |  |

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

|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 9                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Theme:</b> Quadratic Equations and Functions                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>How do we graph a quadratic function?<br>What do the roots of a quadratic function represent?<br>What are different ways to solve a quadratic function?<br>How do you determine the number of solutions a quadratic function has? |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 9.1 Solving Quadratic Equations by Finding Square Roots</li> </ul>                                                     | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Evaluate and approximate square roots.</li> <li>Solve a quadratic equation by finding square roots.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>REI.B.4                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 9                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Theme:</b> Quadratic Equations and Functions                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>How do we graph a quadratic function?<br>What do the roots of a quadratic function represent?<br>What are different ways to solve a quadratic function?<br>How do you determine the number of solutions a quadratic function has? |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 9.2 Simplifying Radicals.</li> </ul>                                                                                   | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Use properties of radicals to simplify radicals.</li> <li>Use quadratic equations to model real-life problems.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>REI.B.4                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>CONTENT:</b> Chapter 9                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Theme:</b> Quadratic Equations and Functions                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Essential Questions:</b><br>How do we graph a quadratic function?<br>What do the roots of a quadratic function represent?<br>What are different ways to solve a quadratic function?<br>How do you determine the number of solutions a quadratic function has? |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 9.3 Graphing Quadratic Functions</li> </ul>                                                                            | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Sketch the graph of a quadratic function.</li> <li>Use quadratic models in real-life settings.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSL MA 9-12<br>CED.A.2 and A.3<br>REI.B.4<br>REI.D.11<br>F.IF.B.4<br>F.IF.C.7a and F.IF.C.7c<br>F.BF.B.3                                                                                        |  |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>3 days                                                                                                                                                                                                               |  |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |  |

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

|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>CONTENT:</b> Chapter 9                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Theme:</b> Quadratic Equations and Functions                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Essential Questions:</b><br>How do we graph a quadratic function?<br>What do the roots of a quadratic function represent?<br>What are different ways to solve a quadratic function?<br>How do you determine the number of solutions a quadratic function has? |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 9.4 Solving Quadratic Equations by Graphing.</li> </ul>                                                                | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Solve a quadratic equation graphically.</li> <li>Use quadratic models in real-life settings.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSL MA 9-12<br>CED.A.2 and A.3<br>REI.B.4<br>REI.D.11<br>F.IF.B.4<br>F.IF.C.7a and F.IF.C.7c<br>F.BF.B.3                                                                                        |  |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2 days                                                                                                                                                                                                               |  |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |  |

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

|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 9                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Theme:</b> Quadratic Equations and Functions                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>How do we graph a quadratic function?<br>What do the roots of a quadratic function represent?<br>What are different ways to solve a quadratic function?<br>How do you determine the number of solutions a quadratic function has? |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 9.5 Solving Quadratic Equations by the Quadratic Formula</li> </ul>                                                    | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Use the quadratic formula to solve a quadratic equation.</li> <li>Use quadratic models for real-life situations.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>REI.B.4                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>3-4 days                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 9                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Theme:</b> Quadratic Equations and Functions                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>How do we graph a quadratic function?<br>What do the roots of a quadratic function represent?<br>What are different ways to solve a quadratic function?<br>How do you determine the number of solutions a quadratic function has? |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 9.6 Applications of the Discriminant</li> </ul>                                                                        | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Use the discriminant to find the number of solutions of a quadratic equation.</li> <li>Apply the discriminant to solve real-life problems.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>REI.B.4                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>1-2 days                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |



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

|                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>CONTENT:</b> Chapter 10                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Theme:</b> Polynomials and Factoring                                                                                                                                                               |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Essential Questions:</b><br>How do you perform operations with polynomials?<br>What are different techniques of factoring polynomials?<br>How can you use factoring to solve a quadratic equation? |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 10.1 Adding and Subtracting Polynomials</li> </ul>          | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Add and subtract polynomials.               <ul style="list-style-type: none"> <li>Use polynomials to model real-life situations.</li> </ul> </li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>A-APR.A.1<br>F.IF.C.7c                                                                                                                                                          |  |
|                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |  |
|                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |  |

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

|                                                                                                                                                                                                       |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>CONTENT:</b> Chapter 10                                                                                                                                                                            |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Theme:</b> Polynomials and Factoring                                                                                                                                                               |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Essential Questions:</b><br>How do you perform operations with polynomials?<br>What are different techniques of factoring polynomials?<br>How can you use factoring to solve a quadratic equation? |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |  |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 10.2 Multiplying Polynomials.</li> </ul>                    | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Multiply two polynomials.</li> <li>Use polynomial multiplication in real-life situations.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>A-APR.A.1                                                                                                                                                                       |  |
|                                                                                                                                                                                                       |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |  |
|                                                                                                                                                                                                       |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |  |

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

|                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 10                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Theme:</b> Polynomials and Factoring                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Essential Questions:</b><br>How do you perform operations with polynomials?<br>What are different techniques of factoring polynomials?<br>How can you use factoring to solve a quadratic equation? |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>Content</b> <i>(As a result of this learning segment, students will know...)</i></p> <ul style="list-style-type: none"> <li>• Section 10.3 Special Products of Polynomials.</li> </ul>          | <p><b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i></p> <ul style="list-style-type: none"> <li>• Use special product patterns for the product of a sum and a difference, and for the square of a binomial.</li> <li>• Use special products as real-life models.</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <p><b>Standards:</b><br/>                 TECH 8.1.12.A.CS1<br/>                 NJSLS MA 9-12<br/>                 SSE.A.2<br/>                 APR.A.1 and APR.C.4</p> <hr/> <p><b>Time Frame:</b><br/>                 1-2 days</p> <hr/> <p><b>Materials:</b><br/>                 Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6</p> <p>Calculators: Ti 30xs, Ti-83/84 plus.</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                             |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 10                                                                                                                                                                                  |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Theme:</b> Polynomials and Factoring                                                                                                                                                                     |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Essential Questions:</b><br>How do you perform operations with polynomials?<br>What are different techniques of factoring polynomials?<br>How can you use factoring to solve a quadratic equation?       |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>• Section 10.4 Solving Polynomials Equations in Factored Form.</li> </ul> | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>• Solve a polynomial equation in factored form.</li> <li>• Relate factors and x-intercepts.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSL MA 9-12<br>APR.B.3<br>CED.A.1<br>A-REI.B.4b<br>F.IF.C.8a<br><br><b>Time Frame:</b><br>1-2 days<br><br><b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 10                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Theme:</b> Polynomials and Factoring                                                                                                                                                                                        |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Essential Questions:</b><br>How do you perform operations with polynomials?<br>What are different techniques of factoring polynomials?<br>How can you use factoring to solve a quadratic equation?                          |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>Content</b> <i>(As a result of this learning segment, students will know...)</i></p> <ul style="list-style-type: none"> <li>Section 10.5 Factoring a Quadratic Trinomial (ac method, when <math>a = 1</math>)</li> </ul> | <p><b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i></p> <ul style="list-style-type: none"> <li>Factor a quadratic expression of the form <math>x^2 + bx + c</math></li> <li>Solve quadratic equations by factoring.</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <p><b>Standards:</b><br/>         TECH 8.1.12.A.CS1<br/>         NJSL MA 9-12<br/>         APR.B.3<br/>         CED.A.1<br/>         SSE.B.3a<br/>         A-REI.B.4b<br/>         F.IF.C.8a</p> <hr/> <p><b>Time Frame:</b><br/>         2-3 days</p> <hr/> <p><b>Materials:</b><br/>         Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6</p> <p>Calculators: Ti 30xs, Ti-83/84 plus.</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |

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

|                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 10                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Theme:</b> Polynomials and Factoring                                                                                                                                                                                           |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Essential Questions:</b><br>How do you perform operations with polynomials?<br>What are different techniques of factoring polynomials?<br>How can you use factoring to solve a quadratic equation?                             |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Section 10.6 Factoring a Quadratic Trinomial (ac method, when <math>a \neq 1</math>)</li> </ul> | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Factor a quadratic expression of the form <math>ax^2 + bx + c</math></li> <li>Solve quadratic equations by factoring</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSL MA 9-12<br>APR.B.3<br>CED.A.1<br>SSE.B.3a<br>A-REI.B.4b<br>A-APR.B.3<br>F.IF.C.8a<br><br><b>Time Frame:</b><br>3-4 days<br><br><b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 10                                                                                                                                                                            |                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Theme:</b> Polynomials and Factoring                                                                                                                                                               |                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Essential Questions:</b><br>How do you perform operations with polynomials?<br>What are different techniques of factoring polynomials?<br>How can you use factoring to solve a quadratic equation? |                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>• Section 10.7 Factoring Special Products</li> </ul>                | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>• Use special product patterns to factor quadratic polynomials.</li> <li>• Solve quadratic equations by factoring.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>CED.A.1<br>REI.B.4b<br>SSE.A.2, SSE.B.3<br>A-APR.B.3<br>A-APR.C.4<br><br><b>Time Frame:</b><br>1-2 days<br><br><b>Materials:</b> Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                       |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> Chapter 10                                                                                                                                                                            |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Theme:</b> Polynomials and Factoring                                                                                                                                                               |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Essential Questions:</b><br>How do you perform operations with polynomials?<br>What are different techniques of factoring polynomials?<br>How can you use factoring to solve a quadratic equation? |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>Content</b> <i>(As a result of this learning segment, students will know...)</i></p> <ul style="list-style-type: none"> <li>• Section 10.8 Factoring Using the Distributive Property</li> </ul> | <p><b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i></p> <ul style="list-style-type: none"> <li>• Use the distributive property to factor a polynomial.</li> <li>• Solve polynomial equations by factoring.</li> </ul> | <p><b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)</p> <ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <p><b>Standards:</b><br/>         TECH 8.1.12.A.CS1<br/>         NJSLS MA 9-12<br/>         CED.A.1<br/>         REI.B.4b<br/>         A-SSE.B.3<br/>         A-APR.B.3</p> <hr/> <p><b>Time Frame:</b><br/>         2-3 days</p> <hr/> <p><b>Materials:</b><br/>         Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6</p> <p>Calculators: Ti 30xs, Ti-83/84 plus.</p> <p>Smart board, internet research and activities, graph papers, color pencils.</p> |



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

|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> (use online materials or from Algebra 2 book)                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Theme:</b> Probability and Data Analysis                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>What is a biased sample?<br>What is a biased question?<br>How do you identify populations and sampling methods?<br>How to analyze central tendency?<br>How to analyze real-life data using Histograms, Box-and-Whisker Plots, and Stem-and-Leaf Plots |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Content</b> ( <i>As a result of this learning segment, students will know...</i> )<br><br><ul style="list-style-type: none"> <li>Analyze Surveys and Samples</li> </ul>                                                                                                           | <b>Skills</b> ( <i>As a result of this learning segment, students will be able to...</i> )<br><br><ul style="list-style-type: none"> <li>Identify populations and sampling methods.</li> <li>Identify biased samples and questions.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>S.IC.1, S.IC.3                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 1 by Larson, ISBN-13: 978-0-618-25019-6<br><br>Calculators: Ti 30xs, Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> (use online materials or from Algebra 2 book)                                                                                                                                                                                                                        |                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Theme:</b> Probability and Data Analysis                                                                                                                                                                                                                                          |                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>What is a biased sample?<br>What is a biased question?<br>How do you identify populations and sampling methods?<br>How to analyze central tendency?<br>How to analyze real-life data using Histograms, Box-and-Whisker Plots, and Stem-and-Leaf Plots |                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>Use Measures of Central Tendency and Dispersion</li> </ul>                                                                                         | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>Compare measures of central tendency.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSL MA 9-12<br>S.ID.2, S.ID.3                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 2 by Larson, ISBN-13: 978-0-618-25020-2<br><br>Graphing calculators: Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> (use online materials or from Algebra 2 book)                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Theme:</b> Probability and Data Analysis                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Essential Questions:</b><br>What is a biased sample?<br>What is a biased question?<br>How do you identify populations and sampling methods?<br>How to analyze central tendency?<br>How to analyze real-life data using Histograms, Box-and-Whisker Plots, and Stem-and-Leaf Plots |                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                            |
| <b>Content</b> ( <i>As a result of this learning segment, students will know...</i> )<br><br><ul style="list-style-type: none"> <li>Interpret Stem-and-Leaf Plots and Histograms</li> </ul>                                                                                          | <b>Skills</b> ( <i>As a result of this learning segment, students will be able to...</i> )<br><br><ul style="list-style-type: none"> <li>Construct Stem-and-Leaf Plots and Histograms.</li> <li>Interpret Stem-and-Leaf Plots and Histograms.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>Homework</li> <li>Warm up exercises</li> <li>Exit Tickets</li> <li>Group activities</li> <li>Section quizzes</li> <li>Chapter tests</li> <li>Cumulative tests</li> <li>Projects / Presentations</li> <li>Midterm exam</li> <li>Final Exam</li> </ul> | <b>Standards:</b><br><b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>S.ID.1<br>S.ID.2<br>S.ID.3<br>S.ID.5                                                                                                                       |
|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Time Frame:</b><br>2-3 days                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i> Algebra 2 by Larson, ISBN-13: 978-0-618-25020-2<br><br>Graphing calculators: Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |

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

|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTENT:</b> (use online materials or from Algebra 2 book)                                                                                                                                                                                                                        |                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Theme:</b> Probability and Data Analysis                                                                                                                                                                                                                                          |                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Essential Questions:</b><br>What is a biased sample?<br>What is a biased question?<br>How do you identify populations and sampling methods?<br>How to analyze central tendency?<br>How to analyze real-life data using Histograms, Box-and-Whisker Plots, and Stem-and-Leaf Plots |                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Content</b> <i>(As a result of this learning segment, students will know...)</i><br><br><ul style="list-style-type: none"> <li>• Interpret Box-and-Whisker Plots</li> </ul>                                                                                                       | <b>Skills</b> <i>(As a result of this learning segment, students will be able to...)</i><br><br><ul style="list-style-type: none"> <li>• Interpret Box-and-Whisker Plots.</li> </ul> | <b>Assessments</b> (The above Essential Questions will be assessed with the following formative and summative measures:)<br><br><ul style="list-style-type: none"> <li>• Homework</li> <li>• Warm up exercises</li> <li>• Exit Tickets</li> <li>• Group activities</li> <li>• Section quizzes</li> <li>• Chapter tests</li> <li>• Cumulative tests</li> <li>• Projects / Presentations</li> <li>• Midterm exam</li> <li>• Final Exam</li> </ul> | <b>Standards:</b><br><b>Standards:</b><br>TECH 8.1.12.A.CS1<br>NJSLS MA 9-12<br>S.ID.1<br>S.ID.2<br>S.ID.3<br>8.1.12.A.1<br><br><b>Time Frame:</b><br>2-3 days<br><br><b>Materials:</b><br>Textbook: 2004 <i>McDougal Littell</i><br>Algebra 2 by Larson, ISBN-13: 978-0-618-25020-2<br><br>Graphing calculators: Ti-83/84 plus.<br><br>Smart board, internet research and activities, graph papers, color pencils. |