CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

Geometry RC Curriculum Guide

Pacing Guide 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.	**Unit 1 (Chapter 1):** Basics of Geometry. 2-3 weeks **Unit 2 (Chapter 2):** Reasoning and Proof. 2 weeks **Unit 3 (Chapter 3):** Perpendicular and Parallel Lines. 2-3 weeks **Unit 4 (Chapter 4):** Congruent Triangles. 2 weeks **Unit 5 (Chapter 5):** Properties of Triangles. 2-3 weeks **Unit 6 (Chapter 6):** Similarity. 3 weeks **Unit 7 (Chapter 7):** Right Triangles and Trigonometry. 1-2 weeks **Unit 8 (Chapter 8):** Quadrilaterals. Regular: 2-3 weeks **Unit 9 (Chapter 9):** Transformations. 2 weeks **Unit 10 (Chapter 10):** Circles. 3 weeks **Unit 11 (Chapter 11):** Area of Polygons and Circles. 1 week **Unit 12 (Chapter 12):** Surface Area and Volume. 3 weeks

21st Century Skills Standards: **9.1** Personal Finance Literacy **9.2** Career Awareness	**9.1.12.C.1:** Review career goals and determine steps necessary for attainment. **9.2.12.BM.1:** Utilize mathematical concepts, skills and problem solving to obtain necessary information for decision-making in business. **9.2.ST.2:** Use technology to acquire, manipulate, analyze and report data.
Technology Standards	**8.1.12.A.4:** Construct a spreadsheet, enter data, and use mathematical or logical functions to manipulate data, generate charts and graphs, and interpret the results. **8.1.12.A.CS1:** Understand and use technology systems.
Interdisciplinary Connections	**Sciences:** HS-PS1-1. Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms. (Chemical bonding and molecular geometry)
NJSLS Mathematical Practices – These practices are demonstrated throughout the curriculum.	1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.
NJSLS Career Ready Practices – These practices are demonstrated throughout the curriculum	CRP2. Apply appropriate academic and technical skills. CRP4. Communicate clearly and effectively and with reason. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP9. Model integrity, ethical leadership and effective management. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

Differentiation/Accommodations/Modifications

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

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

		• Provide oral reminders and check student work during independent work time. • Assist student with long and short term planning of assignments **Modifications for Homework** • Extended time to complete assignments. • Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases. • Provide the student with clearly stated (written) expectations and grading criteria for assignments. **Modification for Assessments** • Extended time on classroom tests and quizzes. • Student may take / complete tests in an alternate setting as needed. • Restate, reread, and clarify directions/questions. • Distribute study guide for classroom tests. • Establish procedures for accommodations / modifications for assessments.	• Provide oral reminders and check student work during independent work time. • Assist student with long and short term planning of assignments **Modifications for Homework** • Extended time to complete assignments. • Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases. • Provide the student with clearly stated (written) expectations and grading criteria for assignments. **Modification for Assessments** • Extended time on classroom tests and quizzes. • Student may take / complete tests in an alternate setting as needed. • Restate, reread, and clarify directions/questions. • Distribute study guide for classroom tests. • Establish procedures for accommodations / modifications for assessments.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 1/2

Theme: Basics of Geometry

Essential Questions:
How do you use inductive reasoning in mathematics?
How do you name geometric figures?
What are congruent segments?
How do you identify whether an angle is acute, right, obtuse, or straight?
How do you identify complementary and supplementary angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.9, 10, 11
• Section 2.1 Patterns and Inductive Reasoning	• Find and describe patterns • Use inductive reasoning to make real-life conjecture	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 1 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 1

Theme: Basics of Geometry

Essential Questions:
How do you use inductive reasoning in mathematics?
How do you name geometric figures?
What are congruent segments?
How do you identify whether an angle is acute, right, obtuse, or straight?
How do you identify complementary and supplementary angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12G.CO.1
• Section 1.1 Points, Lines, and Planes	• Understand and use the basic undefined terms and defined terms of geometry. • Sketch the intersection of lines and planes	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 1 day
			Materials: Textbook: 2004 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 1

Theme: Basics of Geometry

Essential Questions:
How do you use inductive reasoning in mathematics?
How do you name geometric figures?
What are congruent segments?
How do you identify whether an angle is acute, right, obtuse, or straight?
How do you identify complementary and supplementary angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12G.CO.1, 7
• Section 1.2 Segments and Their Measures • Section 1.3 Midpoint and Distance Formula	• Use segment postulates • Use the Distance Formula to measure distance	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

<table>
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How do you use inductive reasoning in mathematics?
How do you name geometric figures?
What are congruent segments?
How do you identify whether an angle is acute, right, obtuse, or straight?
How do you identify complementary and supplementary angles?</td></tr>
<tr><td>Content (As a result of this learning segment, students will know…)

• Section 1.4 Angles and Their Measures</td><td>Skills (As a result of this learning segment, students will be able to…)

• Use angle postulates
• Classify angles as acute, right, obtuse, or straight</td><td>Assessments (The above Essential Questions will be assessed with the following formative and summative measures:)

• Homework
• Warm up exercises
• Exit Tickets
• Group activities
• Section quizzes
• Chapter tests
• Cumulative tests
• Projects / Presentations
• Midterm exam
• Final Exam</td><td>Standards:
TECH
8.1.12.A.4, 8.1.12.A.CS1

NJSLS MA 9-12G.CO.1,7,12

Time Frame:
Geometry RC: 2 day

Materials:
Textbook: 2007 McDougal Littell Geometry by Larson, ISBN: 0-618-25023-9

Graphing calculators: Ti-83/84 plus.

Smart board, internet research and activities, graph papers, color pencils.</td></tr>
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How do you use inductive reasoning in mathematics?
How do you name geometric figures?
What are congruent segments?
How do you identify whether an angle is acute, right, obtuse, or straight?
How do you identify complementary and supplementary angles?</td></tr>
<tr>
<td>Content (As a result of this learning segment, students will know…)

• Section 1.5 Segment and Angle Bisectors</td>
<td>Skills (As a result of this learning segment, students will be able to…)

• Bisect a segment
• Bisect an angle</td>
<td>Assessments (The above Essential Questions will be assessed with the following formative and summative measures:)

• Homework
• Warm up exercises
• Exit Tickets
• Group activities
• Section quizzes
• Chapter tests
• Cumulative tests
• Projects / Presentations
• Midterm exam
• Final Exam</td>
<td>Standards:
TECH
8.1.12.A.4, 8.1.12.A.CS1

NJSLS MA 9-12G.CO.1,7,12

Time Frame:
Geometry RC : 2 day

Materials:
Textbook: 2007 McDougal Littell Geometry by Larson, ISBN: 0-618-25023-9

Graphing calculators: Ti-83/84 plus.

Smart board, internet research and activities, graph papers, color pencils.</td>
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CONTENT: Chapter 1

Theme: Basics of Geometry

Essential Questions:
How do you use inductive reasoning in mathematics?
How do you name geometric figures?
What are congruent segments?
How do you identify whether an angle is acute, right, obtuse, or straight?
How do you identify complementary and supplementary angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12G.CO.1,9 **Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 1.5 Angle Pair Relationships	• Identify vertical angles and linear pairs • Identify complementary and supplementary angles	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 1

Theme: Basics of Geometry

Essential Questions:
How do you use inductive reasoning in mathematics?
How do you name geometric figures?
What are congruent segments?
How do you identify whether an angle is acute, right, obtuse, or straight?
How do you identify complementary and supplementary angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12G.GMD 1 **Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 1.7 Introduction to Perimeter, Circumference, and Area	• Find the perimeter and area of common plane figures • Use general problem-solving plan`	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CONTENT: Chapter 2

Theme: Reasoning and Proof

Essential Questions:
How do you write a converse, inverse and contrapositive statement?
How do you write a bi conditional statement?
How do you construct a logical argument?
How do you solve an equation?
How do you write a geometric proof?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.9, 10, 11 **Time Frame:** Geometry : 4 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 2.4 Use Postulates and Diagrams • Section 2.2 Conditional Statements	• Recognize and analyze a conditional statement • Write postulates about points, lines, and planes using conditional statements	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CONTENT: Chapter 2

Theme: Reasoning and Proof

Essential Questions:
How do you write a converse, inverse and contrapositive statement?
How do you write a biconditional statement?
How do you construct a logical argument?
How do you solve an equation?
How do you write a geometric proof?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.9, 10, 11 **Time Frame:** Geometry RC: 1 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 2.2 Definitions and Biconditional Statements	• Recognize and use definitions • Recognize and use biconditional statements	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CONTENT: Chapter 2

Theme: Reasoning and Proof

Essential Questions:
How do you write a converse, inverse and contrapositive statement?
How do you write a biconditional statement?
How do you construct a logical argument?
How do you solve an equation?
How do you write a geometric proof?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.1, 9, 10, 11 **Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 2.3 Deductive Reasoning	• Use symbolic notation to represent logical statements • Form conclusions by applying the laws of logic to true statements.	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

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How do you write a converse, inverse and contrapositive statement?
How do you write a biconditional statement?
How do you construct a logical argument?
How do you solve an equation?
How do you write a geometric proof?</td></tr>
<tr><td>Content (As a result of this learning segment, students will know…)

• Section 2.5 Reasoning with Properties of Algebra</td><td>Skills (As a result of this learning segment, students will be able to…)

• Use properties from algebra
• Use properties of length and measure to justify segment and angle relationships</td><td>Assessments (The above Essential Questions will be assessed with the following formative and summative measures:)

• Homework
• Warm up exercises
• Exit Tickets
• Group activities
• Section quizzes
• Chapter tests
• Cumulative tests
• Projects / Presentations
• Midterm exam
• Final Exam</td><td>Standards:
TECH
8.1.12.A.4, 8.1.12.A.CS1

NJSLS MA 9-12
A.REI.1
G.CO.9, 10, 11

Time Frame:
Geometry RC: 2 day

Materials:
Textbook: 2007 McDougal Littell Geometry by Larson, ISBN: 0-618-25023-9

Graphing calculators: Ti-83/84 plus.

Smart board, internet research and activities, graph papers, color pencils.</td></tr>
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CONTENT: Chapter 2

Theme: Reasoning and Proof

Essential Questions:
How do you write a converse, inverse and contrapositive statement?
How do you write a biconditional statement?
How do you construct a logical argument?
How do you solve an equation?
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Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.9, 10, 11 **Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2004 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 2.6 Proving Statements about Segments	• Justify statements about congruent segments • Write reasons for steps in a proof	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 3

Theme: Perpendicular and Parallel Lines

Essential Questions:
What angle pairs are formed by transversals?
How are corresponding angles and alternate interior angles related for two parallel lines and a transversal?
How do you find the slope of a line given the coordinates of two points on the line?
How do you write an equation of a line?
How do you find the distance between a point and a line?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.1, 9
• Section 3.1 Lines and Angles	• Identify relationships between lines • Identify angles by transversals	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 3

Theme: Perpendicular and Parallel Lines

Essential Questions:
What angle pairs are formed by transversals?
How are corresponding angles and alternate interior angles related for two parallel lines and a transversal?
How do you find the slope of a line given the coordinates of two points on the line?
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Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12G.CO.1, 9
• Section 3.6 Proof and Perpendicular Lines	• Write different types of proofs • Prove results about perpendicular lines	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 3

Theme: Perpendicular and Parallel Lines

Essential Questions:
What angle pairs are formed by transversals?
How are corresponding angles and alternate interior angles related for two parallel lines and a transversal?
How do you find the slope of a line given the coordinates of two points on the line?
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How do you find the distance between a point and a line?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO. 9 **Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 3.2 Use Parallel Lines and Transversals	• Prove and use results about parallel lines and transversals • Use properties of parallel lines to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CONTENT: Chapter 3

Theme: Perpendicular and Parallel Lines

Essential Questions:
What angle pairs are formed by transversals?
How are corresponding angles and alternate interior angles related for two parallel lines and a transversal?
How do you find the slope of a line given the coordinates of two points on the line?
How do you write an equation of a line?
How do you find the distance between a point and a line?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO. 9
• Section 3.3 Proving Lines are Parallel	• Prove that two lines are parallel • Construct parallel lines using straightedge and compass • Use properties of parallel lines to solve real-life problems.	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 3

Theme: Perpendicular and Parallel Lines

Essential Questions:
What angle pairs are formed by transversals?
How are corresponding angles and alternate interior angles related for two parallel lines and a transversal?
How do you find the slope of a line given the coordinates of two points on the line?
How do you write an equation of a line?
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Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.GPE.5 A.CED.2 G.CO.9, 12
• Section 3.4 Parallel and Perpendicular Lines in the Coordinate Plane • Section 3.5 Write and Graph Equations of Lines	• Find slopes of lines and use slope to identify parallel and perpendicular lines in a coordinate plane. • Write equations of parallel lines in a coordinate plane.	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 4 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 4

Theme: Congruent Triangles

Essential Questions:
How can you find the measure of the third angle of a triangle if you know the measure of the other two angles?
What are congruent figures?
How can you use side lengths to prove triangles congruent?
How can you use two sides and an angle to prove triangles are congruent?
How can you use congruent triangles to prove angles or sides congruent?
How are the sides and angles of a triangle related if there are two or more congruent sides or angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.10
• Section 4.1 Triangles and Angles	• Classify triangles by their sides and angles • Find angle measure in triangles	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 4

Theme: Congruent Triangles

Essential Questions:
How can you find the measure of the third angle of a triangle if you know the measure of the other two angles?
What are congruent figures?
How can you use side lengths to prove triangles congruent?
How can you use two sides and an angle to prove triangles are congruent?
How can you use congruent triangles to prove angles or sides congruent?
How are the sides and angles of a triangle related if there are two or more congruent sides or angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.7 **Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 4.2 Congruence and Triangles	• Identify congruent figures and corresponding parts • Prove that two triangles are congruent	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CONTENT: Chapter 4

Theme: Congruent Triangles

Essential Questions:
How can you find the measure of the third angle of a triangle if you know the measure of the other two angles?
What are congruent figures?
How can you use side lengths to prove triangles congruent?
How can you use two sides and an angle to prove triangles are congruent?
How can you use congruent triangles to prove angles or sides congruent?
How are the sides and angles of a triangle related if there are two or more congruent sides or angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.8, 10, 12 **Time Frame:** Geometry: 1 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 4.3 Proving Triangles are Congruent: SSS	• Prove triangles are congruent using SSS Congruence Postulates • Use congruence postulates in real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
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GEOMETRY RC

CONTENT: Chapter 4

Theme: Congruent Triangles

Essential Questions:
How can you find the measure of the third angle of a triangle if you know the measure of the other two angles?
What are congruent figures?
How can you use side lengths to prove triangles congruent?
How can you use two sides and an angle to prove triangles are congruent?
How can you use congruent triangles to prove angles or sides congruent?
How are the sides and angles of a triangle related if there are two or more congruent sides or angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.8, 10, 12
• Section 4.4 Proving Triangles are Congruent: SAS and HL	• Prove that triangles are congruent using the SAS Congruence Postulate and the HL Congruence Theorem • Use congruence postulates and theorems in real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 4

Theme: Congruent Triangles

Essential Questions:
How can you find the measure of the third angle of a triangle if you know the measure of the other two angles?
What are congruent figures?
How can you use side lengths to prove triangles congruent?
How can you use two sides and an angle to prove triangles are congruent?
How can you use congruent triangles to prove angles or sides congruent?
How are the sides and angles of a triangle related if there are two or more congruent sides or angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO. 10, 12
• Section 4.5 Prove Triangles Congruent by ASA and AAS • Section 4.6 Use Congruent Triangles	• Use ASA and AAS Congruence Postulate to plan and write proofs • Use congruent triangles to prove constructions are valid	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 4

Theme: Congruent Triangles

Essential Questions:
How can you find the measure of the third angle of a triangle if you know the measure of the other two angles?
What are congruent figures?
How can you use side lengths to prove triangles congruent?
How can you use two sides and an angle to prove triangles are congruent?
How can you use congruent triangles to prove angles or sides congruent?
How are the sides and angles of a triangle related if there are two or more congruent sides or angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO. 10 **Time Frame:** Geometry: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 4.7 Isosceles, Equilateral, and Right Triangles	• Use properties of isosceles and equilateral triangles • Use properties of right triangles	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CONTENT: Chapter 4

Theme: Congruent Triangles

Essential Questions:
How can you find the measure of the third angle of a triangle if you know the measure of the other two angles?
What are congruent figures?
How can you use side lengths to prove triangles congruent?
How can you use two sides and an angle to prove triangles are congruent?
How can you use congruent triangles to prove angles or sides congruent?
How are the sides and angles of a triangle related if there are two or more congruent sides or angles?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO. 10 **Time Frame:** Geometry: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 4.8 Triangles and the coordinate proof	• Place geometric figures in a coordinate plane • Write a coordinate proof	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 5

Theme: Properties of Triangles

Essential Questions:
How do you find the point of concurrency of the perpendicular bisectors of the sides of a triangle?
How do you find the centroid of a triangle?
How do you write a coordinate proof?
How do you find the possible lengths of the third side of a triangle if you know the lengths of two sides?
What is the first step in writing an indirect proof?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.9, 12 G.C.3
• Section 5.2 Perpendiculars and Bisectors	• Use properties of perpendicular bisectors. • Use properties of angle bisectors to identify equal distances	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 5

Theme: Properties of Triangles

Essential Questions:
How do you find the point of concurrency of the perpendicular bisectors of the sides of a triangle?
How do you find the centroid of a triangle?
How do you write a coordinate proof?
How do you find the possible lengths of the third side of a triangle if you know the lengths of two sides?
What is the first step in writing an indirect proof?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.10 G.C.3
• Section 5.3 Bisectors of a Triangle	• Use properties of perpendicular bisectors of a triangle • Use properties of angle bisectors of a triangle	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 5

Theme: Properties of Triangles

Essential Questions:
How do you find the point of concurrency of the perpendicular bisectors of the sides of a triangle?
How do you find the centroid of a triangle?
How do you write a coordinate proof?
How do you find the possible lengths of the third side of a triangle if you know the lengths of two sides?
What is the first step in writing an indirect proof?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.10, 12 **Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 5.4 Medians and Altitudes of a triangles	• Use properties of medians of a triangle • Use properties of altitudes of a triangle	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CONTENT: Chapter 5

Theme: Properties of Triangles

Essential Questions:
How do you find the point of concurrency of the perpendicular bisectors of the sides of a triangle?
How do you find the centroid of a triangle?
How do you write a coordinate proof?
How do you find the possible lengths of the third side of a triangle if you know the lengths of two sides?
What is the first step in writing an indirect proof?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.10 G.GPE.4
• Section 5.1 Midsegment Theorem	• Identify the midsegments of a triangle • Use properties of midsegments of a triangle	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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GEOMETRY RC

CONTENT: Chapter 5

Theme: Properties of Triangles

Essential Questions:
How do you find the point of concurrency of the perpendicular bisectors of the sides of a triangle?
How do you find the centroid of a triangle?
How do you write a coordinate proof?
How do you find the possible lengths of the third side of a triangle if you know the lengths of two sides?
What is the first step in writing an indirect proof?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.7, 10
• Section 5.5 Inequalities in One Triangle	• Use triangle measurements to decide which side is longest or which angle is largest. • Use the triangle inequality	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 5

Theme: Properties of Triangles

Essential Questions:
How do you find the point of concurrency of the perpendicular bisectors of the sides of a triangle?
How do you find the centroid of a triangle?
How do you write a coordinate proof?
How do you find the possible lengths of the third side of a triangle if you know the lengths of two sides?
What is the first step in writing an indirect proof?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.7, 10
• Section 5.6 Indirect Proof and Inequalities in Two Triangles	• Read and write an indirect proof • Use the Hinge Theorem and its converse to compare side lengths and angle measures.	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 6

Theme: Similarity

Essential Questions:
If two figures are similar, how do you find the length of a missing side?
How can you show that two triangles are similar?
How do you prove that two triangles are similar by using the SSS Similarity Theorem?
What proportions can you write if a line is parallel to one side of a triangle?
How do you dilate a figure in the coordinate plane?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT. 5
• Section 6.1 Ratio and Proportion	• Read and write an indirect proof • Use the Hinge Theorem and its converse to compare side lengths and angle measures.	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 6

Theme: Similarity

Essential Questions:
If two figures are similar, how do you find the length of a missing side?
How can you show that two triangles are similar?
How do you prove that two triangles are similar by using the SSS Similarity Theorem?
What proportions can you write if a line is parallel to one side of a triangle?
How do you dilate a figure in the coordinate plane?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT.4, 5
• Section 6.2 Proportions to Solve Geometry Problems	• Use properties of proportions • Use proportions to solve real-life problems.	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 6

Theme: Similarity

Essential Questions:
If two figures are similar, how do you find the length of a missing side?
How can you show that two triangles are similar?
How do you prove that two triangles are similar by using the SSS Similarity Theorem?
What proportions can you write if a line is parallel to one side of a triangle?
How do you dilate a figure in the coordinate plane?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT.5
• Section 6.3 Similar Polygons	• Identify similar polygons • Use similar polygons to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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GEOMETRY RC

CONTENT: Chapter 6

Theme: Similarity

Essential Questions:
If two figures are similar, how do you find the length of a missing side?
How can you show that two triangles are similar?
How do you prove that two triangles are similar by using the SSS Similarity Theorem?
What proportions can you write if a line is parallel to one side of a triangle?
How do you dilate a figure in the coordinate plane?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT.3
• Section 8.4 Similar Triangles	• Identify similar triangles using AA Similarity Postulate • Use similar triangles to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 6

Theme: Similarity

Essential Questions:
If two figures are similar, how do you find the length of a missing side?
How can you show that two triangles are similar?
How do you prove that two triangles are similar by using the SSS Similarity Theorem?
What proportions can you write if a line is parallel to one side of a triangle?
How do you dilate a figure in the coordinate plane?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT. 4
• Section 6.5 Proving Triangles are Similar	• Use similarity theorem SSS and SAS to prove that two triangles are similar. • Use similar triangles to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 6

Theme: Similarity

Essential Questions:
If two figures are similar, how do you find the length of a missing side?
How can you show that two triangles are similar?
How do you prove that two triangles are similar by using the SSS Similarity Theorem?
What proportions can you write if a line is parallel to one side of a triangle?
How do you dilate a figure in the coordinate plane?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT.4, 5 G.GPE.6 G.MG.3
• Section 6.6 Proportions and Similar Triangles	• Use proportionality theorems to calculate segment length. • To solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 6

Theme: Similarity

Essential Questions:
If two figures are similar, how do you find the length of a missing side?
How can you show that two triangles are similar?
How do you prove that two triangles are similar by using the SSS Similarity Theorem?
What proportions can you write if a line is parallel to one side of a triangle?
How do you dilate a figure in the coordinate plane?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.2 G.SRT.1 G.GPE.4
• Section 6.7 Perform Similarity Transformation	• Identify Dilations • Use properties of dilations to create real-life perspective drawings	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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GEOMETRY RC

CONTENT: Chapter 7

Theme: Right Triangles and Trigonometry

Essential Questions:
How can you find the length of the altitude to the hypotenuse of a right triangle?
If you know the lengths of two sides of a right triangle, how do you find the length of the third side?
How can you use the sides of a triangle to determine if it is right?
How do you find the lengths of the sides of a 30^o, 60^o, 90^o triangle and a 45^o, 45^o, 90^o triangle?
How can you find the leg of a right triangle when you know the other leg and one acute angle?
How can you find the lengths of the sides of a right triangle when you are given the length of the hypotenuse and once acute angle?
In a right triangle, how can you find all the sides and angles of the triangle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT.4, 5 G.MG.1
• Section 7.3 Similar Right Triangles	• Solve problems involving similar right triangles formed by the altitude drawn to the hypotenuse of a right triangle • Use a geometric mean to solve problems.	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 7

Theme: Right Triangles and Trigonometry

Essential Questions:
How can you find the length of the altitude to the hypotenuse of a right triangle?
If you know the lengths of two sides of a right triangle, how do you find the length of the third side?
How can you use the sides of a triangle to determine if it is right?
How do you find the lengths of the sides of a 30^o, 60^o, 90^o triangle and a 45^o, 45^o, 90^o triangle?
How can you find the leg of a right triangle when you know the other leg and one acute angle?
How can you find the lengths of the sides of a right triangle when you are given the length of the hypotenuse and once acute angle?
In a right triangle, how can you find all the sides and angles of the triangle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT.4, 8 G.GPE. 7 **Time Frame:** Geometry RC: 1 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 7.1 The Pythagorean Theorem	• Prove the Pythagorean Theorem • Use the Pythagorean Theorem to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 7

Theme: Right Triangles and Trigonometry

Essential Questions:
How can you find the length of the altitude to the hypotenuse of a right triangle?
If you know the lengths of two sides of a right triangle, how do you find the length of the third side?
How can you use the sides of a triangle to determine if it is right?
How do you find the lengths of the sides of a 30^o, 60^o, 90^o triangle and a 45^o, 45^o, 90^o triangle?
How can you find the leg of a right triangle when you know the other leg and one acute angle?
How can you find the lengths of the sides of a right triangle when you are given the length of the hypotenuse and once acute angle?
In a right triangle, how can you find all the sides and angles of the triangle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT. 4, 8
• Section 7.2 The Converse of the Pythagorean Theorem	• Use the Converse of the Pythagorean Theorem to solve problems • Use side lengths to classify triangles by their angle measures	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 7

Theme: Right Triangles and Trigonometry

Essential Questions:
How can you find the length of the altitude to the hypotenuse of a right triangle?
If you know the lengths of two sides of a right triangle, how do you find the length of the third side?
How can you use the sides of a triangle to determine if it is right?
How do you find the lengths of the sides of a 30^o, 60^o, 90^o triangle and a 45^o, 45^o, 90^o triangle?
How can you find the leg of a right triangle when you know the other leg and one acute angle?
How can you find the lengths of the sides of a right triangle when you are given the length of the hypotenuse and once acute angle?
In a right triangle, how can you find all the sides and angles of the triangle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT. 6 **Time Frame:** Geometry RC : 1 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 7.4 Special Right Triangles	• Find the side lengths of special right triangles • Use special right triangles to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 7

Theme: Right Triangles and Trigonometry

Essential Questions:
How can you find the length of the altitude to the hypotenuse of a right triangle?
If you know the lengths of two sides of a right triangle, how do you find the length of the third side?
How can you use the sides of a triangle to determine if it is right?
How do you find the lengths of the sides of a 30^o, 60^o, 90^o triangle and a 45^o, 45^o, 90^o triangle?
How can you find the leg of a right triangle when you know the other leg and one acute angle?
How can you find the lengths of the sides of a right triangle when you are given the length of the hypotenuse and once acute angle?
In a right triangle, how can you find all the sides and angles of the triangle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT. 6, 8 **Time Frame:** Geometry RC : 1 day **Materials**: Textbook: 2007, *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 7.5 Trigonometric Ratios	• Find the sine, cosine and tangent of an acute angle • Use trigonometric ratios to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 7

Theme: Right Triangles and Trigonometry

Essential Questions:
How can you find the length of the altitude to the hypotenuse of a right triangle?
If you know the lengths of two sides of a right triangle, how do you find the length of the third side?
How can you use the sides of a triangle to determine if it is right?
How do you find the lengths of the sides of a 30^o, 60^o, 90^o triangle and a 45^o, 45^o, 90^o triangle?
How can you find the leg of a right triangle when you know the other leg and one acute angle?
How can you find the lengths of the sides of a right triangle when you are given the length of the hypotenuse and once acute angle?
In a right triangle, how can you find all the sides and angles of the triangle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT. 8
• Section 7.6 Solving Right Triangles Use Sine and Cosine Ratios	• Solve a right triangle using Sine and Cosine • Use right triangles to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 1 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 7

Theme: Right Triangles and Trigonometry

Essential Questions:
How can you find the length of the altitude to the hypotenuse of a right triangle?
If you know the lengths of two sides of a right triangle, how do you find the length of the third side?
How can you use the sides of a triangle to determine if it is right?
How do you find the lengths of the sides of a 30^o, 60^o, 90^o triangle and a 45^o, 45^o, 90^o triangle?
How can you find the leg of a right triangle when you know the other leg and one acute angle?
How can you find the lengths of the sides of a right triangle when you are given the length of the hypotenuse and once acute angle?
In a right triangle, how can you find all the sides and angles of the triangle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT. 8
• Section 7.7 Use Tangents Solving Right Triangles	• Solve a right triangle using Tangents • Use right triangles to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 1 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 8

Theme: Quadrilaterals

Essential Questions:
How do you classify polygons?
How do you find the missing angle measures of a convex polygon?
How do you find angles and side measures in a parallelogram?
How can you prove that a quadrilateral is a parallelogram?
What are the properties of parallelograms that have all sides or all angles congruent?
What are the main properties of trapezoids and kites?
How can you identify special quadrilaterals?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.GMD.4 G.MG.1
• Section 1.6 Polygons	• Identify, name, and describe polygons • Use the sum of the measures of the interior angles of a quadrilaterals	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 8

Theme: Quadrilaterals

Essential Questions:
How do you classify polygons?
How do you find the missing angle measures of a convex polygon?
How do you find angles and side measures in a parallelogram?
How can you prove that a quadrilateral is a parallelogram?
What are the properties of parallelograms that have all sides or all angles congruent?
What are the main properties of trapezoids and kites?
How can you identify special quadrilaterals?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.GPE.1
• Section 8.1 Angle Measures in Polygons	• Write the equations of circles • Use the equation of a circle and its graph to solve problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 8

Theme: Quadrilaterals

Essential Questions:
How do you classify polygons?
How do you find the missing angle measures of a convex polygon?
How do you find angles and side measures in a parallelogram?
How can you prove that a quadrilateral is a parallelogram?
What are the properties of parallelograms that have all sides or all angles congruent?
What are the main properties of trapezoids and kites?
How can you identify special quadrilaterals?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.11 G.SRT.5
• Section 8.2 Properties of Parallelograms	• Identify, name, and describe polygons • Use the sum of the measures of the interior angles of a quadrilaterals	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 8

Theme: Quadrilaterals

Essential Questions:
How do you classify polygons?
How do you find the missing angle measures of a convex polygon?
How do you find angles and side measures in a parallelogram?
How can you prove that a quadrilateral is a parallelogram?
What are the properties of parallelograms that have all sides or all angles congruent?
What are the main properties of trapezoids and kites?
How can you identify special quadrilaterals?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.11 G.SRT.5
• Section 8.3 Proving Quadrilaterals are parallelograms	• Prove that a quadrilateral is a parallelogram • Use coordinate geometry with parallelograms	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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CONTENT: Chapter 8

Theme: Quadrilaterals

Essential Questions:
How do you classify polygons?
How do you find the missing angle measures of a convex polygon?
How do you find angles and side measures in a parallelogram?
How can you prove that a quadrilateral is a parallelogram?
What are the properties of parallelograms that have all sides or all angles congruent?
What are the main properties of trapezoids and kites?
How can you identify special quadrilaterals?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.11 G.SRT.5 G.GPE.7
• Section 8.4 Rhombuses, Rectangles, and Squares	• Use properties of sides and angles of rhombuses, rectangles, and squares. • Use properties of diagonals of rhombuses, rectangles and squares	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 days **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 8

Theme: Quadrilaterals

Essential Questions:
How do you classify polygons?
How do you find the missing angle measures of a convex polygon?
How do you find angles and side measures in a parallelogram?
How can you prove that a quadrilateral is a parallelogram?
What are the properties of parallelograms that have all sides or all angles congruent?
What are the main properties of trapezoids and kites?
How can you identify special quadrilaterals?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.SRT.5 G.GPE.4
• Section 8.5 Trapezoids and Kites	• Use properties of trapezoids • Use properties of kites	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC : 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 8

Theme: Quadrilaterals

Essential Questions:

How do you classify polygons?
How do you find the missing angle measures of a convex polygon?
How do you find angles and side measures in a parallelogram?
How can you prove that a quadrilateral is a parallelogram?
What are the properties of parallelograms that have all sides or all angles congruent?
What are the main properties of trapezoids and kites?
How can you identify special quadrilaterals?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.11 **Time Frame:** Geometry: 0 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 8.6 Special Quadrilaterals	• Identify special quadrilaterals based on limited information • Prove that a quadrilateral is a special type of quadrilateral	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
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GEOMETRY RC

CONTENT: Chapter 8

Theme: Quadrilaterals

Essential Questions:
How do you classify polygons?
How do you find the missing angle measures of a convex polygon?
How do you find angles and side measures in a parallelogram?
How can you prove that a quadrilateral is a parallelogram?
What are the properties of parallelograms that have all sides or all angles congruent?
What are the main properties of trapezoids and kites?
How can you identify special quadrilaterals?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.GMD 1
• Section 11.1 Areas of Triangles and Quadrilaterals	• Find the areas of squares, rectangles, parallelograms, and triangles • Find the areas of trapezoids, kites, and rhombuses	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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GEOMETRY RC

CONTENT: Chapter 9

Theme: Transformations

Essential Questions:
How do you translate a figure in the coordinate plane?
When does a figure have line symmetry?
How do you reflect a figure in the coordinate plane?
How do you rotate a figure about the origin?
When does a figure have rotational symmetry
What is a glide reflection?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.3, 4, 5
• Section 9.3 Reflections	• Identify and use reflection in a plane • Identify relationships between reflections and line symmetry	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC : 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 7

Theme: Transformations

Essential Questions:
How do you translate a figure in the coordinate plane?
When does a figure have line symmetry?
How do you reflect a figure in the coordinate plane?
How do you rotate a figure about the origin?
When does a figure have rotational symmetry
What is a glide reflection?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.3, 4, 5
• Section 9.4 Rotations	• Identify rotations in the plane • Use rotational symmetry in real-life situations	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

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MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 9

Theme: Transformations

Essential Questions:
How do you translate a figure in the coordinate plane?
When does a figure have line symmetry?
How do you reflect a figure in the coordinate plane?
How do you rotate a figure about the origin?
When does a figure have rotational symmetry
What is a glide reflection?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.3, 4, 5
• Section 9.1 Translations and Vectors	• Identify and use translations in the plane • Use vectors in real-life situations	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 9

Theme: Transformations

Essential Questions:
How do you translate a figure in the coordinate plane?
When does a figure have line symmetry?
How do you reflect a figure in the coordinate plane?
How do you rotate a figure about the origin?
When does a figure have rotational symmetry
What is a glide reflection?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.3, 4, 5
• Section 9.5 Glide Reflections and Compositions	• Identify glide reflections in a plane • Represent transformations as compositions of simpler transformations.	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 10

Theme: Circles

Essential Questions:
How can you verify that a segment is tangent to a circle?
How do you find the measure of an arc of a circle?
How can you tell if two chords in a circle are congruent?
How do you find the measure of an inscribed angle?
What do you need to know to write the standard equation of a circle?
How do you find the length of an arc of a circle?
How do you find the area of a sector of a circle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12G.CO.1, 2 G.C.4
• Section 10.1Tangents to Circles	• Identify segments and lines related to circles • Use properties of a tangent to a circle	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 10

Theme: Circles

Essential Questions:
How can you verify that a segment is tangent to a circle?
How do you find the measure of an arc of a circle?
How can you tell if two chords in a circle are congruent?
How do you find the measure of an inscribed angle?
What do you need to know to write the standard equation of a circle?
How do you find the length of an arc of a circle?
How do you find the area of a sector of a circle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.CO.1, 12 G.C.2, 3
• Section 10.2 Arcs • Section 10.3 Chords	• Use properties of arcs of circles • Use properties of chords of circles	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC : 4 days
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 10

Theme: Circles

Essential Questions:
How can you verify that a segment is tangent to a circle?
How do you find the measure of an arc of a circle?
How can you tell if two chords in a circle are congruent?
How do you find the measure of an inscribed angle?
What do you need to know to write the standard equation of a circle?
How do you find the length of an arc of a circle?
How do you find the area of a sector of a circle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.C.2, 3, 4, 5
• Section 10.4 Inscribed Angles	• Use inscribed angles to solve problems • Use properties of inscribed polygons	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 4 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 10

Theme: Circles

Essential Questions:
How can you verify that a segment is tangent to a circle?
How do you find the measure of an arc of a circle?
How can you tell if two chords in a circle are congruent?
How do you find the measure of an inscribed angle?
What do you need to know to write the standard equation of a circle?
How do you find the length of an arc of a circle?
How do you find the area of a sector of a circle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.GPE.1
• Section 10.7 Equations of Circle	• Write the equations of circles • Use the equation of a circle and its graph to solve problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC : 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 11

Theme: Circles

Essential Questions:
How can you verify that a segment is tangent to a circle?
How do you find the measure of an arc of a circle?
How can you tell if two chords in a circle are congruent?
How do you find the measure of an inscribed angle?
What do you need to know to write the standard equation of a circle?
How do you find the length of an arc of a circle?
How do you find the area of a sector of a circle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.C.5 G.GMD.1
• Section 11.4 Circumference and Arc Length	• Find the circumference of a circle and the length of a circular arc. • Use circumference and arc length to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 11

Theme: Circles

Essential Questions:
How can you verify that a segment is tangent to a circle?
How do you find the measure of an arc of a circle?
How can you tell if two chords in a circle are congruent?
How do you find the measure of an inscribed angle?
What do you need to know to write the standard equation of a circle?
How do you find the length of an arc of a circle?
How do you find the area of a sector of a circle?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.C.5
• Section 11.5 Areas of Circles and Sectors	• Find the area of a circle and a sector of a circle • Use areas of circles and sectors to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

<table>
<tr><td colspan="4">CONTENT: Chapter 12</td></tr>
<tr><td colspan="4">Theme: Surface Area and Volume</td></tr>
<tr><td colspan="4">Essential Questions:
What is a solid a polyhedron?
What is the surface area of prisms, cylinders, pyramids, cones and spheres?
What is the volume of prisms, cylinders, pyramids, cones and spheres?
If two solids are similar, what is the ratio of their surface area and what is the ratio of their volumes?</td></tr>
<tr><td>Content (As a result of this learning segment, students will know…)

• Section 12.1 Explore Solids</td><td>Skills (As a result of this learning segment, students will be able to…)

• Use properties of polyhedral
• Use Euler’s Theorem in real-life situation</td><td>Assessments (The above Essential Questions will be assessed with the following formative and summative measures:)

• Homework
• Warm up exercises
• Exit Tickets
• Group activities
• Section quizzes
• Chapter tests
• Cumulative tests
• Projects / Presentations
• Midterm exam
• Final Exam</td><td>Standards:
TECH
8.1.12.A.4, 8.1.12.A.CS1

NJSLS MA 9-12
G.GMD.4

Time Frame:
Geometry RC: 2 day

Materials:
Textbook: 2007 McDougal Littell Geometry by Larson, ISBN: 0-618-25023-9

Graphing calculators: Ti-83/84 plus.

Smart board, internet research and activities, graph papers, color pencils.</td></tr>
</table>

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 12

Theme: Exploring Solids

Essential Questions:
What is a solid a polyhedron?
What is the surface area of prisms, cylinders, pyramids, cones and spheres?
What is the volume of prisms, cylinders, pyramids, cones and spheres?
If two solids are similar, what is the ratio of their surface area and what is the ratio of their volumes?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.GMD.1, 3, 4
• Section 12.2 Surface Area of Prisms and Cylinders	• Find the surface area of a prism • Find the surface area of a cylinder	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC : 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 12

Theme: Exploring Solids

Essential Questions:
What is a solid a polyhedron?
What is the surface area of prisms, cylinders, pyramids, cones and spheres?
What is the volume of prisms, cylinders, pyramids, cones and spheres?
If two solids are similar, what is the ratio of their surface area and what is the ratio of their volumes?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.GMD.1, 3, 4 **Time Frame:** Geometry RC: 2 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 12.3 Surface Area of Pyramids and Cones	• Find the surface area of a pyramids • Find the surface area of a cones	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 12

Theme: Exploring Solids

Essential Questions:
What is a solid a polyhedron?
What is the surface area of prisms, cylinders, pyramids, cones and spheres?
What is the volume of prisms, cylinders, pyramids, cones and spheres?
If two solids are similar, what is the ratio of their surface area and what is the ratio of their volumes?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.GMD.1, 3, 4
• Section 12.4 Volume of Prisms and Cylinders	• Use volume postulates • Find the volume of prisms and cylinders in real-life	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 3 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CONTENT: Chapter 12

Theme: Exploring Solids

Essential Questions:
What is a solid a polyhedron?
What is the surface area of prisms, cylinders, pyramids, cones and spheres?
What is the volume of prisms, cylinders, pyramids, cones and spheres?
If two solids are similar, what is the ratio of their surface area and what is the ratio of their volumes?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.GMD.1, 3, 4
• Section 12.5 Volume of Pyramids and Cones	• Find the volume of pyramids and cones • Find the volume of pyramids and cones in real-life	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC: 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 12

Theme: Exploring Solids

Essential Questions:
What is a solid a polyhedron?
What is the surface area of prisms, cylinders, pyramids, cones and spheres?
What is the volume of prisms, cylinders, pyramids, cones and spheres?
If two solids are similar, what is the ratio of their surface area and what is the ratio of their volumes?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.GMD.1, 3, 4
• Section 12.6 Surface area and Volume of Spheres	• Find the surface area of spheres • Find the volume of spheres in real-life	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	**Time Frame:** Geometry RC : 2 day
			Materials: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.

CARLSTADT-EAST RUTHERFORD REGIONAL HIGH SCHOOL DISTRICT
MATHEMATICS DEPARTMENT
GEOMETRY RC

CONTENT: Chapter 12

Theme: Exploring Solids

Essential Questions:
What is a solid a polyhedron?
What is the surface area of prisms, cylinders, pyramids, cones and spheres?
What is the volume of prisms, cylinders, pyramids, cones and spheres?
If two solids are similar, what is the ratio of their surface area and what is the ratio of their volumes?

Content *(As a result of this learning segment, students will know…)*	**Skills** *(As a result of this learning segment, students will be able to…)*	**Assessments** (The above Essential Questions will be assessed with the following formative and summative measures:)	**Standards:** TECH 8.1.12.A.4, 8.1.12.A.CS1 NJSLS MA 9-12 G.GMD.3 **Time Frame:** Geometry: 1 day **Materials**: Textbook: 2007 *McDougal Littell* Geometry by Larson, ISBN: 0-618-25023-9 Graphing calculators: Ti-83/84 plus. Smart board, internet research and activities, graph papers, color pencils.
• Section 12.7 Similar Solids	• Find and use the scale factor of similar solids • Use similar solids to solve real-life problems	• Homework • Warm up exercises • Exit Tickets • Group activities • Section quizzes • Chapter tests • Cumulative tests • Projects / Presentations • Midterm exam • Final Exam	