

Pascack Valley Regional High School District

**Pascack Hills High School, Montvale, New Jersey
Pascack Valley High School, Hillsdale, New Jersey**

**Course Name: Geometry (MA3300/3500/3309/3509)
 Geometry Enhanced (MA3400/3409)
 Honors Geometry (MA3600)**

Born On: August, 2016
Previous Revision: August 2020
Current Revision: August, 2023
Board Approval: 8/28/23

COURSE DESCRIPTION: Geometry/Geometry Enhanced/Honors Geometry

Geometry (MA3300/3500/3309/3509), *Geometry Enhanced* (MA3400/3409), and *Honors Geometry* (MA3600) are full year college preparatory, five-credit courses, aligned with the *New Jersey Student Learning Standards*, that are designed to formalize and extend students' geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their understandings of geometric relationships, moving towards formal mathematical arguments. All three courses emphasize deep conceptual understanding, but *Geometry Enhanced* (MA3400/3409) and *Honors Geometry* (MA3600) place additional emphasis on procedural fluency. In addition, *Honors Geometry* (MA3600) covers several plus standards (denoted below with an *), including the area formula for general triangles, the Law of Sines, and the Law of Cosines, and students are expected to solve more challenging, non-routine problems.

All mathematics courses in the Pascack Valley Regional High School District are designed to address multiple learning styles and needs, and accommodations and modifications are made for students with disabilities, multilingual students, students at risk of failure, gifted and talented students, and students with 504 plans. *Geometry* (MA3300/3500), *Geometry Enhanced* (MA3400), and *Honors Geometry* (MA3600) build on concepts learned and skills developed in Algebra I, while also spiraling in those concepts and skills to reinforce and strengthen students' algebraic and geometric foundation, while *Geometry* (MA3309/3509) and *Geometry Enhanced* (MA3409) build on concepts learned and skills developed in 8th Grade Math, while also spiraling in those concepts and skills to reinforce and strengthen students' pre-algebraic and geometric foundation. Additionally, all geometry courses anticipate higher-level mathematics that will be learned in subsequent math courses, and enrichment opportunities are provided to challenge students and engage them in rich, interesting mathematics. Students are encouraged to analyze data using tools and models to make valid and reliable claims (9.4.12.IML.3), and various technologies are integrated throughout the curriculum, including manipulatives, measuring tools, *Geometer's Sketchpad*, specialized software, and various Internet programs and subscriptions. These tools enrich the curriculum by giving students' access to additional mathematical representations, and they also help to differentiate by providing students with additional options to engage with mathematical tasks.

The Pascack Valley Regional High School Mathematics Department integrates 21st century life and career skills across its courses, with the dual goal of informing students about careers and fields of study that use mathematics (9.3.ST.5, 9.3.ST-ET.5 and 9.3.ST-SM.2), and helping students improve the quantitative, mathematical, and statistical reasoning skills they will need to be effective producers and consumers of quantitative information in their everyday lives (9.2.12.CAP.2). Mathematics courses address the *New Jersey Student Learning Standards for Career Readiness, Life Literacies and Key Skills*, with a particular emphasis on demonstrating the ability to reflect, analyze and use creative skills and ideas (9.4.12.CI.1), investigating new challenges and opportunities for personal growth, advancement and transition (9.4.12.CI.3), identifying problem-solving strategies used in the development of an innovative product or practice (9.4.12.CT.1), and explaining the potential benefits of collaborating to enhance critical thinking and problem solving (9.4.12.CT.2). Mathematics courses also address the *New Jersey Student Learning Standards for English Language Arts Companion Standards*, with a particular focus on following complex multistep procedures (RST.9-10.3/RST.11-12.3), determining the meaning of symbols, key terms, and other domain-specific words and phrases (RST.9-10.4/RST.11-12.3), and translating

quantitative or technical information expressed in words into visual forms and translating information expressed visually or mathematically into words (RST.9-10.7). Similarly, the mathematics department seeks to support students by providing them with opportunities to use quantitative, statistical, and mathematical reasoning in interdisciplinary contexts, in contexts that are meaningful to students, and in contexts that attend to the contributions and perspectives of historically marginalized groups. Specifically, mathematics courses will look to incorporate, when appropriate, contributions and experiences of people from the LGBTQ+ community and individuals with disabilities, and references to issues of social and cultural relevance, including climate change.

Geometry: In <i>Geometry</i> , <i>Geometry Enhanced</i> , and <i>Honors Geometry</i> students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments.					
Content/Topic:	Key Learning Items/Concepts and Pacing Guide	Observable Proficiencies and Skills:	NJSLS	Formative, Summative, Benchmark, and Alternative Assessments	Core Instructional and Supplemental Materials/ Modifications and Accommodations
Unit 1 – Constructions Time: 4 weeks (<i>see column 2 for a more detailed breakdown</i>) Content Statement: Students will be able to utilize concepts of congruence to perform constructions. Enduring Understandings: Congruence underlies formal constructions. Rotations, reflections, and translations preserve distance.	Key learning items/concepts: 1. Triangle congruence; relationship between rigid motion and triangle congruence criteria (1 week) 2. Formal geometric constructions (1 week) 3. Construct an equilateral triangle, square, and regular hexagon inscribed in a circle (1 week) 4. Describe rotations and reflections that carry figures onto themselves; transformations; isometries (1 week) Content-specific modifications and accommodations - use multiple representations and technology to support conceptual understanding - provide students with technology if hand-held construction tools are difficult Interdisciplinary/additional connections	<i>Make geometric constructions.</i> <i>Understand congruence in terms of rigid motion.</i> <i>Experiment with transformations in the plane.</i>	NJSLS Content Standards G-CO 1-8, 12, 13 NJSLS SMP MP1. Make sense of problems and persevere in solving them MP2. Construct viable arguments and critique the reasoning of others MP3. Reason abstractly and quantitatively MP4. Model with mathematics MP5. Attend to precision MP6. Use appropriate tools strategically MP7. Look for and make use of structure MP8. Look for and express regularity in repeated reasoning NJSLS for ELA Companion Standards RST.9-10.3 RST.9-10.4 RST.9-10.7 RST.11-12.3 RST.11-12.4 NJSLS-CLKS	Students will be assessed regularly throughout this course, with a focus on both conceptual understanding and procedural fluency. Assessment tools may include the following: - quizzes (F) - tests (S) - performance tasks (F/S) - projects (S) - homework (F) - discussions (F) - journals (F) - Form A, B, or C benchmark (B) - alternative assessments (A) - construction tasks (F)	Selection of primary sources <i>Suggestion(s):</i> Texts: Pearson Geometry Common Core (on grade level); Geometry for Enjoyment and Challenge (advanced); Deltamath (remediation, on grade level, and advanced) <u>G.CO.A.1 Defining Parallel Lines</u> <u>G.CO.A.2 Horizontal Stretch of the Plane</u> <u>G.CO.A.3 Seven Circles II</u> <u>G.CO.A.4 Defining Rotations</u> <u>G.CO.A.5 Showing a triangle congruence</u> <u>G.CO.B.7 Properties of Congruent Triangles</u> <u>G.CO.B.8 Why does SAS work?</u> <u>G.CO.D.12 Bisecting an angle</u> <u>G.CO.D.13 Inscribing an equilateral triangle in a circle</u> Modifications and Accommodations: <u>Students with special needs:</u> Teachers and support staff will attend to all modifications and accommodations listed in students' IEPs and 504s. Teachers will incorporate manipulatives, extra time,

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	- draw on images and structures from diverse cultures		- 21st Century Life and Careers 9.4.12.CI.1 9.4.12.CI.3 9.4.12.CT.1 9.4.12.CT.2 - Technology 9.4.12.IML.3 - Career Education 9.2.12.CAP.2 9.3.ST.5 9.3.ST-ET.5 9.3.ST-SM.2 NJSLS – CSDT 8.1.12.DA.1 8.1.12.DA.5 8.1.12.DA.6 8.1.12.AP.1 8.2.12.ETW.2		alternative assessments, scaffolding, spiraling, technology, and flexible grouping to support student learning. Multilingual students: Teachers and support staff will work to support multilingual students in their first language and in English, providing materials and/or resources to support students' understanding. Students will be given additional time, as appropriate, and translation tools will be utilized as needed. Students at risk of school failure: Formative and summative data will be used to monitor student success, and students at risk of failure will receive additional supports and services, which may include parent consultation, extra help, and differentiation strategies, including small group instruction, group work, scaffolding, and spiraling. Gifted and Talented Students: Students who excel in their mastery of course standards will be further challenged with more complex tasks, extensions of concepts and skills, and extended problem solving and critical thinking opportunities.

Geometry: In <i>Geometry</i> , <i>Geometry Enhanced</i> , and <i>Honors Geometry</i> students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments.					
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Unit 2 – Congruence Time: 8 weeks (<i>see column 2 for a more detailed breakdown</i>) Content Statement: Students will be able to prove figures congruent and apply properties of congruent figures to solve problems. Enduring Understandings: Midpoints and bisectors create congruent segments or angles. Congruent figures have congruent corresponding angles and sides. Rigid transformations preserve congruency.	Key learning items/concepts: 1. Line and angle proofs (1 week) 2. Partitions of segments into given ratios (1/2 week) 3. Triangle proofs (2 ½ weeks) 4. Construct inscribed and circumscribed circles of a triangle (1/2 week) 5. Parallelogram proofs (1 ½ weeks) 6. Prove slope criteria for parallel and perpendicular lines (1/2 week) 7. Coordinate geometry proofs (1 week) 8. Compute perimeter and area using coordinates (1/2 week) Content-specific modifications and accommodations	<i>Prove geometric theorems.</i> <i>Use coordinates to prove simple geometric theorems algebraically.</i>	NJSLS Content Standards G-CO 9-11 G-GC 3 G-GPE 4-7 NJSLS SMP MP1. Make sense of problems and persevere in solving them MP2. Construct viable arguments and critique the reasoning of others MP3. Reason abstractly and quantitatively MP4. Model with mathematics MP5. Attend to precision MP6. Use appropriate tools strategically MP7. Look for and make use of structure MP8. Look for and express regularity in repeated reasoning NJSLS for ELA Companion Standards RST.9-10.3 RST.9-10.4 RST.9-10.7 RST.11-12.3 RST.11-12.4	Students will be assessed regularly throughout this course, with a focus on both conceptual understanding and procedural fluency. Assessment tools may include the following: - quizzes (F) - tests (S) - performance tasks (F/S) - projects (S) - homework (F) - discussions (F) - journals (F) - Form A, B, or C benchmark (B) - alternative assessments (A) - differentiated proof tasks (A)	Selection of primary sources <i>Suggestion(s):</i> Texts: Pearson Geometry Common Core (on grade level); Geometry for Enjoyment and Challenge (advanced); Deltamath (remediation, on grade level, and advanced) <u>G.CO.C.9 Congruent Angles made by parallel lines and a transverse</u> <u>G.CO.C.10 Sum of angles in a triangle</u> <u>G.CO.C.11 Midpoints of the Sides of a Parallelogram</u> <u>G.GPE.B.4.5 A Midpoint Miracle</u> <u>G.GPE.B.7 Triangle Perimeters</u> Modifications and Accommodations: <u>Students with special needs:</u> Teachers and support staff will attend to all modifications and accommodations listed in students' IEPs and 504s. Teachers will incorporate manipulatives, extra time, alternative assessments, scaffolding,

	<ul style="list-style-type: none"> - use multiple representations and technology to support conceptual understanding - provide graphic organizers to support students' understanding of proof <p>Interdisciplinary/additional connections</p> <ul style="list-style-type: none"> - consider measurement applications from science and engineering 		<p>NJSLS-CLKS - 21st Century Life and Careers 9.4.12.CI.1 9.4.12.CI.3 9.4.12.CT.1 9.4.12.CT.2</p> <p>- Technology 9.4.12.IML.3</p> <p>- Career Education 9.2.12.CAP.2 9.3.ST.5 9.3.ST-ET.5 9.3.ST-SM.2</p> <p>NJSLS – CSDT 8.1.12.DA.1 8.1.12.DA.5 8.1.12.DA.6 8.1.12.AP.1 8.2.12.ETW.2</p>		<p>spiraling, technology, and flexible grouping to support student learning.</p> <p><u>Multilingual students:</u> Teachers and support staff will work to support multilingual students in their first language and in English, providing materials and/or resources to support students' understanding. Students will be given additional time, as appropriate, and translation tools will be utilized as needed.</p> <p><u>Students at risk of school failure:</u> Formative and summative data will be used to monitor student success, and students at risk of failure will receive additional supports and services, which may include parent consultation, extra help, and differentiation strategies, including small group instruction, group work, scaffolding, and spiraling.</p> <p><u>Gifted and Talented Students:</u> Students who excel in their mastery of course standards will be further challenged with more complex tasks, extensions of concepts and skills, and extended problem solving and critical thinking opportunities.</p>
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Geometry: In <i>Geometry</i> , <i>Geometry Enhanced</i> , and <i>Honors Geometry</i> students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments.					
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<p>Unit 3 – Similarity</p> <p>Time: 6 weeks (<i>see column 2 for a more detailed breakdown</i>)</p> <p>Content Statement: Students will be able to use similarity and trigonometry to calculate unknown but desired distances.</p> <p>Enduring Understandings: Similar figures have proportional sides and corresponding congruent angles.</p> <p>Trigonometry, dilations, and similarity are all different approaches to the same phenomenon.</p> <p>Given a certain number of pieces (3 in some cases, 4 in others) of a triangle, you can find all others.</p>	<p>Key learning items/concepts:</p> <ol style="list-style-type: none"> 1. Verify properties of dilations; similarity transformations; AA (2 weeks) 2. Prove triangle theorems; solve triangle problems (1 week) 3. Relationship between similarity and trig; cofunctions (1 week) 4. Right triangle trig (2 weeks) <p>Content-specific modifications and accommodations</p> <ul style="list-style-type: none"> - use multiple representations and technology to support conceptual understanding - use virtual manipulatives to support understanding of dilations 	<p><i>Understand similarity in terms of similarity transformations.</i></p> <p><i>Explore properties of similarity and prove theorems involving similarity.</i></p> <p><i>Define trigonometric ratios and solve problems involving right triangles.</i></p> <p><i>*Apply trigonometry to general triangles</i></p>	<p>NJSLS Content Standards</p> <p>G-SRT 1-8 *G-SRT 9-11</p> <p>NJSLS SMP</p> <p>MP1. Make sense of problems and persevere in solving them MP2. Construct viable arguments and critique the reasoning of others MP3. Reason abstractly and quantitatively MP4. Model with mathematics MP5. Attend to precision MP6. Use appropriate tools strategically MP7. Look for and make use of structure MP8. Look for and express regularity in repeated reasoning</p> <p>NJSLS for ELA Companion Standards</p> <p>RST.9-10.3</p>	<p>Students will be assessed regularly throughout this course, with a focus on both conceptual understanding and procedural fluency. Assessment tools may include the following:</p> <ul style="list-style-type: none"> - quizzes (F) - tests (S) - performance tasks (F/S) - projects (S) - homework (F) - discussions (F) - journals (F) - Form A, B, or C benchmark (B) - alternative assessments (A) - calculate the height of a building task (S) 	<p>Selection of primary sources <i>Suggestion(s):</i> Texts: Pearson Geometry Common Core (on grade level); Geometry for Enjoyment and Challenge (advanced); Deltamath (remediation, on grade level, and advanced)</p> <p><u>G.SRT.A.1 Dilating a Line</u> <u>G.SRT.A.2 Are They Similar?</u> <u>G.SRT.A.3 Similar Triangles</u> <u>G.SRT.B.4 Pythagorean Theorem</u> <u>G.SRT.B.5 Tangent Line to Two Circles</u> <u>G.SRT.C.6 Defining Trigonometric Ratio</u> <u>G.SRT.C.7 Sine and Cosine of Complimentary Angles</u> <u>G.SRT.C.8 Constructing Special Angles</u></p> <p>Modifications and Accommodations: Students with special needs: Teachers and support staff will attend to all modifications and accommodations listed in students' IEPs and 504s. Teachers</p>

	<p>Interdisciplinary/additional connections - solve triangle problems with applications in science and engineering</p>		<p>RST.9-10.4 RST.9-10.7 RST.11-12.3 RST.11-12.4</p> <p>NJSLS-CLKS - 21st Century Life and Careers 9.4.12.CI.1 9.4.12.CI.3 9.4.12.CT.1 9.4.12.CT.2</p> <p>- Technology 9.4.12.IML.3</p> <p>- Career Education 9.2.12.CAP.2 9.3.ST.5 9.3.ST-ET.5 9.3.ST-SM.2</p> <p>NJSLS – CSDT 8.1.12.DA.1 8.1.12.DA.5 8.1.12.DA.6 8.1.12.AP.1 8.2.12.ETW.2</p>		<p>will incorporate manipulatives, extra time, alternative assessments, scaffolding, spiraling, technology, and flexible grouping to support student learning.</p> <p><u>Multilingual students:</u> Teachers and support staff will work to support multilingual students in their first language and in English, providing materials and/or resources to support students' understanding. Students will be given additional time, as appropriate, and translation tools will be utilized as needed.</p> <p><u>Students at risk of school failure:</u> Formative and summative data will be used to monitor student success, and students at risk of failure will receive additional supports and services, which may include parent consultation, extra help, and differentiation strategies, including small group instruction, group work, scaffolding, and spiraling.</p> <p><u>Gifted and Talented Students:</u> Students who excel in their mastery of course standards will be further challenged with more complex tasks, extensions of concepts and skills, and extended problem solving and critical thinking opportunities.</p>
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Unit 4 – Circles Time: 3 weeks (<i>see column 2 for a more detailed breakdown</i>) Content Statement: Students will be able to use the concept of distance to understand circles. Enduring Understandings: All circles are similar. The equation of a circle, and by extension, the distance formula, follows directly from the Pythagorean Theorem.	Key learning items/concepts: 1. Angle relationships (1 week) 2. Arc length, radians, and area of a sector (1 week) 3. Equation of a circle (1 week) Content-specific modifications and accommodations - use multiple representations and technology to support conceptual understanding - provide students with scaffolds for the more technically difficult algebraic work with circles Interdisciplinary/additional connections - consider environmental science applications,	<i>Understand and apply theorems about circles.</i> <i>Translate between the geometric description and the equation for a conic section.</i>	NJSLS Content Standards G-C 1, 2, 5 G-GPE 1, 2 NJSLS SMP MP1. Make sense of problems and persevere in solving them MP2. Construct viable arguments and critique the reasoning of others MP3. Reason abstractly and quantitatively MP4. Model with mathematics MP5. Attend to precision MP6. Use appropriate tools strategically MP7. Look for and make use of structure MP8. Look for and express regularity in repeated reasoning NJSLS for ELA Companion Standards RST.9-10.3 RST.9-10.4 RST.9-10.7	Students will be assessed regularly throughout this course, with a focus on both conceptual understanding and procedural fluency. Assessment tools may include the following: - quizzes (F) - tests (S) - performance tasks (F/S) - projects (S) - homework (F) - discussions (F) - journals (F) - Form A, B, or C benchmark (B) - alternative assessments (A) - differentiated circle problems (A)	Selection of primary sources <i>Suggestion(s):</i> Texts: Pearson Geometry Common Core (on grade level); Geometry for Enjoyment and Challenge (advanced); Deltamath (remediation, on grade level, and advanced) <u>G.C.A.1 Similar circles</u> <u>G.C.A.2 Right triangles inscribed in circles I</u> <u>G.C.A.3 Circumscribed Triangles</u> <u>G.GPE.A.1 Explaining the equation for a circle</u> Modifications and Accommodations: <u>Students with special needs:</u> Teachers and support staff will attend to all modifications and accommodations listed in students' IEPs and 504s. Teachers will incorporate manipulatives, extra time, alternative assessments, scaffolding, spiraling, technology, and flexible grouping to support student learning. <u>Multilingual students:</u> Teachers and support staff will work to

	including contexts involving climate change		RST.11-12.3 RST.11-12.4 NJSLS-CLKS - 21st Century Life and Careers 9.4.12.CI.1 9.4.12.CI.3 9.4.12.CT.1 9.4.12.CT.2 - Technology 9.4.12.IML.3 - Career Education 9.2.12.CAP.2 9.3.ST.5 9.3.ST-ET.5 9.3.ST-SM.2 NJSLS – CSDT 8.1.12.DA.1 8.1.12.DA.5 8.1.12.DA.6 8.1.12.AP.1 8.2.12.ETW.2		support multilingual students in their first language and in English, providing materials and/or resources to support students' understanding. Students will be given additional time, as appropriate, and translation tools will be utilized as needed. <u>Students at risk of school failure:</u> Formative and summative data will be used to monitor student success, and students at risk of failure will receive additional supports and services, which may include parent consultation, extra help, and differentiation strategies, including small group instruction, group work, scaffolding, and spiraling. <u>Gifted and Talented Students:</u> Students who excel in their mastery of course standards will be further challenged with more complex tasks, extensions of concepts and skills, and extended problem solving and critical thinking opportunities.
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Unit 5 – Solids Time: 5 weeks (<i>see column 2 for a more detailed breakdown</i>) Content Statement: Students will be able to model and analyze measures of solid figures. Enduring Understandings: Real-world objects can be described, approximately, using geometric shapes, their measures, and their properties.	Key learning items/concepts: 1. Informal arguments for formulas (1 week) 2. Volume (2 weeks) 3. Cross-sections (1 week) 4. Modeling (1 week) Content-specific modifications and accommodations - use multiple representations and technology to support conceptual understanding - provide students with manipulatives to better understand three-dimensional measurement Interdisciplinary/additional connections - model real-world situations with applications in science and engineering	<i>Explain volume formulas and use them to solve problems.</i> <i>Visualize relationships between two-dimensional and three-dimensional objects.</i> <i>Apply geometric concepts in modeling situations.</i>	NJSLS Content Standards G-GMD 1, 3, 4 G-MG 1-3 NJSLS SMP MP1. Make sense of problems and persevere in solving them MP2. Construct viable arguments and critique the reasoning of others MP3. Reason abstractly and quantitatively MP4. Model with mathematics MP5. Attend to precision MP6. Use appropriate tools strategically MP7. Look for and make use of structure MP8. Look for and express regularity in repeated reasoning NJSLS for ELA Companion Standards RST.9-10.3 RST.9-10.4 RST.9-10.7 RST.11-12.3	Students will be assessed regularly throughout this course, with a focus on both conceptual understanding and procedural fluency. Assessment tools may include the following: - quizzes (F) - tests (S) - performance tasks (F/S) - projects (S) - homework (F) - discussions (F) - journals (F) - Form A, B, or C benchmark (B) - alternative assessments (A) - modeling project (S)	Selection of primary sources <i>Suggestion(s):</i> Texts: Pearson Geometry Common Core (on grade level); Geometry for Enjoyment and Challenge (advanced); Deltamath (remediation, on grade level, and advanced) <u>G.GMD.A.1 Area of a circle</u> <u>G.GMD.A.3 The Great Egyptian Pyramids</u> <u>G.GMD.B.4 Tennis Balls in a Can</u> <u>G.MG.A.1 Toilet Roll</u> <u>G.MG.A.2 How many cells are in the human body?</u> <u>G.MG.A.3 Ice Cream Cone</u> Modifications and Accommodations: Students with special needs: Teachers and support staff will attend to all modifications and accommodations listed in students' IEPs and 504s. Teachers will incorporate manipulatives, extra time, alternative assessments, scaffolding, spiraling, technology, and flexible grouping to support student learning.

			<p>RST.11-12.4</p> <p>NJSLS-CLKS - 21st Century Life and Careers 9.4.12.CI.1 9.4.12.CI.3 9.4.12.CT.1 9.4.12.CT.2</p> <p>- Technology 9.4.12.IML.3</p> <p>- Career Education 9.2.12.CAP.2 9.3.ST.5 9.3.ST-ET.5 9.3.ST-SM.2</p> <p>NJSLS – CSDT 8.1.12.DA.1 8.1.12.DA.5 8.1.12.DA.6 8.1.12.AP.1 8.2.12.ETW.2</p>		<p><u>Multilingual students:</u> Teachers and support staff will work to support multilingual students in their first language and in English, providing materials and/or resources to support students' understanding. Students will be given additional time, as appropriate, and translation tools will be utilized as needed.</p> <p><u>Students at risk of school failure:</u> Formative and summative data will be used to monitor student success, and students at risk of failure will receive additional supports and services, which may include parent consultation, extra help, and differentiation strategies, including small group instruction, group work, scaffolding, and spiraling.</p> <p><u>Gifted and Talented Students:</u> Students who excel in their mastery of course standards will be further challenged with more complex tasks, extensions of concepts and skills, and extended problem solving and critical thinking opportunities.</p>
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Geometry: In <i>Geometry</i> , <i>Geometry Enhanced</i> , and <i>Honors Geometry</i> students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments.					
Content/Topic:	Key Learning Items/Concepts and Pacing Guide	Observable Proficiencies and Skills:	NJSLS	Formative, Summative, Benchmark, and Alternative Assessments	Core Instructional and Supplemental Materials/ Modifications and Accommodations
<p>Unit 6 – Probability</p> <p>Time: 5 weeks (<i>see column 2 for a more detailed breakdown</i>)</p> <p>Content Statement: Students will be able to create and analyze probability models to interpret data</p> <p>Enduring Understandings: Events are described as subsets of a sample space.</p> <p>Two events A and B are independent if the probability of A and B occurring together is the product of their probabilities.</p> <p>Independence of event A and event B means that the conditional probability of A given B is the same as the probability of, and the conditional probability of B given A is the same as the probability of B.</p>	<p>Key learning items/concepts:</p> <ol style="list-style-type: none"> 1. Subsets of a sample space (1 week) 2. Independence (1 week) 3. Conditional probability (2 weeks) 4. Two-way tables (1 week) <p>Content-specific modifications and accommodations</p> <ul style="list-style-type: none"> - use multiple representations and technology to support conceptual understanding - provide students with graphic organizers to support understanding of probability <p>Interdisciplinary/additional connections</p> <ul style="list-style-type: none"> - consider probability applications in other fields, including 	<p><i>Understand independence and conditional probability and use them to interpret data.</i></p> <p><i>Use the rules of probability to compute probabilities of compound events in a uniform probability model.</i></p>	<p>NJSLS Content Standards</p> <p>S-CP 1-7</p> <p>NJSLS SMP</p> <p>MP1. Make sense of problems and persevere in solving them MP2. Construct viable arguments and critique the reasoning of others MP3. Reason abstractly and quantitatively MP4. Model with mathematics MP5. Attend to precision MP6. Use appropriate tools strategically MP7. Look for and make use of structure MP8. Look for and express regularity in repeated reasoning</p> <p>NJSLS for ELA Companion Standards</p> <p>RST.9-10.3 RST.9-10.4 RST.9-10.7</p>	<p>Students will be assessed regularly throughout this course, with a focus on both conceptual understanding and procedural fluency. Assessment tools may include the following:</p> <ul style="list-style-type: none"> - quizzes (F) - tests (S) - performance tasks (F/S) - projects (S) - homework (F) - discussions (F) - journals (F) - Form A, B, or C benchmark (B) - alternative assessments (A) - create a game project (S) 	<p>Selection of primary sources <i>Suggestion(s):</i> Texts: Pearson Geometry Common Core (on grade level); Geometry for Enjoyment and Challenge (advanced); Deltamath (remediation, on grade level, and advanced)</p> <p><u>S.CP.A.1 Describing Events</u> <u>S.CP.A.2 Cards and Independence</u> <u>S.CP.A.3 Lucky Envelopes</u> <u>S.CP.A.4 Two-Way Tables and Probability</u> <u>S.CP.A.5 Breakfast Before School</u> <u>S.CP.B.6 The Titanic 1</u> <u>S.CP.B.7 The Addition Rule</u></p> <p>Modifications and Accommodations: Students with special needs: Teachers and support staff will attend to all modifications and accommodations listed in students' IEPs and 504s. Teachers will incorporate manipulatives, extra time, alternative assessments, scaffolding, spiraling, technology, and flexible</p>

	<p>business, science, and social studies, as well as applications involving climate change</p> <p>- draw on experience with games from diverse cultures</p>		<p>RST.11-12.3 RST.11-12.4</p> <p>NJSLS-CLKS - 21st Century Life and Careers 9.4.12.CI.1 9.4.12.CI.3 9.4.12.CT.1 9.4.12.CT.2</p> <p>- Technology 9.4.12.IML.3</p> <p>- Career Education 9.2.12.CAP.2 9.3.ST.5 9.3.ST-ET.5 9.3.ST-SM.2</p> <p>NJSLS – CSDT 8.1.12.DA.1 8.1.12.DA.5 8.1.12.DA.6 8.1.12.AP.1 8.2.12.ETW.2</p>		<p>grouping to support student learning.</p> <p><u>Multilingual students:</u> Teachers and support staff will work to support multilingual students in their first language and in English, providing materials and/or resources to support students' understanding. Students will be given additional time, as appropriate, and translation tools will be utilized as needed.</p> <p><u>Students at risk of school failure:</u> Formative and summative data will be used to monitor student success, and students at risk of failure will receive additional supports and services, which may include parent consultation, extra help, and differentiation strategies, including small group instruction, group work, scaffolding, and spiraling.</p> <p><u>Gifted and Talented Students:</u> Students who excel in their mastery of course standards will be further challenged with more complex tasks, extensions of concepts and skills, and extended problem solving and critical thinking opportunities.</p>
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