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, Geometry Enhanced</i> , and <i>Honors Geometry</i> students explore more complex geometric situations and deepen their					
explanations of geome	etric relationships, moving to	wards formal ma	athematical 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 (see	Key learning items/concepts: 1. Triangle congruence;	Make geometric constructions.	NJSLS Content Standards	Students will be assessed regularly throughout this	Selection of primary sources Suggestion(s): Texts: Pearson Geometry Common
column 2 for a more detailed breakdown)	relationship between rigid motion and triangle congruence criteria (1 week)	Understand congruence in terms of rigid	G-CO 1-8, 12, 13 NJSLS SMP	course, with a focus on both conceptual	Core (on grade level); Geometry for Enjoyment and Challenge (advanced); Deltamath (remediation, on grade
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.	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	motion. Experiment with transformations in the plane.	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	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)	level, and advanced) G.CO.A.1 Defining Parallel Lines G.CO.A.2 Horizontal Stretch of the Plane G.CO.A.3 Seven Circles II G.CO.A.4 Defining Rotations G.CO.A.5 Showing a triangle congruence G.CO.B.7 Properties of Congruent Triangles G.CO.B.8 Why does SAS work? G.CO.D.12 Bisecting an angle G.CO.D.13 Inscribing an equilateral triangle in a circle
	- use multiple representations and technology to support conceptual understanding - provide students with technology if hand-held construction tools are difficult Interdisciplinary/additional connections		RST.9-10.3 RST.9-10.4 RST.9-10.7 RST.11-12.3 RST.11-12.4	- alternative assessments (A) - construction tasks (F)	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,

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

assessments, scaffolding,

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

- use multiple	NJSLS-CLKS	spiraling, technology, and flexible
representations and	- 21st Century Life and	grouping to support student
technology to support	Careers	learning.
conceptual	9.4.12.CI.1	Multilingual students: Teachers
understanding	9.4.12.CI.3	and support staff will work to
- provide graphic	9.4.12.CT.1	support multilingual students in
organizers to support	9.4.12.CT.2	their first language and in English,
students' understanding		providing materials and/or
of proof	- Technology	resources to support students'
	9.4.12.IML.3	understanding. Students will be
Interdisciplinary/additi		given additional time, as
onal connections	- Career Education	appropriate, and translation tools
- consider measurement	9.2.12.CAP.2	will be utilized as needed.
applications from	9.3.ST.5	Students at risk of school
science and engineering	9.3.ST-ET.5	<u>failure</u> :
	9.3.ST-SM.2	Formative and summative data
		will be used to monitor student
	NJSLS – CSDT	success, and students at risk of
	8.1.12.DA.1	failure will receive additional
	8.1.12.DA.5	supports and services, which may
	8.1.12.DA.6	include parent consultation, extra
	8.1.12.AP.1	help, and differentiation strategies,
	8.2.12.ETW.2	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.

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 3 – Similarity	Key learning	Understand similarity in	NJSLS Content	Students will be	Selection of primary sources
	items/concepts:	terms of similarity	Standards	assessed	Suggestion(s):
Time: 6 weeks (see column 2		transformations.		regularly	Texts: Pearson Geometry
for a more detailed breakdown)	1. Verify properties of		G-SRT 1-8	throughout this	Common Core (on grade level):
	dilations; similarity	Explore properties of	*G-SRT 9-11	course, with a	Geometry for Enjoyment and
Content Statement:	transformations; AA (2	similarity and prove		focus on both	Challenge (advanced); Deltama
Students will be able to use	weeks)	theorems involving	NJSLS SMP	conceptual	(remediation, on grade level, an
similarity and trigonometry to	2. Prove triangle	similarity.		understanding	advanced)
calculate unknown but desired	theorems; solve triangle		MP1. Make sense of	and procedural	
distances.	problems (1 week)	Define trigonometric	problems and persevere in	fluency.	G.SRT.A.1 Dilating a Line
	3. Relationship between	ratios and solve problems	solving them MP2. Construct viable	Assessment tools	G.SRT.A.2 Are They Similar?
Enduring Understandings:	similarity and trig;	involving right triangles.	arguments and critique the	may include the	_
Similar figures have	cofunctions (1 week)		reasoning of others	following:	G.SRT.A.3 Similar Triangles
proportional sides and	4. Right triangle trig (2	*Apply trigonometry to	MP3. Reason abstractly	- quizzes (F)	G.SRT.B.4 Pythagorean Theore
corresponding congruent	weeks)	general triangles	and quantitatively MP4. Model with	- tests (S)	G.SRT.B.5 Tangent Line to Tw
angles.	•	general triangles	mathematics	- performance	Circles
	Content-specific		MP5. Attend to precision	tasks (F/S)	G.SRT.C.6 Defining
Trigonometry, dilations, and	modifications and		MP6. Use appropriate tools	- projects (S)	Trigonometric Ratio
similarity are all different	accommodations		strategically	- homework (F)	G.SRT.C.7 Sine and Cosine of
approaches to the same	- use multiple		MP7. Look for and make use of structure	- discussions (F)	Complimentary Angles
phenomenon.	representations and		MP8. Look for and express	- journals (F)	G.SRT.C.8 Constructing Specia
	technology to support		regularity in repeated	- Form A, B, or	Angles
Given a certain number of	conceptual		reasoning	C benchmark (B)	
pieces (3 in some cases, 4 in	understanding			- alternative	Modifications and
others) of a triangle, you can	- use virtual			assessments	Accommodations:
find all others.	manipulatives to support		NJSLS for ELA	(A)	Students with special needs:
	understanding of		Companion	- calculate the	Teachers and support staff will
	dilations		Standards	height of a	attend to all modifications and
				building task (S)	accommodations listed in
			RST.9-10.3		students' IEPs and 504s. Teach

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

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

Geometry: In Geometry, C	Geometry Enhanced, and	l <i>Honors Geometry</i> stu	dents explore more cor	nplex geometric	situations and deepen their
explanations of geometric re	elationships, moving tov	wards formal mathemat	tical 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 5 – Solids	Key learning	Explain volume formulas	NJSLS Content	Students will be	Selection of primary sources
	items/concepts:	and use them to solve	Standards	assessed	Suggestion(s):
Time: 5 weeks (see column 2		problems.		regularly	Texts: Pearson Geometry Common
for a more detailed breakdown)	1. Informal arguments		G-GMD 1, 3, 4	throughout this	Core (on grade level); Geometry
	for formulas (1 week)	Visualize relationships	G-MG 1-3	course, with a	for Enjoyment and Challenge
Content Statement:	2. Volume (2 weeks)	between two-		focus on both	(advanced); Deltamath
Students will be able to model	3. Cross-sections (1	dimensional and three-	NJSLS SMP	conceptual	(remediation, on grade level, and
and analyze measures of solid	week)	dimensional objects.		understanding	advanced)
figures.	4. Modeling (1 week)		MP1. Make sense of	and procedural	
		Apply geometric	problems and persevere in solving them	fluency.	G.GMD.A.1 Area of a circle
Enduring Understandings:	Content-specific	concepts in modeling	MP2. Construct viable	Assessment tools	G.GMD.A.3 The Great Egyptian
Real-world objects can be	modifications and	situations.	arguments and critique the	may include the	<u>Pyramids</u>
described, approximately, using	accommodations		reasoning of others	following:	G.GMD.B.4 Tennis Balls in a Can
geometric shapes, their	- use multiple		MP3. Reason abstractly and quantitatively	- quizzes (F)	G.MG.A.1Toilet Roll
measures, and their properties.	representations and		MP4. Model with	- tests (S)	G.MG.A.2 How many cells are in
	technology to support		mathematics	- performance	the human body?
	conceptual		MP5. Attend to precision	tasks (F/S)	G.MG.A.3 Ice Cream Cone
	understanding		MP6. Use appropriate tools strategically	- projects (S)	
	- provide students with		MP7. Look for and make use	- homework (F)	Modifications and
	manipulatives to better		of structure	- discussions (F)	Accommodations:
	understand three-		MP8. Look for and express	- journals (F)	Students with special needs:
	dimensional		regularity in repeated reasoning	- Form A, B, or	Teachers and support staff will
	measurement		reasoning	C benchmark (B)	attend to all modifications and
	Intondicainlin ann/c 3 344		NJSLS for ELA	- alternative	accommodations listed in students'
	Interdisciplinary/additi onal connections		Companion Standards	assessments	IEPs and 504s. Teachers will
	- model real-world		1	(A)	incorporate manipulatives, extra
	situations with		RST.9-10.3	- modeling	time, alternative assessments,
			RST.9-10.4	project (S)	scaffolding, spiraling, technology,
	applications in science and engineering		RST.9-10.7		and flexible grouping to support
	and engineering		RST.11-12.3		student learning.

RST.11-12.4	Multilingual students: Tanchara
K31.11-12.4	<u>Multilingual students</u> : Teachers and support staff will work to
NICLC CLUC	
NJSLS-CLKS	support multilingual students in
- 21st Century Life and	their first language and in English,
Careers	providing materials and/or
9.4.12.CI.1	resources to support students'
9.4.12.CI.3	understanding. Students will be
9.4.12.CT.1	given additional time, as
9.4.12.CT.2	appropriate, and translation tools
	will be utilized as needed.
- Technology	Students at risk of school failure:
9.4.12.IML.3	Formative and summative data will
	be used to monitor student success,
- Career Education	and students at risk of failure will
9.2.12.CAP.2	receive additional supports and
9.3.ST.5	services, which may include parent
9.3.ST-ET.5	consultation, extra help, and
9.3.ST-SM.2	differentiation strategies, including
	small group instruction, group
NJSLS – CSDT	work, scaffolding, and spiraling.
8.1.12.DA.1	Gifted and Talented Students:
8.1.12.DA.5	Students who excel in their mastery
8.1.12.DA.6	of course standards will be further
8.1.12.AP.1	challenged with more complex
8.2.12.ETW.2	tasks, extensions of concepts and
	skills, and extended problem
	solving and critical thinking
	opportunities.

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 6 – Probability	Key learning	Understand	NJSLS Content	Students will be	Selection of primary sources
Time: 5 weeks (see column 2	items/concepts:	independence and conditional probability	Standards	assessed regularly throughout this	Suggestion(s): Texts: Pearson Geometry
for a more detailed breakdown)	1. Subsets of a sample space (1 week)	and use them to interpret data.	S-CP 1-7	course, with a focus on both	Common Core (on grade level); Geometry for Enjoyment and
Content Statement:	2. Independence (1	•	NJSLS SMP	conceptual	Challenge (advanced); Deltamat
Students will be able to create	week)	Use the rules of		understanding and	(remediation, on grade level, and
and analyze probability models	3. Conditional	probability to compute	MP1. Make sense of	procedural fluency.	advanced)
to interpret data	probability (2 weeks)	probabilities of	problems and persevere in solving them	Assessment tools	
	4. Two-way tables (1	compound events in a	MP2. Construct viable	may include the	S.CP.A.1 Describing Events
Enduring Understandings:	week)	uniform probability	arguments and critique the	following:	S.CP.A.2 Cards and Independent
Events are described as subsets		model.	reasoning of others	- quizzes (F)	S.CP.A.3 Lucky Envelopes
of a sample space.	Content-specific		MP3. Reason abstractly and quantitatively	- tests (S)	S.CP.A.4 Two-Way Tables and
	modifications and		MP4. Model with	- performance tasks	<u>Probability</u>
Two events A and B are	accommodations		mathematics	(F/S)	S.CP.A.5 Breakfast Before Scho
independent if the probability of	- use multiple		MP5. Attend to precision	- projects (S)	S.CP.B.6 The Titanic 1
A and B occurring together is	representations and		MP6. Use appropriate tools strategically	- homework (F)	S.CP.B.7 The Addition Rule
the product of their	technology to support		MP7. Look for and make use	- discussions (F)	
probabilities.	conceptual		of structure	- journals (F)	Modifications and
Indonondonos of 4 1	understanding		MP8. Look for and express	- Form A, B, or C	Accommodations:
Independence of event <i>A</i> and event <i>B</i> means that the	- provide students with		regularity in repeated reasoning	benchmark (B) - alternative	Students with special needs:
conditional probability of A	graphic organizers to support understanding of		reasoning		Teachers and support staff will
given B is the same as the	probability			assessments	attend to all modifications and
probability of, and the	probability		NJSLS for ELA	(A)	accommodations listed in
conditional probability of B	Interdisciplinary/additi		Companion Standards	- create a game project (S)	students' IEPs and 504s. Teacher
given A is the same as the	onal connections		F	project (3)	will incorporate manipulatives,
probability of B .	- consider probability		RST.9-10.3		extra time, alternative
probability of D.	applications in other		RST.9-10.4		assessments, scaffolding,
	fields, including		RST.9-10.7		spiraling, technology, and flexib

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