Pascack Valley Regional High School District

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

Course Name: Algebra II w/ Trigonometry Enhanced (MA4400)

Algebra II w/ Trigonometry (MA4300/4400/4500)

Honors Algebra II w/ Trigonometry (MA4600)

Born On: August, 2016

Previous Revision: August, 2020

Current Revision: August, 2023

Board Approval: 8/28/23

COURSE DESCRIPTION: Algebra II w/ Trigonometry/Enhanced/Honors

Algebra II w/ Trigonometry Enhanced (MA4400), Algebra II w/ Trigonometry (MA4300/4500), and Honors Algebra II w/ Trigonometry (MA4600) are full year college preparatory, five-credit courses, aligned with the New Jersey Student Learning Standards, that build on students' prior work with linear, quadratic, and exponential functions and extend their repertoire of functions to include polynomial, rational, and radical functions. Students work closely with the expressions that define the functions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. All three courses emphasize deep conceptual understanding, but Algebra II w/ Trigonometry Enhanced (MA4400) and Honors Algebra II w/ Trigonometry (MA4600) place additional emphasis on procedural fluency and cover several plus standards (denoted below with an *) that relate to function inverses, logarithms, polynomials, complex numbers, rational expressions, the unit circle, trigonometric functions, and trigonometric identities. In addition, Honors Algebra 2 w/ Trigonometry (MA4600) goes into greater depth with rational and trigonometric functions, 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. *Algebra II w/ Trigonometry* and *Honors Algebra II w/ Trigonometry* build on concepts learned and skills developed in *Geometry* and *Algebra I*, while also spiraling in those concepts and skills to reinforce and strengthen students' algebraic and geometric foundation. Additionally, *Algebra II w/ Trigonometry* anticipates higher-level mathematics that will be learned in *Precalculus* and beyond, 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 graphing calculators, 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.

| over the set of complex nun | over the set of complex numbers and solving exponential equations using the properties of logarithms. | | | | | | |
|--|---|--|---|--|--|--|--|
| 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 – Functions | Key learning | Write expressions in | NJSLS Content | Students will be | Selection of primary sources | | |
| Time: 4 weeks (see column 2 for a more detailed breakdown) Content Statement: Students will be able to model real-life phenomena with different types of functions. Enduring Understandings: For a function f(x) that has an inverse, the domain/input for f(x) is the inverse function's range/output and that the range/output for f(x) is the | 1. Graphs of Square Roots, Cube Roots, Piecewise-defined functions, Step Functions, and Absolute Value Functions (2 weeks) 2. Function Transformations (1 week) 3. Inverses (1 week) Content-specific | equivalent forms to solve problems. Create equations that describe numbers or relationships Represent and solve equations and inequalities graphically. Understand the concept of a function and use function | A-SSE 1, 3 A-CED 1 A-REI 11 F-IF 3-4, 6-9 F-BF 1, 3, 4 *F-BF 4b-d, 5 NJSLS SMP MP1. Make sense of problems and persevere in solving them MP2. Construct viable arguments and critique | 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 | Suggestion(s): Texts: Pearson Algebra II w/ Trigonometry Common Core (on grade level); Larson Algebra II (advanced); Deltamath (remediation, on grade level, and advanced) A.SSE.B.4 Course of Antibiotics F.IF.C.8b Carbon 14 dating in practice I F.IF.C.7e Logistic Growth Model A.REI.D.11 Ideal Gas Law F.BF.A.1b A Sum of Functions F.BF.B.4a Temperatures in degrees Fahrenheit and Celsius | | |
| inverse function's domain/input. Models can be written as functions. Function domain and range come from the consideration of what inputs are permitted and what outputs will result. | modifications and accommodations - use multiple representations to support conceptual understanding - use technology to enhance student engagement - utilize graphing technology and patty paper to support understanding of function | notation. Analyze functions using different representations. Build a function that models a relationship between two quantities Build new functions from existing | 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 | tasks (F/S) - projects (S) - homework (F) - discussions (F) - journals (F) - Form A, B, or C benchmark (B) - alternative assessments (A) - graph your name with piecewise functions (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, 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' | | |

| over the set of complex numbers and solving exponential equations using the properties of logarithms. | | | | | | |
|---|-----------------------------|------------------------------------|---|--|--|--|
| transforma | <u> </u> | Standards | understanding. Students will be given | | | |
| inverses | | | additional time, as appropriate, and | | | |
| | Interpret the structure | RST.9-10.3 | translation tools will be utilized as needed. | | | |
| Interdiscip | plinary/ad of expressions. | RST.9-10.4 | Students at risk of school failure: | | | |
| ditional co | onnections | RST.9-10.7 | Formative and summative data will be used | | | |
| - draw on l | literal Represent and solve | RST.11-12.3 | to monitor student success, and students at | | | |
| equations f | from equations and | RST.11-12.4 | risk of failure will receive additional | | | |
| science | inequalities | | supports and services, which may include | | | |
| - draw on s | student graphically. | NJSLS-CLKS | parent consultation, extra help, and | | | |
| interest and | | - 21st Century Life | differentiation strategies, including small | | | |
| experience | | and Careers | group instruction, group work, scaffolding, | | | |
| modeling r | | 9.4.12.CI.1 | and spiraling. | | | |
| phenomena | applications in terms | 9.4.12.CI.3 | Gifted and Talented Students: Students | | | |
| piecewise i | functions of the context. | 9.4.12.CT.1 | who excel in their mastery of course | | | |
| | | 9.4.12.CT.2 | standards will be further challenged with | | | |
| | Analyze functions | | more complex tasks, extensions of | | | |
| | using different | - Technology | concepts and skills, and extended problem | | | |
| | expressions | 9.4.12.IML.3 | solving and critical thinking opportunities. | | | |
| | | Company Edward on | | | | |
| | Build a function that | - Career Education 9.2.12.CAP.2 | | | | |
| | models a relationship | 9.2.12.CAP.2 9.3.ST.5 | | | | |
| | between two | 9.3.ST-ET.5 | | | | |
| | quantities. | 9.3.ST-E1.3 9.3.ST-SM.2 | | | | |
| | | 9.5.51-5141.2 | | | | |
| | Build new functions | NJSLS – CSDT | | | | |
| | from existing | 8.1.12.DA.1 | | | | |
| | functions. | 8.1.12.DA.5 | | | | |
| | | 8.1.12.DA.6 | | | | |
| | *Find inverse | 8.1.12.AP.1 | | | | |
| | functions. | 8.2.12.ETW.2 | | | | |
| | | | | | | |
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| 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 –Exponentials and Logarithms | Key learning items/concepts: | Extend the properties of exponents to | NJSLS Content Standards | Students will be assessed regularly | Selection of primary sources Suggestion(s): Texts: Pearson Algebra II w/ Trigonometry |
| Time: 12 weeks (see column 2 for a more detailed breakdown) | 1. Radicals and rational exponents (2 weeks) 2. Graph exponential | rational exponents. Write expressions | N-RN 1, 2 A-SSE 3, 4 F-IF 7, 8 | throughout this course, with a focus on both | Common Core (on grade level); Larson Algebra II (advanced); Deltamath (remediation, on grade level, and advanced |
| Content Statement: Students will be able to model real-life phenomena with | functions; interpret parameters of exponential functions (4 | in equivalent forms to solve problems. | F-BF 2 F-LE 1-5 | conceptual understanding and procedural | F.IF.C.7c Graphs of Power Functions F.IF.B.4, F.IF.C.7e Model air plane |
| exponential and logarithmic functions. | weeks) 3. Exponential growth and decay (1 week) | Analyze functions using different representations. | NJSLS SMP MP1. Make sense of | fluency. Assessment tools may include the | acrobatics F.LE.A.4 Carbon 14 dating N.RN.A.1 Evaluating Exponential |
| Enduring Understandings: Exponents and logarithms have an inverse relationship. Radical notation is a representation of rational | 4. Derive formula for a finite geometric series (1 week) 5. Logarithms; Solve Exponential Equations with base 2, 10, or e | Build a function that models a relationship between two quantities | problems and persevere in solving them MP2. Construct viable arguments and critique the reasoning of others MP3. Reason | following: - quizzes (F) - tests (S) - performance tasks (F/S) - projects (S) | Expressions N.RN.A.2 Rational or Irrational? A.SSE.B.3c Forms of exponential expressions F.LE.A.2 Rumors F.LE.B.5, F.LE.A.2 Exponential Parameter |
| exponents. Exponential functions grow differently than linear functions. | using Logarithms and Technology (4 weeks) Content-specific modifications and accommodations - use multiple representations to | Construct and compare linear, quadratic, and exponential models and solve problems. | abstractly and quantitatively MP4. Model with mathematics MP5. Attend to precision MP6. Use appropriate tools strategically MP7. Look for and | - homework (F) - discussions (F) - journals (F) - Form A, B, or C benchmark (B) - alternative assessments (A) | Modifications and Accommodations: Students with special needs: Teachers and support staff will attend to all modification and accommodations listed in students' IEI and 504s. Teachers will incorporate manipulatives, extra time, alternative |
| | support conceptual understanding - use technology to | Interpret expressions for | make use of structure MP8. Look for and express regularity in repeated reasoning | - exp/logarithmic exploration (F) | assessments, scaffolding, spiraling, technology, and flexible grouping to suppo student learning. |

| enhance student engagement - differentiate problem sets to support different learners Interdisciplinary/additi onal connections - explore exponential and logarithmic applications in the Richter scale, ph scale, compounded interest and climate change - explore population growth for different groups around the world and in the United States | functions in terms of the situation they model. Construct and compare linear, quadratic, and exponential models and solve problems. | 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 - 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-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 | | 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. |
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| over the set of complex nun | nbers and solving expor | ential equations us | ing the properties of log | garithms. | |
|-----------------------------------|--|--|---|--|--|
| 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 – Polynomials and | Key learning | Use properties of | NJSLS Content | Students will be | Selection of primary sources |
| Rationals | items/concepts: | rational and | Standards | assessed regularly | Suggestion(s): |
| | _ | irrational | | throughout this | Texts: Pearson Algebra II w/ |
| Time: 8 weeks (see column 2 | 1. Operations with | numbers. | N-RN 3 | course, with a | Trigonometry Common Core (on |
| for a more detailed breakdown) | polynomials; complex | | N-CN 1, 2, 7 | focus on both | grade level); Larson Algebra II |
| | Numbers; Solve | Perform arithmetic | A-SSE 1, 2 | conceptual | (advanced); Deltamath (remediation, |
| Content Statement: | quadratics with complex | operations with | A-APR 1-4, 6 | understanding and | on grade level, and advanced) |
| Students will be able to model | solutions (2 weeks) | complex numbers. | A-REI 2, 6, 7, 11 | procedural fluency. | |
| real-life phenomena with | 2. graph polynomials; | T | F-IF 7 | Assessment tools | A.REI.C.7 Linear and Quadratic |
| polynomial and rational | polynomial identities; | Use complex | *N-CN 4-6, 8, 9 | may include the | System |
| functions. | polynomial division; | numbers in | *A-APR 7 | following: | A.REI.C.6 Pairs of Whole Numbers |
| | remainder theorem (3 | polynomial | | - quizzes (F) | A.REI.A.2 Radical Equations |
| Enduring Understandings: | weeks) | identities and | NJSLS SMP | - tests (S) | A.APR.B.3 Graphing from Factors |
| Complex number i is defined | 3. solve simple rational | equations. | | - performance tasks | III |
| such that $i^2 = -1$. | and radical equations (2 | equations. | MP1. Make sense of problems | (F/S) | A.APR.C.4 Trina's Triangles |
| | weeks) | Interpret the | and persevere in solving them | - projects (S) | A.APR.D.6 Combined Fuel |
| For a polynomial $p(x)$ and a | 4. Systems of three | structure of | MP2. Construct viable | - homework (F) | Efficiency |
| number a: | linear equations (1 week) | expressions. | arguments and critique the | - discussions (F) | A.SSE.A.2 A Cubic Identity |
| - $p(a) = 0$ if and only if | | expressions. | reasoning of others | - journals (F) | A.REI.A.1 Products and Reciprocals |
| (x-a) is a factor of | Content-specific | Perform arithmetic | MP3. Reason abstractly and quantitatively | - Form A, B, or C | N.CN.A.1 Complex number patterns |
| p(x) | modifications and | operations on | MP4. Model with | benchmark (B) | N.CN.A.2 Powers of a complex |
| - $(x-a)$ is a factor of | accommodations | polynomials | mathematics | - alternative | <u>number</u> |
| p(x) if and only if $p(a)$ | - use multiple | porynomiais | MP5. Attend to precision | assessments | N.CN.C.7, A.REI.B.4b Completing |
| =0 | representations to | Use polynomial | MP6. Use appropriate tools strategically | (A) | the square |
| Eastern of malamanials are to | support conceptual | identities to solve | MP7. Look for and make use | - polynomial | |
| Factors of polynomials can be | understanding | problems. | of structure | graphing task (F) | Modifications and |
| used to identify zeros to be used | - use technology to | proviens. | MP8. Look for and express | | Accommodations: |
| to develop a rough graph of the | enhance student | Downito nations 1 | regularity in repeated reasoning | | Students with special needs: |
| polynomial function. | engagement | Rewrite rational | reasoning | | |

| Inverse relationships exist between roots and powers. | - use technology to support students' understanding of systems of three linear equations Interdisciplinary/additi onal connections - explore some of the theorems involving polynomials, including their historical contexts | expressions. Understand solving equations as a process of reasoning and explain the reasoning. Represent and solve equations and inequalities graphically. Analyze functions using different representations. *Represent complex numbers and their operations on the complex plane. | 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 - 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.6 8.1.12.AP.1 8.2.12.ETW.2 | | 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. 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. |
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Grade Level: 9 – 12

| Content/Topic: Items/Concepts and Pacing Guide Key Learning Items/Concepts and Skills: Viit 4 – Trigonometric Functions Time: 8 weeks (see column 2 for a more detailed breakdown) Content Statement: Students will be able to model real-life phenomena with Key learning Proficiencies and Skills: NJSLS Content Standards I. Unit circle; radians (3 weeks) 2. Pythagorean identities (1 week) 3. Graph trig functions (period, midline, F-TF 1, 2, 5, 8 *F-TF 3, 4, 6, 7 Indicate Proficiencies and Skills: NJSLS Content Standards F-IF 7 F-TF 1, 2, 5, 8 *F-TF 3, 4, 6, 7 F-TF 1, 2, 5, 8 *F-TF 3, 4, 6, 7 NJSLS SMP | Formative, Summative, Benchmark, and Alternative Assessments Students will be assessed | Core Instructional and Supplemental Materials/ Modifications and Accommodations |
|--|--|---|
| Functions items/concepts: using different representations. F-IF 7 for a more detailed breakdown) Content Statement: Students will be able to model real-life phenomena with items/concepts: using different representations. F-IF 7 Extend the domain of trigonometric functions using the unit circle. NJSLS SMP | | Calastian of mimory garage |
| Time: 8 weeks (see column 2 for a more detailed breakdown) Content Statement: Students will be able to model real-life phenomena with Time: 8 weeks (see column 2 weeks) 2. Pythagorean identities trigonometric functions using the unit circle. Time: 8 weeks (see column 2 trepresentations. F-IF 7 F-TF 1, 2, 5, 8 *F-TF 3, 4, 6, 7 NJSLS SMP | accecced | Selection of primary sources |
| Time: 8 weeks (see column 2 for a more detailed breakdown) 1. Unit circle; radians (3 weeks) 2. Pythagorean identities Content Statement: Students will be able to model real-life phenomena with 1. Unit circle; radians (3 textend the domain of trigonometric functions using the unit circle. 5. Pythagorean identities functions (1 week) 3. Graph trig functions (period, midline, unit circle. 7. Extend the domain of trigonometric functions using the unit circle. 8. *F-TF 3, 4, 6, 7 NJSLS SMP | | Suggestion(s): |
| for a more detailed breakdown) Weeks) 2. Pythagorean identities (1 week) 3. Graph trig functions real-life phenomena with Extend the domain of trigonometric functions using the unit circle. F-TF 1, 2, 5, 8 *F-TF 3, 4, 6, 7 NJSLS SMP | regularly | Texts: Pearson Algebra II w/ |
| Content Statement: Students will be able to model real-life phenomena with 2. Pythagorean identities (1 week) 3. Graph trig functions (period, midline, (p | throughout this | Trigonometry Common Core (on |
| Content Statement: Students will be able to model real-life phenomena with (1 week) 3. Graph trig functions (period, midline, functions using the unit circle. NJSLS SMP | course, with a | grade level); Larson Algebra II |
| Students will be able to model real-life phenomena with 3. Graph trig functions (period, midline, period, midline, processing the state of the stat | focus on both | (advanced); Deltamath |
| real-life phenomena with (period, midline, | conceptual | (remediation, on grade level, and |
| | understanding | advanced) |
| | and procedural | |
| Model periodic and percevere in solving them | fluency. | F.TF.A.1 Bicycle Wheel |
| Enduring Understandings: The radian measure of an angle is defined as the length of the arc on the unit circle that is subtended by the angle. The unit circle enables us to determine the characteristics of the trigonometric functions. The unit circle enables us to determine the characteristics of the trigonometric functions. Content-specific modifications and accommodations - use multiple representations and technology to support conceptual understanding - use Geometer's Sketchpad to animate the Unit Circle, and unwrap the unit circle to reinforce key aspects of sine and cosine functions Denomena with trigonometric functions. | 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) | F.TF.A.2 What exactly is a radian? F.TF.A.2 Trigonometric functions for arbitrary angles (radians) F.TF.A.2 Trig Functions and the Unit Circle F.TF.B.5 As the Wheel Turns F.TF.C.8 Trigonometric Ratios and the Pythagorean Theorem F.IF.C.9 Throwing Baseballs Modifications and Accommodations: Students with special needs: Teachers and support staff will attend to all modifications and accommodations listed in students' |

| - connect trig functions | RST.9-10.7 | (A) | incorporate manipulatives, extra |
|---------------------------|-------------------------|-----------------|---------------------------------------|
| to sinusoidal | RST.11-12.3 | - trig modeling | time, alternative assessments, |
| phenomena, such as | RST.11-12.4 | project (S) | scaffolding, spiraling, technology, |
| temperature, daylight, or | | | and flexible grouping to support |
| position on a Ferris | NJSLS-CLKS | | student learning. |
| Wheel | - 21st Century Life and | | Multilingual students: Teachers |
| | 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 failure: |
| | 9.2.12.CAP.2 | | Formative and summative data will |
| | 9.3.ST.5 | | be used to monitor student success, |
| | 9.3.ST-ET.5 | | and students at risk of failure will |
| | 9.3.ST-SM.2 | | receive additional supports and |
| | | | services, which may include parent |
| | NJSLS – CSDT | | consultation, extra help, and |
| | 8.1.12.DA.1 | | differentiation strategies, including |
| | 8.1.12.DA.5 | | small group instruction, group |
| | 8.1.12.DA.6 | | work, scaffolding, and 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. |

Grade Level: 9 – 12