

Rumson-Fair Haven Regional High School Curriculum

Course: *Learning & Language Disabilities 11/12- Mathematics (LLD Math 11/12)*

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Section I: Course Description

The *Learning & Language Disabilities 11/12 - Mathematics (LLD Math 11/12)* curriculum is designed with the belief that all students need to gain a strong foundation in mathematical literacy to aid in career success and 21st-century life. The design of the curriculum will ensure that all students are mathematically challenged based on appropriate ability and pace while developing critical thinking and problem-solving strategies. The course is driven by the New Jersey Student Learning Standards for Mathematics and Mathematical Practice Standards with an emphasis on exposure to key knowledge, transferable skills, and practical real-world application. Students in this course will deepen foundational concepts from Learning & Language Disabilities I & II, exploring functions both graphically and numerically, bridging from linear to nonlinear functions. Students will use their knowledge of these functions to apply them to real-world scenarios, where they can make the necessary connections to be successful beyond high school. The course allows teachers to differentiate themselves to better meet the needs of all students through targeted small-group instruction.

Section II: NJSLs: New Jersey Student Learning Standards/Learning Objectives

1. **2023 New Jersey Student Learning Standards – Mathematics:**
 - “A New Jersey education in Mathematics builds quantitatively and analytically literate citizens prepared to meet the demands of college and career, and to engage productively in an information-driven society; ...A high-quality mathematics education fosters a population that...leverages data in decision-making and as a lens for discussing, analyzing, and responding to practical questions, persists to make sense of and model problems arising in everyday life, society, and the workplace, thinks critically and strategically to assess quantitative relationships and to solutions to complex problems, employs precise reasoning and constructs viable arguments to deduce conclusions, recognize false statements and assess peers’ reasoning, interprets, evaluates and critiques the mathematics embedded in social, scientific and commercial systems, as well as the claims made in the private and public sectors, communicates precisely when conveying, representing, and justifying both qualitative and quantitative perspectives.”
2. **2023 New Jersey Student Learning Standards English Language Arts:**
 - A New Jersey education in English Language Arts builds readers, writers, and communicators prepared to meet the demands of college and career and to engage as productive American citizens with global responsibilities. ...Students will develop the necessary skills in reading, writing, speaking, and listening that are the foundations for creative and purposeful expression in language read rich, challenging texts that build their knowledge of the world, grow their confidence and identities as readers, and develop critical thinking skills and vocabulary necessary for long-term success[; e]ngage in regular, meaningful, writing authentic tasks, exploring valued topics, writing for impact and expression, and sharing their work with others (including authentic audiences) leverage complex texts and digital media to develop comprehension, active listening, and discussion skills ground daily writing and discussion in evidence, fostering an ability to read critically, build arguments, cite evidence, and communicate ideas to contribute meaningfully as productive citizens evaluate the reliability, credibility, and perspective of authors and speakers across all forms of media express ideas and knowledge through a variety of modalities and media, and serve as effective communicators who purposefully read, write, and speak across multiple disciplines [and l]earn to persist in reading complex texts, establishing lifelong habits to read voluntarily for pleasure, for further education, for information on public policy, and for advancement in the workplace.
3. **Standard 8.1 (Computer Science) and 8.2 (Design Thinking) of the 2020 NJSLs:**
 - “The ‘Intent and Spirit of the Computer Science and Design Thinking Standards’ is to focus on deep understanding of concepts that enable students to think critically and systematically about leveraging technology to solve local and global issues. Authentic learning experiences that enable students to apply content knowledge, integrate concepts across disciplines, develop computational thinking skills, acquire and incorporate varied perspectives, and communicate with diverse audiences about the use and effects of computing prepares New Jersey students for college and careers.”
4. **Standard 9.4 (Life Literacies and Key Skills) of the 2020 NJSLs:**
 - “This standard outlines key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy* that are critical for students to develop to live and work in an interconnected global economy.”

- ***Climate Change:** The state of New Jersey has mandated instruction in, “Climate Change across all content areas, leveraging the passion students have shown for this critical issue and providing them opportunities to develop a deep understanding of the science behind the changes and to explore the solutions our world desperately needs.”
- 5. **[Dynamic Learning Maps Essential Elements](#)**
 - The Dynamic Learning Maps Essential Elements are specific statements of knowledge and skills linked to the grade-level expectations identified in the Common Core State Standards. The purpose of the Dynamic Learning Maps Essential Elements is to build a bridge from the content in the Common Core State Standards to academic expectations for students with the most significant cognitive disabilities.
- 6. **[*Amistad Law: N.J.S.A. 18A 52:16A-88:](#)**
 - The inclusion of lessons and resources/texts dealing with the African slave trade, slavery in America, the vestiges of slavery in this country, and the contributions of African Americans to our society will be implemented in English and Social Studies courses in accordance with state law: “Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.”
- 7. **[*Holocaust Law: N.J.S.A. 18A 35-28:](#)**
 - The inclusion of lessons and resources/texts that enable pupils to identify and analyze applicable theories concerning human nature and behavior; to understand that genocide is a consequence of prejudice and discrimination; and to understand that issues of moral dilemma and conscience have a profound impact on life will be implemented in English and Social Studies courses in accordance with state law: “Every board of education shall include instruction on the Holocaust and genocides in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.”
- 8. **[*LGBT and Disabilities Law: N.J.S.A. 18A:35-4.35:](#)**
 - A transformative approach to the inclusion of lessons and resources/texts on the contributions and issues concerning the LGBTQ+ population and people with disabilities will be implemented across all core subjects in accordance with state law: “A board of education shall include instruction on the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, in an appropriate place in the curriculum of middle school and high school students as part of the district’s implementation of the New Jersey Student Learning Standards (N.J.S.A.18A:35-4.36). A board of education shall have policies and procedures in place pertaining to the selection of instructional materials to implement the requirements of N.J.S.A. 18A:35-4.35.”
- 9. **[Asian American and Pacific Legislation: N.J.S.A 4021/A6100:](#)**
 - The inclusion of lessons and resources/texts on the history and contributions of Asian Americans and Pacific Islanders will enable New Jersey’s schools to provide a curriculum that reflects the diversity of our state. In accordance with state law: “A board of education shall include instruction on the history and contributions of Asian Americans and Pacific Islanders in an appropriate place in the curriculum of students in grades kindergarten through as part of the school district’s implementation of the New Jersey Student Learning Standards in Social Studies.”
- 10. Acquisition/development/refinement of the higher-order critical thinking skills aligned with the *Revised Bloom’s Taxonomy of Cognitive Objectives*

Section III: Curriculum Modifications

The *LLD Math 11/12* curriculum is subject to case-by-case modifications to support/advance the needs of all students, including special education students, English language learners, gifted students, and those at risk of school failure. These modifications are based on Individualized Learning Programs (IEPs), recommendations made by the district’s English Language Learners (ELL) coordinator, feedback from members of the Intervention & Referral Services Team (*I&RS*) for at-risk students, and 504 Plans.

Coursework and assessments will be modified on an individual basis for students when necessary. Modifications may include but are not limited to those outlined on the [Modifications/Accommodations for Mathematics Courses](#) chart.

Section IV: Preparation for Standardized Testing

Instruction in *LLD Math 11/12* is aligned with the requirements of state and national standardized assessments, including the *NJGPA*, *NJSLA*, the *ACT*, the *PSAT*, and the *SAT*.

Section V: Curriculum Pacing Guide

Curriculum Pacing Guide	
Course Title: <i>LLD Math 11/12</i>	Grade Level: 11-12
Unit I: Linear Equations	Weeks 1 - 8
Unit II: Exponential Functions	Weeks 9 - 12
Unit III: Polynomials	Weeks 13 - 19
Unit IV: Quadratic Functions	Weeks 20 - 28
Unit V: Radicals	Weeks 29 - 31
Unit VI: Financial Applications	Weeks 32 - 40

Section VI: Technology Skills

Students in *LLD Math 11/12* are required to complete the technology skills components of the curriculum:

- TI-83/TI-84
- Desmos/ Geogebra
- Math XL
- Edulastic
- Google Suite

Section VII: Primary Texts and Year-Long Instructional Resources

The following texts and instructional resources are employed in *LLD Math 11/12*:

- *Common Sense Education* (www.commonsense.org)
- [Math XL](#)
- [Illustrative Mathematics](#)
- [You Cubed](#), Stanford Graduate School of Education
- [NRICH](#), University of Cambridge

Section VIII: Grading Formula and Assessment Modes

Marking period grades in *LLD Math 11/12* are determined via a percentage weighting model. The specific grading categories and weightings of each will be determined before the start of each academic year and will be published in the posted/distributed course syllabi.

Assessments in *LLD Math 11/12* vary greatly in format, scope/content/skills assessed, and alternative assessments; differentiation in assessments and choice will be incorporated as appropriate. Preliminary assessments of each format will be used as benchmarks, and summative assessments will be created/revised collaboratively each year and planned by *LLD Math III/IV* instructional team members to inform future learning and measure student growth.

Section IX: Unit Templates

The following unit templates have been established for the *LLD Math 11/12* curriculum by the *LLD Math 11/12* instructional team:

Unit I: Linear Equations		
Unit Summary		
This introductory unit will review the foundational skills of solving and graphing linear functions that were taught in <i>LLD Math 10</i> . Students will also solve equations in one variable that require multiple steps of simplifying and isolating for the specified variable. Key strategies and methods of graphing linear functions will be summarized, including a table of values, intercepts, and slope-intercept form. Students will extend their knowledge of graphing linear functions to solving linear systems and absolute value functions. Students will demonstrate mastery of the key concepts of linear equations and functions to set the foundation for the exploration of non-linear functions in subsequent units.		
Standards/Core Ideas/Performance Expectations		
The state standards outlined below, and established by the New Jersey Department of Education, will guide instruction throughout this unit in <i>LLD Math 11/12</i> :		
<ul style="list-style-type: none"> ● <i>2023 New Jersey Student Learning Standards: Mathematics</i> <ul style="list-style-type: none"> ○ MP.1-8 ○ A.CED.A.1-2 & 4, A.REI.A.1, B.3, C.5-6 & D.10 ● <i>2023 New Jersey Student Learning Standards English Language Arts</i> <ul style="list-style-type: none"> ○ L.VL.11-12.3.A, W.AW.11-12.1.A & E, W.IW.11-12.2.A, W.NW.11-12.3.A-E, SL.II.11-12.2, SL.PI.11-12.4, R.I.MF.11-12.6 ● <i>Dynamic Learning Maps Essential Elements for Mathematics</i> <ul style="list-style-type: none"> ○ M.EE.A.CED.1, M.EE.A.CED.2-4 ● <i>2020 New Jersey Student Learning Standards: Computer Science and Design Thinking</i> <ul style="list-style-type: none"> ○ 8.1.12.AP.5 ● <i>2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills</i> <ul style="list-style-type: none"> ○ 9.4.8.TL.3, 9.4.8.TL.5, 9.2.8.CAP.19 		
Unit Essential Questions	Unit Enduring Understandings	
<ul style="list-style-type: none"> ● What information does the equation of a line provide? ● How are equations and graphs related? ● What is meant by the slope of a line, and how can knowing a line's slope help to graph a line and find parallel and perpendicular lines? ● How can real-world situations be modeled by systems? How can solutions be found for a system? ● What does the number of solutions (none, one, or infinite) of a system of linear equations represent? ● What are the advantages and disadvantages of solving a system of linear equations graphically versus algebraically? ● How can students use absolute value to model real-world scenarios? 	<ul style="list-style-type: none"> ● The properties of various forms of an equation provide information to derive/sketch its graph. ● There are different forms of a linear equation. ● The equations of vertical and horizontal lines vary from other linear equations. ● The equation of a line can be found when given its graph. ● The point at which lines intersect is the solution to the system with those lines. ● Systems of linear equations can be used to model problems. ● The absolute value represents the distance from a value. 	
Evidence of Learning		
Formative & Alternative Assessments: <ul style="list-style-type: none"> ● Classwork ● Homework ● Performance activities ● Individual student check-ins with teacher 	Benchmark & Summative Assessments: <ul style="list-style-type: none"> ● Quizzes (Benchmark) ● Tests (Benchmark) ● Summative Assessment 	Resources Needed: <ul style="list-style-type: none"> ● Whiteboard space ● Dry erase markers ● Colored pencils ● Graph paper ● Highlighters/Red Pens ● TI-32/TI-83/TI-84 ● Chromebook

Unit II: Exponential Functions		
Unit Summary		
Unit II will introduce students to exponents and exponential functions. Students will learn the properties of exponents and apply them to write equivalent expressions. Students will use their prior knowledge of linear functions to compare and contrast to exponential functions, identifying key differences and when to use each to model real-world data. Students will graph exponential functions through the use of a table of values and distinguish between exponential growth and decay. Students will work to apply exponent properties to solve exponential equations.		
Standards/Core Ideas/Performance Expectations		
The state standards outlined below, and established by the New Jersey Department of Education, will guide instruction throughout this unit in <i>LLD Math 11/12</i> :		
<ul style="list-style-type: none"> ● <i>2023 New Jersey Student Learning Standards: Mathematics</i> <ul style="list-style-type: none"> ○ MP.1-8 		

<ul style="list-style-type: none"> ○ N.RN.A.1-2, F.IF.C.7, F.LE.A.1-2 & B.5 ● <i>2023 New Jersey Student Learning Standards English Language Arts</i> <ul style="list-style-type: none"> ○ L.VL.11-12.3.A, W.AW.11-12.1.A & E, W.IW.11-12.2.A, W.NW.11-12.3.A-E, SL.II.11-12.2, SL.PI.11-12.4, RI.MF.11-12.6 ● <i>Dynamic Learning Maps Essential Elements for Mathematics</i> <ul style="list-style-type: none"> ○ M.EE.N.RN.1, M.EE.F.IF.1-3, M.EE.F.IF.4-6 ● <i>2020 New Jersey Student Learning Standards: Computer Science and Design Thinking</i> <ul style="list-style-type: none"> ○ 8.1.12.AP.5 ● <i>2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills</i> <ul style="list-style-type: none"> ○ 9.4.8.TL.3, 9.4.8.TL.5, 9.2.8.CAP.19 		
Unit Essential Questions	Unit Enduring Understandings	
<ul style="list-style-type: none"> ● Why are exponent properties important in mathematics? ● Why do students need exponential notation to model situations? ● How can the difference between exponential growth and decay be described? ● What differentiates an exponential model from a linear model given a real-world set of data? 	<ul style="list-style-type: none"> ● The properties of exponents allow the mathematics of numbers to be simplified to a smaller structure. ● Exponential growth involves a rapid increase, while exponential decay involves a rapid decrease over time. ● An exponential factor represents the number of times a base is multiplied by itself, while a rate signifies the speed or frequency of change. ● An exponential model portrays data that grows or declines rapidly, often following a curve, while a linear model depicts data with consistent, gradual change in a straight line. 	
Evidence of Learning		
Formative & Alternative Assessments: <ul style="list-style-type: none"> ● Classwork ● Homework ● Performance activities ● Individual student check-ins with teacher 	Benchmark & Summative Assessments: <ul style="list-style-type: none"> ● Quizzes ● Tests ● Summative Assessment 	Resources Needed: <ul style="list-style-type: none"> ● Whiteboard space ● Dry erase markers ● Colored pencils ● Graph paper ● Highlighters/Red Pens ● TI-32/TI-83/TI-84 ● Chromebook

Unit III: Polynomials	
Unit Summary	
<p>Unit III introduces students to polynomials and operations with them. Students will learn what a polynomial expression is and how to classify its varying structures. Students will work to see patterns when performing operations with polynomials, including addition, subtraction, multiplication, and factoring. Students will learn various methods of factoring based on factoring being the reverse of polynomial multiplication.</p>	
Standards/Core Ideas/Performance Expectations	
<p>The state standards outlined below, and established by the New Jersey Department of Education, will guide instruction throughout this unit in <i>LLD Math 11/12</i>:</p> <ul style="list-style-type: none"> ● <i>2023 New Jersey Student Learning Standards: Mathematics</i> <ul style="list-style-type: none"> ○ MP.1-8 ○ A.SSE.A.2, A.APR.A.1 & B.3 ● <i>2023 New Jersey Student Learning Standards English Language Arts</i> <ul style="list-style-type: none"> ○ L.VL.11-12.3.A, W.AW.11-12.1.A & E, W.IW.11-12.2.A, W.NW.11-12.3.A-E, SL.II.11-12.2, SL.PI.11-12.4, RI.MF.11-12.6 ● <i>2020 New Jersey Student Learning Standards: Computer Science and Design Thinking</i> <ul style="list-style-type: none"> ○ 8.1.12.AP.5 ● <i>2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills</i> <ul style="list-style-type: none"> ○ 9.4.8.TL.3, 9.4.8.TL.5, 9.2.8.CAP.19 	
Unit Essential Questions	Unit Enduring Understandings
<ul style="list-style-type: none"> ● How can polynomials be simplified to solve problems? ● Can two algebraic expressions that appear to be different be equivalent? ● How are the properties of real numbers related to polynomials? 	<ul style="list-style-type: none"> ● To simplify polynomials, add or subtract, where only like terms can be combined. ● The process of factoring is another way of rewriting a polynomial to be an equivalent expression. ● The properties of real numbers (integers) apply to polynomials. ● Multiplying and factoring polynomials are related through inverse operations.
Evidence of Learning	

Formative & Alternative Assessments: <ul style="list-style-type: none"> • Classwork • Homework • Performance activities • Individual student check-ins with teacher 	Benchmark & Summative Assessments: <ul style="list-style-type: none"> • Quizzes • Tests • Summative Assessment 	Resources Needed: <ul style="list-style-type: none"> • Whiteboard space • Dry erase markers • Algebra tiles • Colored pencils • Graph paper • Highlighters/Red Pens • TI-32/TI-83/TI-84 • Chromebook
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Unit IV: Quadratic Functions

Unit Summary

Unit IV extends on the skills mastered in Unit III on polynomials. Students will learn the characteristics of quadratic functions to facilitate learning several methods of graphing quadratic functions. Students will learn to distinguish between linear, quadratic, and exponential models and how the shapes of their graphs differ. They will learn various methods of solving quadratic equations and how to identify the solutions they find to the related quadratic function. By the end of this unit, students will be able to graph a quadratic function and identify key features of a graph, including how to interpret these parts in the context of a real-world scenario.

Standards/Core Ideas/Performance Expectations

The state standards outlined below, and established by the New Jersey Department of Education, will guide instruction throughout this unit in *LLD Math 11/12*:

- *2023 New Jersey Student Learning Standards: Mathematics*
 - MP.1-8
 - A.REI.B.4, D.10-11, F.IF.B.4 & C.7
- *2023 New Jersey Student Learning Standards English Language Arts*
 - L.VL.11-12.3.A, W.AW.11-12.1.A & E, W.IW.11-12.2.A, W.NW.11-12.3.A-E, SL.II.11-12.2, SL.PI.11-12.4, RI.MF.11-12.6
- *Dynamic Learning Maps Essential Elements for Mathematics*
 - M.EE.A.REI.10-12, M.EE.F.IF.4-6
- *2020 New Jersey Student Learning Standards: Computer Science and Design Thinking*
 - 8.1.12.AP.5
- *2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills*
 - 9.4.8.TL.3, 9.4.8.TL.5, 9.2.8.CAP.19

Unit Essential Questions

- What are the advantages of a quadratic function in vertex form? In standard form?
- In what ways can the zeros of a quadratic be found, and can this help students find when an object is in free-fall?
- How is any quadratic function related to the parent quadratic function?
- How are the real solutions of a quadratic equation related to the graph of the related quadratic function?

Unit Enduring Understandings

- If the product of two factors is zero, then one of the factors is zero.
- Every quadratic function is a transformation of its parent function.
- A quadratic function in any form provides key information about its graph.
- There is more than one way to solve a quadratic equation, where structure will be reviewed to determine the method.

Evidence of Learning

Formative & Alternative Assessments: <ul style="list-style-type: none"> • Classwork • Homework • Performance activities • Individual student check-ins with teacher 	Benchmark & Summative Assessments: <ul style="list-style-type: none"> • Quizzes • Tests • Summative Assessment 	Resources Needed: <ul style="list-style-type: none"> • Whiteboard space • Dry erase markers • Colored pencils • Graph paper • Highlighters/Red Pens • TI-32/TI-83/TI-84 • Chromebook
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Unit V: Radicals

Unit Summary

In this unit, students will explore radical expressions and equations. Students will know the difference between perfect and non-perfect squares. They will be able to simplify square roots, including those with variables. Students will learn how to simplify radical expressions by adding, subtracting, multiplying, dividing, and rationalizing radicals. The unit will conclude by applying the properties of radical expressions to solving radical equations, understanding that squaring can undo a square root.

Standards/Core Ideas/Performance Expectations		
<p>The state standards outlined below, and established by the New Jersey Department of Education, will guide instruction throughout this unit in <i>LLD Math 11/12</i>:</p> <ul style="list-style-type: none"> ● <i>2023 New Jersey Student Learning Standards: Mathematics</i> <ul style="list-style-type: none"> ○ MP.1-8 ○ N.RN.A.2-3, A.SSE.A.1, A.REI.A.2 ● <i>2023 New Jersey Student Learning Standards English Language Arts</i> <ul style="list-style-type: none"> ○ L.VL.11-12.3.A, W.AW.11-12.1.A & E, W.IW.11-12.2.A, W.NW.11-12.3.A-E, SL.II.11-12.2, SL.PI.11-12.4, RI.MF.11-12.6 ● <i>Dynamic Learning Maps Essential Elements for Mathematics</i> <ul style="list-style-type: none"> ○ M.EE.A.SSE.1 ● <i>2020 New Jersey Student Learning Standards: Computer Science and Design Thinking</i> <ul style="list-style-type: none"> ○ 8.1.12.AP.5 ● <i>2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills</i> <ul style="list-style-type: none"> ○ 9.4.8.TL.3, 9.4.8.TL.5, 9.2.8.CAP.19 		
Unit Essential Questions	Unit Enduring Understandings	
<ul style="list-style-type: none"> ● How can the properties of real numbers be used to simplify algebraic expressions? ● How do radicals and squares help solve problems? 	<ul style="list-style-type: none"> ● The set of real numbers has several special subsets related in particular ways. ● Squares and radicals affect the numbers that are being used within an operation. ● A radical cannot be in the denominator of a simplified expression. 	
Evidence of Learning		
Formative & Alternative Assessments: <ul style="list-style-type: none"> ● Classwork ● Homework ● Performance activities ● Individual student check-ins with teacher 	Benchmark & Summative Assessments: <ul style="list-style-type: none"> ● Quizzes ● Tests ● Summative Assessment 	Resources Needed: <ul style="list-style-type: none"> ● Whiteboard space ● Dry erase markers ● Colored pencils ● Graph paper ● Highlighters/Red Pens ● TI-32/TI-83/TI-84 ● Chromebook

Unit VI: Financial Applications	
Unit Summary	
<p>This final unit will spiral through the necessary mathematical skills needed in daily life. Students will understand that the concepts and properties of addition, subtraction, multiplication, and division are the same when using whole numbers, fractions, or decimals. Students will learn that mathematical problems in real life involving money can be solved using various mathematical operations.</p>	
Standards/Core Ideas/Performance Expectations	
<p>The state standards outlined below, and established by the New Jersey Department of Education, will guide instruction throughout this unit in <i>LLD Math 11/12</i>:</p> <ul style="list-style-type: none"> ● <i>2023 New Jersey Student Learning Standards: Mathematics</i> <ul style="list-style-type: none"> ○ MP.1-8 ○ N.RN.A.2-3, A.SSE.A.1, A.REI.A.2 ● <i>2023 New Jersey Student Learning Standards English Language Arts</i> <ul style="list-style-type: none"> ○ L.VL.11-12.3.A, W.AW.11-12.1.A & E, W.IW.11-12.2.A, W.NW.11-12.3.A-E, SL.II.11-12.2, SL.PI.11-12.4, RI.MF.11-12.6 ● <i>Dynamic Learning Maps Essential Elements for Mathematics</i> <ul style="list-style-type: none"> ○ M.EE.7.RP.1-3 ● <i>2020 New Jersey Student Learning Standards: Computer Science and Design Thinking</i> <ul style="list-style-type: none"> ○ 8.1.12.AP.5 ● <i>2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies, and Key Skills</i> <ul style="list-style-type: none"> ○ 9.2.12.CAP.3, 9.2.12.CAP.16, 9.4.12.CI.1, 9.4.12.CT.2 	
Unit Essential Questions	Unit Enduring Understandings
<ul style="list-style-type: none"> ● How can a student's prior knowledge about addition, subtraction, multiplication, or division help them solve various mathematical problems? ● What operations can be used to solve the problem? 	<ul style="list-style-type: none"> ● Students can use addition to combine quantities, subtraction to find the difference, multiplication to repeat addition, and division to share or split quantities when solving various mathematical problems. ● The operation used to solve a mathematical problem is dependent on the specific mathematical task involved. ● To solve a real-world problem, identify the problem's key quantities,

<ul style="list-style-type: none"> How can math be used to solve real-world problems? 	then choose the appropriate mathematical operation(s) to model and manipulate those quantities.
Evidence of Learning	
Formative & Alternative Assessments: <ul style="list-style-type: none"> Classwork Homework Performance activities Individual student check-ins with teacher 	Benchmark & Summative Assessments: <ul style="list-style-type: none"> Quizzes Tests Summative Assessment Budget Project
Resources Needed: <ul style="list-style-type: none"> Whiteboard space Dry erase markers Colored pencils Graph paper Highlighters/Red Pens TI-32/TI-83/TI-84 Chromebook 	

Section X: Unit Reflection

The *LLD Math 11/12* instructional team must confer upon the completion of each instructional unit in the *LLD Math 11/12* and rate the degrees to which the instructional units meet performance criteria established by the New Jersey Department of Education using the Unit Reflection Form. Completed unit reflection forms must be submitted to the Department Supervisor for approval upon completion of curriculum implementation with a complementing list of suggested modifications to the *LLD Math 11/12* curriculum.

Unit Reflection Form: <i>LLD Math 11/12</i>			
Lesson Activities:	Strongly	Moderately	Weakly
Foster student use of technology as a tool to develop critical thinking, creativity, and innovation skills;			
Are challenging and require higher-order thinking and problem-solving skills;			
Allow for student choice;			
Provide scaffolding for acquiring targeted knowledge/skills;			
Integrate modern, global perspectives, especially those regarding diversity, genocide, global issues, and historical ones regarding racial relations;			
Integrate 21 st century skills;			
Provide opportunities for interdisciplinary connection and transfer of knowledge and skills;			
Are varied to address different student learning styles and preferences;			
Are differentiated based on student needs;			
Are student-centered with teacher acting as a facilitator and co-learner during the teaching and learning process;			
Provide means for students to demonstrate knowledge and skills and progress in meeting learning goals and objectives;			
Provide opportunities for student reflection and self-assessment;			

Provide data to inform and adjust instruction to better meet the varying needs of learners.			
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Appendix

LLD 11/12 Scope and Sequence

Writing Instruction and the RFH Community

Writing instruction should happen across the RFH Community. Writing across the curriculum is a philosophy that advances the belief that writing is a method of learning. Since all departments are committed to helping students learn, writing must be used as a methodology to advance student learning.

Each academic discipline has its own unique conventions, formats and structures. It is the responsibility of each department to agree upon domain-specific writing praxes, model them for students, and require them to utilize them on a consistent basis. Students must understand that acceptable writing in one domain may not be acceptable writing in another area. The development of domain-specific writing skills supports the overall development of the student writer because all writing is grounded in the writing situation: audience, context, purpose, subject, and writer. Representatives from the academic disciplines must share their domain-specific writing praxes with each other, identify intersections, and determine how to address perceived gaps that limit student learning.

Students must experience writing situations that help them learn how to think creatively and critically and communicate effectively in the academic disciplines. Writing instruction, regardless of the academic discipline, must always reinforce student understanding of the writing situation. When students experience writing situations, they must study examples of domain-specific writing in order to understand how writers communicate in discipline-related contexts. This does not mean information embedded in textbooks. Domain-specific writing is writing that is used to inform and influence readers as it draws them into an established circle of discourse. Students must use these non-fiction texts to develop the close reading skills that will shape their own writing. Focused engagement with domain-specific writing should not be limited to basic reading comprehension and topical understanding. It must also include the analysis of the writing situation that is represented in the text: audience, context, purpose, subject, and writer. The close reading of well-written texts—regardless of the domain—will show students the importance of writing mechanics, diction, and syntax. The development of close reading skills will also help the students grow in terms of their ability to construct and advance independent and original claims that are well-supported by evidence. Domain-specific writing is grounded in positioning of claims and the effective use of evidence.

The final written product is important; nevertheless, the learning that results in this production must not be devalued. The writing process is not limited to the basic steps of planning, drafting, revising, and editing/proofreading. It is a complex sequence of critical and creative thinking and writing that leads to the production of a text that provides evidence of learning and understanding. Students must ultimately develop the ability to self-assess the effectiveness of their writing as a representation of the writing situation. Without the use of models that evidence learning and understanding, students will not develop the ability to self-assess their own work—the true outcome of the writing process.

What types of writing situations should RFH students engage in?

RFH students should engage in writing situations across the curriculum that require them to:

- write to improve mechanical proficiency, diction usage, and syntactical sophistication
- write to narrate, describe, and reflect
- write to summarize and report
- write to classify and define
- write to explain how process leads to an outcome
- write to compare, contrast and evaluate
- write to speculate on cause and effect
- write to propose solutions and solve problems
- write to analyze

These writing situations should be positioned in a coordinated, developmental sequence that extends across the academic disciplines.

Upon Completion of Grade 12, RFH students must be ready to transition to the following writing situations:

- write to analyze
- write to persuade (argument)

The core focus of first-year college writing courses are analysis and argument. These courses orient the students to the demands and expectations of writing for the academic culture of college. At colleges/universities with carefully coordinated writing programs, students must demonstrate proficiency in analysis and argument before they transition to upper level courses that require them to engage in the following writing situation:

- write to investigate (research)