CURRICULUM MAP ALGEBRA I
North Smithfield School Department

UNIT	COMMON CORE CLUSTERS AND STANDARDS (blue indicates grade 8) Curriculum Algebra I.docx	MATHEMATICAL PRACTICE
Unit 1: Relationships between Quantities and Reasoning with Equations	• Reason quantitatively and use units to solve problems **N.Q.1,2,3** • Interpret the structure of expressions **A.SSE.1** • Create equations that describe numbers or relationships **A.CED.1,2,3,4** • Understand solving equations as a process of reasoning and explain the reasoning **A.REI.1** • Solve equations and inequalities in one variable **A.REI.3** **Mathematical Practices** :	1. Make sense of problems and persevere in solving them
Unit 2: Linear and Exponential Relationships	• Analyze and solve linear equations and pairs of simultaneous linear equations. **8EE** • Solve systems of equations **A.REI.5,6** • Represent and solve equations and inequalities graphically **A.REI.10,11,12** • Define, evaluate, and compare functions. **8.F .1, 2, 3** • Understand the concept of function and function notation **F.IF.1,2,3** • Use functions to model relationships between quantities. **8.F.4, 5** • Interpret functions that arise in applications in terms of a context **F.IF.5** • Analyze functions using different representations **F.IF.7,9** **Mathematical Practices** :	2. Reason abstractly and quantitatively 3. Construct viable arguments and critique the reasoning of others
Unit 3: Expressions and Equations	• Interpret the structure of expressions **A.SSE.1,2** • Write expressions in equivalent forms to solve problems **A.SSE.3** • Perform arithmetic operations on polynomials **A.APR.1** • Create equations that describe numbers or relationships **A.CED.1,2,4** • Solve equations and inequalities in one variable **A.REI.4** **Mathematical Practices** :	
Unit 4: Quadratic Functions and Modeling	• Identify zeros of polynomials when suitable factorizations are available A.APR.3 • Use properties of rational and irrational numbers **N.RN.3** • Understand and apply the Pythagorean Theorem. **8.G.6,7,8** • Interpret functions that arise in applications in terms of a context **F.IF.4,5,6** • Analyze functions using different representations **F.IF.7,8,9** • Build a function that models a relationship between two quantities **F.BF.1,3** • Construct and compare linear, quadratic, and exponential models and solve problems **F.LE.3** • Interpret expressions for functions in terms of the equations they model **F.LE.5** **Mathematical Practices** :	4. Model with mathematics ★ 5. Use appropriate tools strategically 6. Attend to precision
Unit 5: Descriptive Statistics	• Summarize, represent, and interpret data on a single count or measurement variable **S.ID.1,2,3** • Investigate patterns of association in bivariate data. **8.SP.1, 2, 3, 4** • Summarize, represent, and interpret data on two categorical and quantitative variables **S.ID.5,6** • Interpret linear models **S.ID.7,8,9** • Construct and compare linear, quadratic, and exponential models and solve problems **F.LE.1,2** **Mathematical Practices** :	7. Look for and make use of structure 8. Look for and express regularity in repeated reasoning

Major Content   Supporting   Additional Content

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