

O'MALEY INNOVATION MIDDLE SCHOOL SCOPE & SEQUENCE CHART: INTENDED UNITS OF STUDY, 2014-2015 (DRAFT)

CONTENT AREA: Algebra GRADE LEVEL: 8

UNIT/ ESSENTIAL QUESTION	APPROX. START TIME	APPROX. END TIME	TEXT(S)/RESOURCES	TARGETED UNDERSTANDING (PURPOSE)	CONTENT STANDARD(S)
Algebraic Modeling and Unit Analysis	Early Sept.	Late September	Oncore Mathematics Algebra 1 Houghton Mifflin Harcourt	<ul style="list-style-type: none"> Evaluating Expressions Simplifying Expressions Writing Expressions Writing Equations and Inequalities Representing Functions Modeling with Functions 	CC.9-12.N.Q.1,2 CC.9-12.A/SSE.1,1a,1b,2 CC.9-12.A.CED.1,3 CC.9-12.F.IF.1,2,5 CC.9-12.F.BF.1,1a
Linear Equations and Inequalities	Late Sept	Late Oct.	Oncore Mathematics Algebra 1 Houghton Mifflin Harcourt	<ul style="list-style-type: none"> Solving Linear Equations Solving Linear Inequalities Modeling with one-variable linear equations and inequalities Literal Equations and Inequalities Rewriting Formulas Linear equations in Two Variables Linear inequalities in two variables Modeling with two-variable equations and inequalities 	CC.9-12.N.Q.1,2 CC.9-12.A/SSE.1,1a,2 CC.9-12.A.CED.1,2,3,4 CC.9-12.F.BF.1,1a CC.9-12.A.REI.1,3,10,12
Systems of Equations and Inequalities	Early Nov	Late Nov.	Oncore Mathematics Algebra 1 Houghton Mifflin Harcourt	<ul style="list-style-type: none"> Solving Linear Systems by Graphing Solving Linear Systems by Substitution Solving Linear Systems by Adding or Subtracting Solving Linear Systems By Multiplying Solving Systems of Linear Inequalities Modeling with Linear Systems 	CC.9-12.N.Q.1,2 CC.9-12.A.CED.2,3 CC.9-12.A.REI.5,6,12
Linear Functions	Early Dec.	Early Jan.	Oncore Mathematics Algebra 1 Houghton Mifflin Harcourt	<ul style="list-style-type: none"> Discrete Linear Functions Continuous Linear Functions Using Slope Changing the values of m and b in $f(x) = mx + b$ Writing Linear Functions Operations with Linear Functions Linear Functions and their Inverses Correlation Fitting Lines to Data Linear Regression 	CC.9-12.N.Q.1 CC.9-12.A.APR.1 CC.9-12.A.CED.2 CC.9-12.AREI.11 CC.9- 12.F.IF.1,2,3,4,5,6,7,7a,9 CC.9- 12.F.BF.1,1a,1b,2,3,4,4a CC.9-12.F.LE.2,5 CC.9- 12.S.ID.6,6a,6b,6c,7,8,9 CC.9-12.S.IC.6

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Exponential Functions	<u>Early</u> Jan , Late Jan	<u>Late</u> Feb , Mid Feb	Oncore Mathematics Algebra 1 Houghton Mifflin Harcourt	<ul style="list-style-type: none"> • Discrete Exponential Functions • Exponential Growth Functions • Exponential Decay Functions • Changing the values of a and b in $f(x) = ab^x$ • Solving Equations involving Exponents • Performing Exponential Regressions • Comparing Linear and Exponential Functions • Modeling with Exponential Functions 	CC.9-12.A.CED.1,2 CC.9-12.A.REI.11 CC.9- 12.F.IF.1,2,3,4,5,7,7a,7e CC.9-12.F.BF.1,1a,3- CC.9- 12.F.LE.1,1a,1b,1c,2,2,5 CC.9-12.S.ID.6,6a,6b	
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CONTENT AREA: Algebra GRADE LEVEL: 8

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Piecewise and Absolute Value Functions	Late Feb. Late Feb.	Late March Mid March	Oncore Mathematics Algebra 1 Houghton Mifflin Harcourt	<ul style="list-style-type: none"> Piecewise Functions Translating the Graph of $F(x) = x$ Stretching, Shrinking and Reflecting the Graph of $F(x) = x$ Combining Transformations of the Graph of $F(x) = x$ Solving Absolute Value Equations Modeling with Absolute Value Functions 	CC.9-12.A.CED.1,2 CC.9-12.A.REI.11 CC.9-12.F.IF.1,2,3,4,5,7,7e CC.9-12.F.BF.1,1a,3 CC9-12.F.IF.1,1a,1b,1c,2,3,5 CC9-12.S.ID.6,6a,6b
Quadratic Functions $f(x) = a(x-h)^2 + k$	Late March	Mid April	Oncore Mathematics Algebra 1 Houghton Mifflin Harcourt	<ul style="list-style-type: none"> Translating the Graph of $f(x) = x^2$ Stretching, shrinking, and Reflecting the Graph of $f(x) = x^2$ Combining the Transformations of the Graph of $f(x) = x^2$ Solving Quadratic Equations Graphically Solving Quadratic Equations Using Square Roots Modeling with Quadratic Functions 	CC.9-12.A.REI.4, 4b CC.9-12.F.IF.7a CC.9-12.F.BF.3
Quadratic Functions $f(x) = ax^2 + bx + c$	Mid April	Early May	Oncore Mathematics Algebra 1 Houghton Mifflin Harcourt	<ul style="list-style-type: none"> Multiplying binomials Solving $ax^2 + bx + c = 0$ by Factoring Solving $x^2 + bx + c = 0$ by Completing the Square 	CC.9-12.A.SSE.2,3,3a CC.9-12.A.APR.1 CC.9-12.A.REI.4, 4a,4b CC.9-12.F.IF.8, 8a CC.9-12.CED.1* CC.9-12.f.BF.1a*
Data Analysis	ongoing	June	Oncore Mathematics Algebra 1 Houghton Mifflin Harcourt	<ul style="list-style-type: none"> Measures of Center and Spread Data distribution and Outliers Histograms Box Plots Two-Way Frequency Tables 	CC.9-12.S.ID.1,2,3,5
MCAS/ PARCC Review	ongoing	May	PARCC Sample Test Items and Tests	All Common Core State Standards	All of the above

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