Moon Area School District Curriculum Map

Course: Basic Math 8
Grade Level: 8th Grade
Content Area: Math
Frequency: Full-Year Course

Big Ideas

1. Real Numbers Rational/Irrational
2. Simplifying Variable Expressions
3. Writing Verbal Models
4. Data Analysis
5. Equations
6. Inequalities
7. Functions
8. Exponents and Scientific Notation
9. Similar Right Triangles to show Slope
10. Pythagorean Theorem and Converse
11. Transformations
12. Square roots

Essential Questions

13. How do you model real numbers in a real-world situation?
14. What predictions can you make from a scatterplot or matrix?
15. What is meant by equality when solving equations?
16. How do the words "and" and "or" affect the outcome of an inequality?
17. Name a real- life situation that can be represented in a two-way table. What can this table tell us?
18. What does slope-intercept form of an equation tell us?
19. How do we use real-world data to write the equation of a line?
20. How is an expression simplified with a negative exponent?
21. What are the essential rules when performing basic operations and simplification of square roots?

Primary Resource(s) & Technology:
Textbook Series, IXL online software,
Microsoft Teams, Promethean Boards, Student Laptops/iPads

Pennsylvania and/or focus standards referenced at:
www.pdesas.org
www.education.pa.gov

Big Ideas/ EQs	Focus Standard(s)	Assessed Competencies (Key content and skills)	Timeline
1-4/12-13	A1.1.1.3.1 A1.1.1.1.1 Eligible Content: M08.A-N.1.1.1 M08.A-N.1.1.2 M08.A-N.1.1.3 M08.A-N.1.1.4 M08.A-N.1.1.5	• State the absolute value of a number. • Rational/Irrational Numbers • Add and subtract real numbers. • Multiply real numbers. • Divide real numbers. • Evaluate a variable expression and evaluate expressions containing • Use the order of operations to evaluate algebraic expressions. • Use the distributive property and simplify expressions by combining like terms.	August - Oct (Weeks or Days)
5/13, 15	A1.1.2.1.1 A1.1.2.1.2 A1.1.2.2.2 A1.1.1.5.3 Eligible Content: M08.B-E.3.1.1 M08.B-E.3.1.2	• Solve linear equations using addition, subtraction, multiplication and division of real numbers. • Use two or more transformations to solve an equation. • Collect variables on one side of an equation. • Solve absolute value equations. • Solve a formula for one of its variables and rewrite an equation in function form.	
6/15-16	A1.1.3.1.1 A1.1.3.1.2, A1.1.3.1.3	• Graph and solve one-step linear inequalities in one • Solve multi-step linear inequalities • Write, solve, and graph compound inequalities. • Solve absolute value inequalities.	After PSSA's
4 /13, 14,17	A1.2.3.2.2 A1.2.2.2.1 A1.2.3.2.3 A1.2.3.1.1 A1.2.3.2.1 Eligible Content: M08.B-F.2.1.2; M08.D- .1.1.1(Bivariate); M08.D-S.1.1.2	• Make and use a stem-and-leaf plot to put data in order and find the mean, median, and mode of data. • Draw, read, and interpret a box-and-whisker plot. • Draw a scatterplot and make predictions about real-life situations • Two-way tables	

	M08.D-S.1.2.1		
7/13, 18-19	A1.2.1.1.1 A1.2.1.1.2, A1.2.1.1.3 A1.2.2.1.4 A1.2.1.1.3 A1.1.2.1.1 A1.2.1.2.2 A1.2.1.2.1 A1.2.2.1.2 A1.2.2.1.4 A1.1.2.1.3 Eligible Content: M08.B-E.2.1.1 M08.B-E.2.1.3 M08.B-E.3.1.1 M08.B-F.1.1.2 M08.B-F.2.1.1 M08.D-S.1.1.3	• Identify whether relations are functions, find the domain and range of a function, identify independent and dependent variables of functions, and make an input-output table for a function. • Use function notation to evaluate functions. • Graph a linear equation using a table or a list of values • Find the intercepts of the graph of linear equations. • Find the slope of a line using two of its points or the slope of a linear function. • Graph a linear equation in slope-intercept form.	
8 /13, 15,20-21	A1.1.1.3.1 Eligible Content: M08.B-E.1.1.1, M08.B-E.1.1.3, M08.B-E.1.1.4	• Use properties of exponents to multiply exponential expressions. • Evaluate powers that have zero and negative exponents. • Use division properties of exponents to evaluate powers and simplify expressions. • Use scientific notation to represent numbers.	
9-11/19, 21	Eligible Content: M08.C-G.1.1.1 M08.C-G.1.1.2 M08.C-G.1.1.3 M08.C-G.1.1.4 M08.C-G.2.1.1 M08.C-G.2.1.2 M08.C-G.2.1.3 M08.C-G.3.1.1	• Transformations (rotations, reflections, translations, dilations): • Pythagorean Theorem and its converse • Apply formulas for the volume of cones, cylinders and spheres • Similar right triangles	
