

## SMMUSD GRADE 7-8 Core MATH CURRICULUM GUIDE

### SEMESTER 1-2 August - February

Aug - Sept 3 weeks	Sept 3 weeks	Oct 3 weeks	Nov 4 weeks	Dec 2 weeks	Jan 2 weeks	Jan 1 - 2 weeks	Feb 2 weeks
<i>Accentuate the Negative</i>	<i>Stretching and Shrinking</i>	<i>Comparing and Scaling</i>	<i>Moving Straight Ahead</i>	<i>Shapes and Designs And Filling and Wrapping</i>	<i>Filling and Wrapping; Say It With Symbols</i>	<i>Samples and Populations</i>	<i>What Do You Expect?</i>
Develop and use algorithms for rational operations; solve problems using rational numbers	Understand similar figures; analyze changes in area and perimeter	Ratios, rates, and percent; develop and use strategies for solving problems requiring proportional reasoning	Recognize linear relationships by constant rate of change; understand equality and solve multi-step equations	Angle relationships and equations and area and circumference of circles	Understand and measure the volume of triangular and rectangular prisms, cones, spheres and cylinders; understand and measure the surface area of triangular and rectangular prisms; extend similarity and scale factor to 3D figures	Deepen understanding of the process of statistical investigation and apply to sampling; explore measures of central tendency	Experimental and theoretical probabilities; make connections between probability, rational numbers, geometry, stats, science, and business
7.NS.1 7.NS.2 7.NS.3 7.EE.A.1	7.RP.A.2a, 2b 7.RP.A.3 7.G.A.1 7.EE.B.3 7.EE.B.4	7.RP.2 a, b 7.RP.3 7.EE.3 7.EE.4 a 7.NS.3 7.RP.1	7.RP.2 7.EE.1 7.EE.2 7.EE.4 a, b	7.EE.4a 7.G.2 to 7.G.6	7.NS.3 7.EE.1 7.EE.2 7.G.1 7.G.3 7.G.4 7.G.6 7.G.9c	7.RP.2 7.NS.1 7.SP.1 to 7.SP.7a	7.RP.2 7.RP.3 7.SP.5 7.SP.6 7.SP.7 7.SP.8

**Domains: RP: Ratios and Proportional Relationships; NS: The Number System; EE: Expressions and Equations; SP: Statistics and Probability; G = Geometry**

MP1: Make sense of problems and persevere in solving them

MP2: Reason abstractly and quantitatively

MP3: Construct viable arguments and critique the reasoning of others

MP4: Model with mathematics

MP5: Use appropriate tools

MP6: Attend to precision

MP7: Look for and make use of structure

MP8: Look for and express regularity in repeated reasoning

**Mathematical Practices 1-3-6 = connections to EL/ELD and NGSS standards: See Overview Curriculum Guide for details of grade expectations**

**For Core Seven Mathematics, instructional time should focus on four Critical Areas:**

- (1) Developing understanding of and applying proportional relationships.
- (2) Developing understanding of operations with rational numbers and working with expressions and linear equations.
- (3) Solve problems involving scale drawings and informal geometric constructions, and working with two- and three- dimensional shapes to solve problems involving area, surface area, and volume.
- (4) Drawing inferences about populations based on samples

**SMMUSD COMMON GRADE 7-8 Core MATH CURRICULUM GUIDE**

**SEMESTER 2 February - May**

Feb - March 2 weeks  <i>Looking for Pythagoras</i>	March 2 weeks  <i>Growing, Growing, Growing</i>	April - May 3 weeks  <i>Say It With Symbols</i>	May 2 weeks  <i>It's in the System</i>	May - June 3 weeks  <i>Butterflies, Pinwheels, and Wallpaper</i>
Pythagorean Theorem, square and cube roots, and beyond rational numbers	Scientific notation and exponent rules	Write, determine and solve equivalent expressions and linear equations; understand and identify functions	Write and solve systems of linear relationships	Transformational geometry; understanding congruence and similarity
8.NS.1 8.NS.2 8.EE.2 8.G.6 8.G.7 8.G.8	8.EE.1 8.EE.3 8.EE.4	8.EE.6 8.EE.7 a, b 8.F.1 8.F.2 --Slope Intercept 8.F.3 8.F.4 8.F.5 --Scales of axis *Graph a line	8.EE.7.a 8.EE.8.a, b, c 8.F.3	8.G.1a, b, c 8.G.2 8.G.3 8.G.4 8.G.5

**Domains: NS: The Number System; EE: Expressions and Equations; F = Functions; G = Geometry; SP: Statistics and Probability**

MP1: Make sense of problems and persevere in solving them  
 MP2: Reason abstractly and quantitatively  
 MP3: Construct viable arguments and critique the reasoning of others  
 MP4: Model with mathematics

MP5: Use appropriate tools  
 MP6: Attend to precision  
 MP7: Look for and make use of structure  
 MP8: Look for and express regularity in repeated reasoning

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**For Core Eight Mathematics, instructional time should focus on three Critical Areas:**

- (1) Formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations.
- (2) Grasping the concept of a function and using functions to describe quantitative relationships.
- (3) Analyzing two- and three- dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem