

SMMUSD MATH 8 CURRICULUM GUIDE					
SEMESTER 1: fall FIAB Congruency/~		SEMESTER 2: winter FIAB Proportional Relationships, Lines & Linear Equations			
Unit 1 Aug-Oct 6 weeks  <b>Geometric Transformations</b> + <a href="#">Inspiring week of math</a> —Stanford YouCubed  <i>Butterflies, Pinwheels &amp; Wallpaper</i>  <a href="#">OpenUp</a> Unit 1 Rigid Transformations & Congruence  <a href="#">OpenUp</a> Unit 2 Dilations, Similarity, & Intro to Slope <a href="#">Math Milestones</a>	Unit 2 Oct-Dec. 9 weeks  <b>Graphing and Writing Linear Relationships</b>  <i>Thinking with Mathematical Models</i>  <a href="#">OpenUp</a> Unit 3 Linear Relationships	Unit 3 Jan-Feb 6 weeks  <b>Algebraic Expressions, Equations &amp; Systems of Relationships (linear)</b>  <i>Say It with Symbols It's in the System</i>  <a href="#">OpenUp</a> Unit 4 Linear Equations & Linear Systems  <b>DO between units 3 and 4:</b> <a href="#">OpenUp</a> Unit 5 Functions L1-10	Unit 4 Feb-Mar 4 weeks  <b>Exponents and Radicals &amp; Scientific Notation</b>  <i>Growing, Growing, Growing</i>  <a href="#">OpenUp</a> Unit 7 Exponents & Scientific Notation and <a href="#">OpenUp</a> Unit 5 Functions L1-10 & Volume (11-22)	Unit 5 Mar-May 4 weeks  <b>Pythagorean Theorem and Rational/Irrational Numbers</b>  <i>Looking for Pythagoras</i>  <a href="#">OpenUp</a> Unit 8 Pythagorean Theorem & Irrational Numbers	Review/Projects May-June 3 weeks  <a href="#">OpenUp</a> Unit 6 Associations in Data  <a href="#">OpenUp</a> Unit 5 <b>Volume (L11-22)</b>  <a href="#">OpenUp</a> Unit 5 Functions L1-10—do between Units 3 and 4!)  <i>Consider using time after CAASPP to review and solidify concepts. Continue engaging students with projects tied to the course's concepts.</i>
Introduction to transformational geometry and understanding congruence and similarity <a href="#">Math Milestones</a>	Patterns, Functions, Linear Functions, Graphs, Linear Equations	Use and manipulate symbolic representations in context and work with systems of linear relations	Exponential Relationships	Pythagorean Theorem, roots, beyond rational numbers, Volume	
8.G.1, 8.G.1a, 8.G.1b, 8.G.1c, 8.G.2, 8.G.3, 8.G.4, 8.G.5 <a href="#">Math Milestones</a>	8.EE.5, 8.EE.6, 8.EE.7, 8.F.1, 8.F.2, 8.F.3, 8.F.4, 8.F.5, 8.SP.1, 8.SP.2, 8.SP.3, 8.SP.4	8.EE.2, 8.EE.7, 8.EE.7a, 8.EE.7b, 8.EE.8, 8.EE.8a, 8.EE.8b, 8.EE.8c, I.G.9, 8.F.3	8.EE.1, 8.EE.2, 8.EE.3, 8.EE.4, 8.F.1, 8.F.2, 8.F.3, 8.F.4, 8.F.5	8.NS.1, 8.NS.2, 8.EE.2, 8.G.6, 8.G.7, 8.G.8, 8.GC.9	

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

[Math Milestones](#)

**For Grade 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**

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

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

[Detailed GVC Guide](#)

