2017-2018 PSUSD MATH GRADE 8 YEAR-AT-A-GLANCE

155 Total Days of Instruction/Software (1 day = 50 min. period)
*Chapter & Unit Assessments need to be built into Instructional/Software days **(Mathia Goal: 2 workspaces/week)**
District Assessments (Link to PSUSD Assessment site)
*** ALD CORRELATION- One possible ALD correlation / Topic

MODULE NAME and LENGTH	TOPIC NAME, LESSON, and NUMBER of DAYS	STANDARDS ADDRESSED	***ALD CORRELATION
MODULE 1: Transforming Geometric Objects **_Total Days_** **Instruction: 25 days** **Mathia: 15 days**	**Topic 1: Rigid Motion Transformations** ● **Lesson 1: Patty Paper, Patty Paper-** Introduction to Congruent Figures **(1 day)** ● **Lesson 2: Sides, Flips, and Spins-** Introduction to Rigid Motions **(3 days)** ● **Lesson 3: Lateral Moves-** Translations of Figures on the Coordinate Plane **(2 days)** ● **Lesson 4: Mirror, Mirror-** Reflections of Figures on the Coordinate Plane **(2 days)** ● **Lesson 5: Half Turns and Quarter Turns-** Rotations of Figures on the Coordinate Plane **(2 days)** ● **Lesson 6: Every Which Way-** Combining Rigid Motions **(2 days)**	8.G.1a 8.G.1b 8.G.1c 8.G.2 8.G.3	**Level 3:** **Expressions and Equations** students should be able to write and evaluate numerical expressions with nonnegative integer exponents and expressions from formulas in real-world problems, and they should be able to apply and extend previous understandings of arithmetic to evaluate expressions with variables that include nonnegative integer exponents. They should be able to apply properties of operations to generate equivalent expressions.
	Topic 2: Similarity ● **Lesson 1: Pinch-Zoom Geometry-** Dilations of Figures **(3 days)** ● **Lesson 2: Rising, Running, Stepping, Scaling-** Dilating Figures on the Coordinate Plane **(3 days)** ● **Lesson 3: From Here to There-** Mapping Similar Figures using Transformations **(2 days)**	8.G.3 8.G.4	**Level 3:**

	Topic 3: Line and Angle Relationships ● **Lesson 1: Pulling a One-Eighty-** Triangle Sum and Exterior Angle Theorems **(2 days)** ● **Lesson 2: Crisscross Applesauce-** Angle Relationships Formed by Lines Intersected by Transversal **(2 days)** ● **Lesson 3: The Vanishing Point:** The Angle-Angle Similarity Theorem **(1 day)**	**8.G.5**	**Level 3:**
Module 2: Developing Functional Foundations **_Total Days_** **Instruction: 34 days Mathia: 15 days**	**Topic 1:From Proportions to Linear Relationships** ● **Lesson 1: Post-Secondary Proportions-** Representations of Proportional Relationships **(1 day)** ● **Lesson 2: Jack and Jill Went Up the Hill** Using Similar Triangles to Describe the Steepness of a Line **(3 days)** ● **Lesson 3: Slippery Slopes-** Exploring Slopes using Similar Triangles **(2 days)** ● **Lesson 4: Up, Down and All Around-** Transformations of Lines **(optional)** ――――――――――――――――――――――― **Topic 2: Linear Relationships** ● **Lesson 1: U.S. Shirts-** Using Tables, Graphs, and Equations **(2 days)** ● **Lesson 2: At the Arcade-** Linear Relationships in Tables **(2 days)** ● **Lesson 3: Dining, Dancing, and Driving-**Linear Relationships in Contexts **(1 day)** ● **Lesson 4: Derby Day-** Slope-Intercept Form of a Line **(2 days)** ● **Lesson 5: What's the Point-** Point-Slope Form of a Line **(2 days- (5-1 optional))** ● **Lesson 6: The Arts Are Alive-** Using Linear Equations **(1 day (6-1 only))**	**8.EE.5 8.EE.6** **8.G.1a 8.G.1c** ――――― **8.F.4**	**Level 3:** ―――――――――――――― **Level 3:**

Topic 3: Introductions to Functions
- **Lesson 1: Patterns, Sequences, Rules...-** Analyzing Sequences as Rules **(1 day)**
- **Lesson 2: Once Upon a Graph-** Analyzing Characteristics of Graphs of Relationships **(3 days)**
- **Lesson 3: One or More Xs to One Y-** Defining Functional Relationships **(3 days)**
- **Lesson 4: Over the River and Through the Woods-** Describing Functions **(2 days)**
- **Lesson 5: Comparing Apples to Oranges-** Comparing Functions using Different Representations **(1 day)**

8.F.1
8.F.2
8.F.3
8.F.4
8.F.5

Level 3:

Topic 4: Patterns in Bivariate Data
- **Lesson 1: Pass the Squeeze** Analyzing Patterns in Scatter Plots **(2 days)**
- **Lesson 2: Where Do You Buy Your Books?-** Drawing Lines of Best Fit **(2 days)**
- **Lesson 3: Mia Is Growing Like a Weed-** Analyzing Lines of Best Fit **(2 days)**
- **Lesson 4: The Stroop Test-** Comparing Slopes and Intercepts of Data from Experiments **(1 day)**
- **Lesson 5: Would You Rather..? -** Patterns of Association in Two-Way Table **(1 day)**

8.SP.1
8.SP.2
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8.SP.4

Module 3: Modeling Linear Equations **Total Days** Instruction: 14 days Mathia: 9 days	**Topic 1: Solving Linear Equations** ● **Lesson 1: Strategic Solving-** Equations with Variables on Both Sides **(3 days)** ● **Lesson 2: MP3s and DVDs-** Analyzing and Solving Linear Equations **(2 days)** ● **Lesson 3: Tic-Tac-Bingo-** Creating Linear Equations **(2 days)**	8.EE.7a 8.EE.7b	Level 3:
	Topic 2: Systems of Linear Equations ● **Lesson 1: Crossing Paths-** Point of Intersection of Linear Graphs **(2 days)** ● **Lesson 2: The Road Less Traveled-** Systems of Linear Equations **(2 days)** ● **Lesson 3: The County Fair-** Using Substitution to Solve Linear Systems **(3 days)** ● **Lesson 4: Rockin' Roller Rinks-** Choosing a Method to Solve a Linear System **(optional)**	8.EE.8a 8.EE.8b 8.EE.8c	Level 3:
Module 4: Expanding Number Systems **Total Days** Instruction: 12 days Mathia: 9 days	**Topic 1: The Real Number System** ● **Lesson 1: So Many Numbers, So Little Time-** Number Sort **(1 day)** ● **Lesson 2: Rational Decisions-** Rational and Irrational Numbers **(2 days)** ● **Lesson 3: What Are Those?!-** The Real Numbers **(2 days)**	8.NS.1 8.NS.2 8.EE.2	Level 3:
	Topic 2: Pythagorean Theorem ● **Lesson 1: The Right Triangle Connection-** The Pythagorean Theorem **(3 days)** ● **Lesson 2: Can That Be Right?-** The Converse of the Pythagorean Theorem **(1 day)** ● **Lesson 3: Pythagoras Meets Descartes-** Distances in the Coordinate System **(1 day)** ● **Lesson 4: Catty Corner-** Side Lengths in Two and Three Dimensions **(2 days)**	8.EE.2 8.G.6 8.G.7 8.G.8	Level 3:

| Module 5: Applying Powers

Total Days
Instruction:
13 days
Mathia: 9 days | **Topic 1: Exponents and Scientific Notation**
● **Lesson 1: It's a Generational Thing-** Properties of Powers with Integer Exponents **(3 days)**
● **Lesson 2: Show What You Know-** Analyzing Properties of Powers **(2 days)**
● **Lesson 3: The Big and Small of It-** Scientific Notation **(1 day)**
● **Lesson 4: How Much Larger?** Operations with Scientific Notation **(3 days)** | **8.EE.1**
8.EE.3
8.EE.4 | **Level 3:** |
| | **Topic 2: Volume of Curved Figures**
● **Lesson 1: Drum Roll, Please!-** Volume of a Cylinder **(1 day)**
● **Lesson 2: Cone of Silence-** Volume of a Cone **(1 day)**
● **Lesson 3: Pulled in All Directions-** Volume of a Sphere **(1 day)**
● **Lesson 4: Silos, Frozen Yogurt, and Popcorn-** Volume Problems with Cylinders, Cones and Spheres. **(1 day)** | **8.G.9** | **Level 3:** |