

David E. Owens – Math Department

Department Philosophy: Here at DEOMS, we take a problem centered approach to the teaching and learning of mathematics. We focus on big ideas and the connections among them in a real world context. We continually assess to drive instruction. Using the Connected Mathematics Program materials, we explore mathematical concepts in an engaging student centered manner.

Units of Study

	6 th Grade	7 th Grade	8 th Grade
Unit 1	Factors/Multiples -Prime/Composite -GCF (Greatest Common Factor)/LCM (Least Common Multiple) -Square Numbers -Factorization -Distributive Property	Accentuate the Negative – Students extend the number system to include rational numbers (positive and negative integers, fractions, and decimals) and develop algorithms for adding, subtracting, multiplying, and dividing rational numbers.	Thinking With Mathematical Models- This Unit introduces and develops the concept of linear and inverse mathematical models and their applications in problem solving.
Unit 2	Fractions/Ratios -Equivalencies -Integers -Mixed Numbers -Percents -Fraction/Decimal/Percent	Stretching and Shrinking/Comparing and Scaling – Students understand what it means for figures to be similar and develop strategies for using similar figures to solve problems; utilize proportional reasoning to solve problems.	Looking for Pythagoras- This Unit introduces the students to the discovery of the Pythagorean relationship through an exploration of squares drawn on the sides of a right triangle. Students apply the Pythagorean Theorem to a variety of problems.
Unit 3	Estimation -Adding/Subtracting -Fractions/Mixed Numbers -Multiplying/Dividing Fractions/Mixed Numbers -Fact Families	Moving Straight Ahead – Students explore properties of linearity; utilize multiple representations of linearity to understand and solve problems.	Growing, Growing, Growing- This Unit continues the discussion of nonlinear functions by examining exponential functions. Students investigate exponential growth and exponential decay applications.

<p>Unit 4</p>	<p>Data Tables</p> <p>-Graphs</p> <p>-Variables</p> <p>-Linear/Nonlinear Patterns</p> <p>-4 Quadrant Graphing</p> <p>-Solving Inequalities</p>	<p>What do you expect? /Samples and Populations– Students gain an understanding of experimental and theoretical probabilities and use these concepts for understanding sampling procedures in statistics.</p>	<p>Butterflies, Pinwheels and Wallpaper- This Unit develops student understanding of congruence and similarity of geometric figures, and the mathematical techniques for finding and applying those relationships of shapes.</p>
<p>Unit 5</p>	<p>Ratios/Rates/Decimals</p> <p>-Operations with Decimals</p> <p>-Computing Tips/ Tax</p> <p>-Place Value</p> <p>-Percent Discounts</p>	<p>Filing and Wrapping – Students develop an understanding of surface area and volume and strategies for calculating those measure.</p>	<p>Say It With Symbols- This Unit develops the understanding of using symbolic expressions to represent and reason about relationships. The students will write and interpret equivalent expressions, combine expressions to form new expressions, predict patterns of change represented by an equation or expression, and solve equations.</p>
<p>Unit 6</p>	<p>Area</p> <p>-Perimeter</p> <p>-Rectangles/Parallelograms</p> <p>-Volume</p> <p>-Surface Area</p>	<p>Shapes and Designs – Students extend their understandings of two dimensional geometry including shapes, angles, and rotations.</p>	<p>It's in the System- This Unit develops student understanding of the methods in which systems of equations and inequalities with two variables can be used to model problem situations. The students will develop skills in the graphic and symbolic methods needed to solve those systems.</p>