OSSD Scope & Sequence: Course 3

Scope & Sequence (S&S) is an overview of the skills and content covered in your curriculum at each class/instructional level. It provides an overview of the length of time (scope) and the order (sequence) in which key content will be taught.

Grade Level(s): 8
Content Area and/or Course Title: Math 8

Unit Title	Time/Term	Focus Standards and Unit Outcomes
		Standards from the Vermont Content Areas: Mathematics as delivered by Carnegie Learning. ***Essential Standards are indicated in blue font.***
Transforming Geometric Objects	**Sept - Nov (~8 Weeks)**	Students use patty paper to investigate transformations of geometric objects. These investigations lead to an understanding of congruence and similarity. Students use this new knowledge about transformations to establish facts about triangles and relationships between special angle pairs. **8.G.1a, 8.G.1b, 8.G.1c, 8.G.2, 8.G.3, 8.G.4 8.G.5** Assessments: ● Geometric Transformations Assessment ● Line and Angle Relationships Assessment
Modeling Linear Relationships	**Nov - Feb (~12 Weeks)**	Students connect their prior knowledge of proportional relationships with linear equations and transformations. They model linear relationships using graphs and equations and discuss the advantages of each form of a linear equation. Students analyze and solve pairs of simultaneous linear equations. **8.EE.5, 8.EE.6, 8.G.1a, 8.G.1c, 8.F.3, 8.F.4, 8.EE.7, 8.EE.7a, 8.EE.7b, 8.EE.7c, 8.EE.8, 8.EE.8a, 8.EE.8b,**

		8.EE.8c Assessments: ● Solving Linear Equations Assessment ● Dueling T-Shirts Projects ● Stained Glass Window Performance Task ● Derby Day Performance Task ● Systems of Equations Assessment
Developing Functions Foundations	**Feb - March (~6 Weeks)**	Students define, identify, and compare functions using multiple representations. Students determine, construct, and analyze lines of best fit for scatter plots. **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** Assessments: ● Introduction to Functions Assessment ● Comparing Functions Performance Task ● Patterns in Bivariate Data Assessment
Expanding the Number Systems	**April - May (~6 Weeks)**	Students learn about irrational numbers and estimate square and cube roots. They explain proofs of the Pythagorean Theorem and its converse and use the theorems to solve problems off and on on the coordinate plane. **8.NS.1, 8.NS.2, 8.EE.2, 8.EE.7b, 8.G.6, 8.G.7, 8.G.8** Assessments: ● Pythagorean Theorem Assessment
Applying Powers	**May - June (~6 Weeks)**	Students develop and apply the Properties of Powers to rewrite expressions. They write and operate with numbers in scientific notation. Students develop and apply volume formulas of cylinders, cones, and spheres. **8.EE.1, 8.EE.3, 8.EE.4 8.G.9, 8.G.C.9**