

## Avon School Mathematics Curriculum

### Grade 8

#### Curriculum Overview

*In grade 8, 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.*

The topics within this map are color coded to display the domains in which they correlate:

*Ratios and Proportional Relationships (embedded in units 3, 4, and 5)*

*The Number System*

*Expressions and Equations*

*Geometry*

*Statistics and Probability*

*Reference: New Jersey Department of Education. New Jersey Student Learning Standards, 2016.*

*Reference: New Jersey Department of Education Division of Teaching and Learning. Curricular Framework, 2016.*

| Topic Title   | Timeframe           | New Jersey Student Learning Standards   |
|---|---------------------|---|
| Week 0 - Ready Math   | First Week          | 6.NS.C.8, 6.G.A.3, 7.G.A.2  |
| Rigid Transformations and Congruence                              | September - October | 8.G.A.1, 8.G.A.1a, 8.G.A.1b, 8.G.A.1c, 8.G.A.3, 8.G.A.2                                       |
| Transformations, Similarity, and Angle Relationships              | November            | 8.G.A.3, 8.G.A.4, 8.G.A.5   |
| Slope, Linear Equations, and Systems                              | December - January  | 8.EE.B.5, 8.EE.B.6, 8.EE.C.7, 8.EE.C.7a, 8.EE.C.7b, 8.EE.C.8, 8.EE.C.8a, 8.EE.C.8b, 8.EE.C.8c |
| Linear and Nonlinear Relationships                                | February - March    | 8.F.A.1, 8.F.A.2, 8.F.A.3, 8.F.B.4, 8.F.B.5, 8.EE.B.5   |
| Properties and Scientific Notation                                | March - April       | 8.EE.A.1, 8.EE.A.3, 8.EE.A.4  |
| Rational Numbers, Irrational Numbers, and the Pythagorean Theorem | April - May         | 8.EE.A.2, 8.G.B.6, 8.G.B.7, 8.G.B.8, 8.G.C.9, 8.NS.A.1, 8.NS.A.2                              |
| Two-Variable Data and Fitting a Linear Model                      | June                | 8.SP.A.1, 8.SP.A.2, 8.SP.A.3, 8.SP.A.4  |