Math 7 Course Overview:

In Grade 7, instructional time should focus on four critical areas: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface are, and volume; and (4) drawing inferences about populations based on samples.

(1) Students extend their understanding of ratios and develop understanding of proportionality to solve single- and multi-step problems. Students use their understanding of ratios and proportionality to solve a wide variety of percent problems, including those involving discounts, interest, taxes, tips, and percent increase or decrease. Students solve problems about scale drawings by relating corresponding lengths within an abject are preserved in similar objects. Students graph proportional relationships and understand the unit rate informally as a measure of the steepness of the related line, called the slope. They distinguish proportional relationships from other relationships.	(2) Students develop a unified understanding of number, recognizing fractions, decimals (that have a finite or repeating decimal representation), and percents as different representations of rational numbers. Students extend addition, subtraction, multiplication and division to all rational numbers, maintaining the properties of operations and the relationships between addition and subtraction, and multiplication and division. By applying these properties, and by viewing negative numbers in terms of everyday contexts (e.g., amounts owed or temperatures below zero), students explain and interpret the rules for adding, subtracting, multiplying, and dividing with negative numbers. They use the arithmetic of rational numbers as they formulate expressions and equations in one variable and use these equations to solve problems.	(3) Students continue their work with area from Grade 6, solving problems involving the area and circumference of a circle and surface area of three-dimensional objects. In preparation for work on congruence and similarity in Grade 8 they reason about relationships among two-dimensional figures using scale drawings and informal geometric constructions, and they gain familiarity with the relationships between angles formed by intersecting lines. Students work with three-dimensional figures, relating them to two –dimensional figures by examining cross-sections. They solve real-world and mathematical problems involving area, surface area, and volume of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	(4) Students build on their previous work with single data distributions to compare two data distributions and address questions about differences between populations. They begin informal work with random sampling to generate data sets and learn about the importance of representative samples for drawing inferences.

Mercer MS Math 7 Scope and Sequence Year at a Glance

Unit of Study	Length of Unit	Time Frame (suggested dates)
Unit 1: Ratios and Proportional Relationships	25 - 30 days	September 15- October 23 Interim Assessment #1 – Oct. 22
Unit 2: Number Sense	25 - 30 days	October 26- December 18 Interim Assessment #2 – Dec. 16
Unit 3: Expressions and Equations	30 - 35 days	January 4- March 1 Interim Assessment #3 – Feb. 29
Unit 4: Percents and Proportional Relationships	22 days	March 2- April 1
Unit 5: Probability	17 days	April 4- May 3 Interim Assessment #4 – May 2
Unit 6: Data and Statistics	11 days	May 13 – May 27 ??SBA for Math 7 – Week of May 16
Unit 7: Geometry	12 days	May 31- June 17

Mercer MS Math 7 Scope and Sequence Year at a Glance

Unit 1	Unit	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
Ratios and Proportional Relationships	Number Systems	Expressions and Equations	Ratios and Percents	Probability	Data and Statistics	Geometry
25 - 30 **days**	25 - 30 **days**	30 - 35 **days**	22 **days**	17 **days**	11 **days**	12 **days**
7.RP.1	7.NS.1a	7.EE.1	7.RP.3	7.SP.5	7.SP.1	7.G.1
7.RP.2a	7.NS.1b	7.EE.2	7.NS.2a	7.SP.6	7.SP.2	7.G.2
7.RP.2b	7.NS.1c	7.EE.3	7.NS.2c	7.SP.7a	7.SP.3	7.G.3
7.RP.2c	7.NS.2a	7.EE.4a	7.EE.2	7.SP.7b	7.SP.4	7.G.4
7.RP.2d	7.NS.2b	7.EE.4b	7.G.1	7.SP.8a		7.G.5
7.G.1	7.NS.2c	7.G.4	7.SP.1	7.SP.8b	SMP 2	7.G.6
	7.NS.2d	7.G.5		7.SP.8c	SMP 3	7.EE.3
SMP 2	7.NS.3		SMP 1		SMP 4	7.EE.4a
SMP 4	7.EE.1	SMP 1	SMP 2	SMP 2	SMP 5	
SMP 5		SMP 3	SMP 4	SMP 3		SMP 3
SMP 8	SMP 1	SMP 7	SMP 6	SMP 4		SMP 7
	SMP 4			SMP 5		SMP 8
	SMP 6					
	SMP 7					

Note: Within each unit, the standards are listed in the order in which they appear in the Common Core State Standards. This does not indicate a teaching order. The unit plan should sequence the learning of the standards to be most advantageous to student learning.