GRADE 3 MATH

EUREKA SCOPE AND SEQUENCE CHART

Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7
Properties of Multiplication and Division and Solving Problems	Place Value and Problem Solving with Units of Measure	Multiplication and Division and Solving Problems with Units of 0, 1, 6-9, and Multiples of 10	Multiplication and Area	Fractions as Numbers on a Number Line	Collecting and Displaying Data	Geometry and Measurement
Approximately 7 Weeks	Approximately 4 Weeks	Approximately 5 Weeks	Approximately 4 Weeks	Approximately 9 Weeks	Approximately 2 Weeks	Approximately 5 Weeks
MGSE3.OA.1*	MGSE3.NBT.1*	MGSE3.OA.3*	MGSE3.MD.5*	MGSE3.NF.1*	MGSE3.MD.3	MGSE3.OA.8*
MGSE3.OA.2*	MGSE3.NBT.2*	MGSE3.OA.4*	MGSE3.MD.6*	MGSE3.NF.2*	MGSE3.MD.4	MGSE3.MD.4
MGSE3.OA.3*	MGSE3.MD.1	MGSE3.OA.5*	MGSE3.MD.7*	MGSE3.NF.3*		MGSE3.MD.8
MGSE3.OA.4*	MGSE3.MD.2	MGSE3.OA.6*		MGSE3.G.2		MGSE3.G.1
MGSE3.OA.5*		MGSE3.OA.7*				
MGSE3.OA.6*		MGSE3.OA.8*				
MGSE3.OA.7*		MGSE3.OA.9				
MGSE3.OA.8*		MGSE3.NBT.3				

Key: G= Geometry, MD=Measurement and Data, NBT= Number and Operations in Base Ten, NF = Number and Operations, Fractions, OA = Operations and Algebraic Thinking

***Prioritized Standards: Grade level standards of highest priority have been identified. Pacing has been modified to allow sufficient time for in-depth instruction and practice.**

Supporting Standards: Key concepts and skills, from these grade level standards, will be used to support the Prioritized Standards.

SCOPE AND SEQUENCE CHART

Module Name	Module Description	Georgia Standards of Excellence	Module Duration
Module 1 **Properties of Multiplication and Division**	**In this module, students will be able to:** **Topic A:** Multiplication and the Meaning of the Factors **Topic B:** Division as an Unknown Factor Problem **Topic C:** Multiplication Using Units of 2 and 3 **Topic D:** Division Using Units of 2 and 3 **Topic E:** Multiplication and Division Using Units of 4 **Topic F:** Distributive Property and Problem Solving Using Units of 2–5 and 10	**Represent and solve problems involving multiplication and division.** **MGSE3.OA.1** Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as* 5 x 7. **MGSE3.OA.2** Interpret whole number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares (How many in each group?), or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each (How many groups can you make?). *For example, describe a context in which a number of shares or a number of groups can be expressed as* 56 ÷ 8. **MGSE3.OA.3** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, *for example,*	**Approximately 7 Weeks**

		by using drawings and equations with a symbol for the unknown number to represent the problem. **MGSE3.OA.4** Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 x ? = 48, 5 = _ ÷ 3, 6 x 6 = ? **Understand properties of multiplication and the relationship between multiplication and division.** **MGSE3.OA.5** Apply properties of operations as strategies to multiply and divide.13 Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.) **MGSE3.OA.6** Understand division as an unknown-factor problem. For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.	

		Multiply and divide within 100. **MGSE3.OA.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. **Solve problems involving the four operations, and identify and explain patterns in arithmetic.** **MGSE3.OA.8** Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. *This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order where there are no parentheses to specify a particular order (Order of Operations).*	

Module 2 **Place Value and Problem Solving with Units of Measure**	**In this Module, students will be able to:** **Topic A:** Time Measurement and Problem Solving **Topic B:** Measuring Weight and Liquid Volume in Metric Units **Topic C:** Rounding to the Nearest Ten and Hundred **Topic D:** Two- and Three-Digit Measurement Addition Using the Standard Algorithm **Topic E:** Two- and Three-Digit Measurement Subtraction Using the Standard Algorithm	**Use place value understanding and properties of operations to perform multi-digit arithmetic.** **MGSE3.NBT.1** Use place value understanding to round whole numbers to the nearest 10 or 100. **MGSE3.NBT.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. **Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects**. **MGSE3.MD.1** Tell and write time to the nearest minute and measure elapsed time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram, drawing a pictorial representation on a clock face, etc. **MGSE3.MD.2** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters	**Approximately 4 Weeks**

		(l).[5] Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (Combine lessons in order to reduce the amount of time spent on time, volume, and mass. Reduce the amount of required student practice.)	
Module 3 **Multiplication and Division with Units of 0, 1, 6-9, and Multiples of 10**	**In this module students will be able to:** **Topic A:** The Properties of Multiplication and Division **Topic B:** Multiplication and Division Using Units of 6 and 7 **Topic C:** Multiplication and Division Using Units up to 8 **Topic D:** Multiplication and Division Using Units of 9 **Topic E:** Analysis of Patterns and Problem Solving Including Units of 0 and 1 **Topic F:** Multiplication of Single-Digit Factors and Multiples of 10	**Represent and solve problems involving multiplication and division.** **MGSE3.OA.3** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, *for example, by using drawings and equations with a symbol for the unknown number to represent the problem.* **MGSE3.OA.4** Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 x ? = 48, 5 = _ ÷ 3, 6 x 6 = ?	**Approximately 5 Weeks**

		Understand properties of multiplication and the relationship between multiplication and division. **MGSE3.OA.5** Apply properties of operations as strategies to multiply and divide.13 Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.) **Multiply and divide within 100.** **MGSE3.OA.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. **Solve problems involving the four operations, and identify and explain patterns in arithmetic.**	

		MGSE3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. *This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order where there are no parentheses to specify a particular order (Order of Operations).* **MGSE3.OA.9** Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.* **Use place value understanding and properties of operations to perform multi-digit arithmetic.** **MGSE3.NBT.3** Multiply one-digit whole numbers by multiples of 10 in the range 10–90. numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.	

Module 4 **Multiplication and Area**	**In this module students will be able to:** **Topic A:** Foundations for Understanding Area **Topic B:** Concepts of Area Measurement **Topic C:** Arithmetic Properties Using Area Models **Topic D:** Applications of Area Using Side Lengths of Figures	**Geometric Measurement: understand concepts of area and relate area to multiplication and to addition.** **MGSE3.MD.5** Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units. **MGSE3.MD.6** Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units). **MGSE3.MD.7** Relate area to the operations of multiplication and addition. a. Find the area of a rectangle with whole-number side lengths by tiling	**Approximately 4 Weeks**

		it, and show that the area is the same as would be found by multiplying the side lengths. b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. c. Whole-number side lengths a and b + c is the sum of a × b and a × c. Use area models to represent the distributive property in mathematical reasoning.	
Module 5 Fractions as Numbers on a Number Line	**In this module students will be able to:** **Topic A:** Partitioning a Whole into Equal Parts **Topic B:** Unit Fractions and Their Relation to the Whole **Topic C:** Comparing Unit Fractions and Specifying the Whole **Topic D:** Fractions on the Number Line **Topic E:** Equivalent Fractions	**Develop understanding of fractions as numbers.** **MGSE3.NF.1** Understand a fraction $1b$ as the quantity formed by 1 part when a whole is partitioned into *b* equal parts (unit fraction); understand a fraction ab as the quantity formed by *a* parts of size $1b$. *For example,* 3/4 *means there are three* 1/4 *parts, so* 3/4 = 1/4 + 1/4 + 1/4**.**	**Approximately 9 Weeks**

	Topic F: Comparison, Order, and Size of Fractions	**MGSE3.NF.2** Understand a fraction as a number on the number line; represent fractions on a number line diagram. a. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size $1/b$. Recognize that a unit fraction $1/b$ is located $1/b$ whole unit from 0 on the number line. b. Represent a non-unit fraction a/b on a number line diagram by marking off a lengths of $1/b$ (unit fractions) from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the non-unit fraction a/b on the number line. **MGSE3.NF.3** Explain equivalence of fractions through reasoning with visual fraction models. Compare fractions by reasoning about their size. a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	

		b. Recognize and generate simple equivalent fractions with denominators of 2, 3, 4, 6, and 8, e.g., 1/2 = 2/4, 4/6 = 2/3. Explain why the fractions are equivalent, e.g., by using a visual fraction model. *c.* Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3 =* 6/2 *(3 wholes is equal to six halves); recognize that* 3/1 *= 3; locate* 4/4 *and 1 at the same point of a number line diagram.* d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	

		Reason with shapes and their attributes. **MGSE3.G.2** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as ¼ of the area of the shape.*	
Module 6 Collecting and Displaying Data	**In this module students will be able to:** **Topic A:** Generate and Analyze Categorical Data **Topic B:** Generate and Analyze Measurement Data	**Represent and interpret data.** **MGSE3.MD.3** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.* (Eliminate lessons on creating scaled graphs. Integrate a few problems with scaled graphs only as settings for multiplication word problems (3.OA.A.3) and two-step word problems (3.OA.8).) **MGSE3.MD.4** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the	**Approximately 2 Weeks**

		horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters . (Eliminate any lessons or problems that do not strongly reinforce the fraction work of this grade (3.NF.A). Incorporate foundational work measuring with rulers (2.MD.A) to support entry into generating fractional measurement data in grade 3.)	
Module 7 **Geometry and Measurement Word Problems**	**In this module students will be able to:** **Topic A**: Solving Word Problems **Topic B:** Attributes of Two-Dimensional Figures **Topic C:** Problem Solving with Perimeter **Topic D:** Recording Perimeter and Area Data on Line Plots **Topic E:** Problem Solving with Perimeter and Area **Topic F:** Year in Review	**Solve problems involving the four operations, and identify and explain patterns in arithmetic.** **MGSE3.OA.8** Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. **Represent and interpret data.** **MGSE3.MD.4** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the	**Approximately 5 Weeks**

		horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters. (Eliminate any lessons or problems that do not strongly reinforce the fraction work of this grade (3.NF.A). Incorporate foundational work measuring with rulers (2.MD.A) to support entry into generating fractional measurement data in grade 3.) **Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.** **MGSE3.MD.8** Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. (Integrate a few problems on perimeter into work on area (3.MD.C).)	

		Reason with shapes and their attributes. **MGSE3.G.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. (Combine lessons on shapes and their attributes in order to reduce the amount of time spent on this standard)	