

EUREKA SCOPE AND SEQUENCE CHART

Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7
Place Value, Rounding, and Algorithms for Addition and Subtraction	Unit Conversions and Problem Solving with Metric Measurement	Multi-Digit Multiplication and Division	Angle Measurement and Plane Figures	Fraction Equivalence, Ordering, and Operations	Decimal Fractions	Exploring Multiplication
Approximately 6 Weeks	Approximately 1 Week	Approximately 9 Weeks	Approximately 3 Weeks	Approximately 9 Weeks	Approximately 3 Weeks	Approximately 5 Weeks
MGSE4.NBT.1*	MGSE4.MD.1*	MGSE4.OA.1	MGSE4.MD.5*	MGSE4.OA.5	MGSE4.NF.5*	MGSE4.OA.1
MGSE4.NBT.2*	MGSE4.MD.2*	MGSE4.OA.2*	MGSE4.MD.6	MGSE4.NF.1*	MGSE4.NF.6	MGSE4.OA.2*
MGSE4.NBT.3*		MGSE4.OA.3*	MGSE4.MD.7	MGSE4.NF.2*	MGSE4.NF.7*	MGSE4.OA.3*
MGSE4.NBT.4*		MGSE4.OA.4	MGSE4.MD.8	MGSE4.NF.3*	MGSE4.MD.2*	MGSE4.MD.1*
MGSE4.OA.3*		MGSE4.NBT.5*	MGSE4.G.1	MGSE4.NF.4*		MGSE4.MD.2*
		MGSE4.NBT.6*	MGSE4.G.2*	MGSE4.MD.4		
		MGSE4.MD.3*	MGSE4.G.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.

Module Name	Module Description	Georgia Standards of Excellence	Module Duration
<p>Module 1</p> <p>Place Value, Rounding, and Algorithms for Addition and Subtraction</p>	<p>In this module students will:</p> <p>Topic A: Place Value of Multi-Digit Whole Numbers</p> <p>Topic B: Comparing Multi-Digit Whole Numbers</p> <p>Topic C: Rounding Multi-Digit Whole Numbers</p> <p>Topic D: Multi-Digit Whole Number Addition</p> <p>Topic E: Multi-Digit Whole Number Subtraction</p> <p>Topic F: Addition and Subtraction Word Problems</p>	<p><u>Generalize place value understanding for multi-digit whole numbers.</u></p> <p>MGSE4.NBT.1 Recognize that in a multi-digit whole number, a digit in any one place represents ten times what it represents in the place to its right. For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.</p> <p>MGSE4.NBT.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p> <p>MGSE4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place.</p> <p><u>Use place value understanding and properties of operations to perform multi-digit arithmetic.</u></p> <p>MGSE4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.</p> <p><u>Use place value understanding and properties of operations to perform multi-digit arithmetic.</u></p> <p>MGSE4.OA.3 Solve multistep word problems with whole numbers and having whole-number answers using the four</p>	<p>Approximately 6 Weeks</p>

		operations, including problems in which remainders must be interpreted. Represent these problems using equations with a symbol or letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	
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<p>Module 2</p> <p>Unit Conversions and Problem Solving with Metric Measurement</p>	<p>In this module students will:</p> <p>Topic A: Metric Unit Conversions</p> <p>Topic B: Application of Metric Unit Conversions</p>	<p><u>Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.</u></p> <p>MGSE4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr., min, sec.</p> <p>a. Understand the relationship between gallons, cups, quarts, and pints.</p> <p>b. Express larger units in terms of smaller units within the same measurement system.</p> <p>c. Record measurement equivalents in a two-column table.</p> <p>MGSE4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.</p>	<p>Approximately 1 Week</p>
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<p style="text-align: center;">Module 3</p> <p style="text-align: center;">Multi-Digit Multiplication and Division</p>	<p>Topic A: Multiplicative Comparison Word Problems</p> <p>Topic B: Multiplication by 10, 100, and 1,000</p> <p>Topic C: Multiplication of up to Four Digits by Single-Digit Numbers</p> <p>Topic D: Multiplication Word Problems</p> <p>Topic E: Division of Tens and Ones with Successive Remainders</p> <p>Topic F: Reasoning with Divisibility</p> <p>Topic G: Division of Thousands, Hundreds, Tens, and Ones</p> <p>Topic H: Multiplication of Two-Digit by Two-Digit Numbers</p>	<p><u>Use the four operations with whole numbers to solve problems.</u></p> <p>MGSE4.OA.1 Understand that a multiplicative comparison is a situation in which one quantity is multiplied by a specified number to get another quantity.</p> <ol style="list-style-type: none"> a. Interpret a multiplication equation as a comparison e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. b. Represent verbal statements of multiplicative comparisons as multiplication sentences. <p>MGSE4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison. Use drawings and equations with a symbol or letter for the unknown number</p> <p><u>Use place value understanding and properties of operations to perform multi-digit arithmetic.</u></p> <p>MGSE4.OA.3 Solve multistep word problems with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a symbol or letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding</p> <p><u>Gain familiarity with factors and multiples.</u></p> <p>MGSE4.OA.4 Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit</p>	<p style="text-align: center;">Approximately 9 Weeks</p>
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number. Determine whether a given whole number in the range 1-100 is prime or composite.

Use place value understanding and properties of operations to perform multi-digit arithmetic.

MGSE4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

MGSE4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

MGSE4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.

<p>Module 4</p> <p>Angle Measure and Plane Figures</p>	<p>In this module students will:</p> <p>Topic A: Lines and Angles</p> <p>Topic B: Angle Measurement</p> <p>Topic C: Problem Solving with the Addition of Angle Measures</p> <p>Topic D: Two-Dimensional Figures and Symmetry</p>	<p><u>Geometric Measurement: understand concepts of angle and measure angles.</u></p> <p>MGSE4.MD.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:</p> <ol style="list-style-type: none"> a) An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a “one-degree angle,” and can be used to measure angles. b) An angle that turns through n one-degree angles is said to have an angle measure of n degrees. <p>MGSE4.MD.6 Measure angles in whole number degrees using a protractor. Sketch angles of specified measure.</p> <p>MGSE4.MD.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol or letter for the unknown angle measure.</p> <p>MGSE4.MD.8 Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.</p>	<p>Approximately 3 Weeks</p>
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<p>Module 5</p> <p>Fraction Equivalence, Ordering, and Operations</p>	<p>In this module students will:</p> <p>Topic A: Decomposition and Fraction Equivalence</p> <p>Topic B: Fraction Equivalence Using Multiplication and Division</p> <p>Topic C: Fraction Comparison</p>	<p><u>Extend understanding of fraction equivalence and ordering.</u></p> <p>MGSE5.NF.1 Add and subtract fractions and mixed numbers with unlike denominators by finding a common denominator and equivalent fractions to produce like denominators.</p> <p>MGSE4.NF.2 Compare two fractions with different numerators and different denominators, e.g., by using visual</p>	<p>Approximately 9 Weeks</p>

	<p>Topic D: Fraction Addition and Subtraction</p> <p>Topic E: Extending Fraction Equivalence to Fractions Greater Than 1</p> <p>Topic F: Addition and Subtraction of Fractions by Decomposition</p> <p>Topic G: Repeated Addition of Fractions as Multiplication</p> <p>Topic H: Exploring a Fraction Pattern</p>	<p>fraction models, by creating common denominators or numerators, or by comparing to a benchmark fraction such as $\frac{1}{2}$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions.</p> <p><u>Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</u></p> <p>MGSE4.NF.3 Understand a fraction $\frac{a}{b}$ with a numerator $>$ 1 as a sum of unit fractions $\frac{1}{b}$.</p> <ol style="list-style-type: none"> Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$; $\frac{3}{8} = \frac{1}{8} + \frac{2}{8}$; $2\frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem. 	
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MGSE4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number e.g., by using a visual such as a number line or area model.

- a) Understand a fraction a/b as a multiple of $1/b$. For example, use a visual fraction model to represent $5/4$ as the product $5 \times (1/4)$, recording the conclusion by the equation $5/4 = 5 \times (1/4)$.
- b) Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express $3 \times (2/5)$ as $6 \times (1/5)$, recognizing this product as $6/5$. (In general, $n \times (a/b) = (n \times a)/b$.)
- c) Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat $3/8$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?

Generate and analyze patterns.

MGSE5.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. Explain informally why the pattern will continue to develop in this way. *For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers.*

Represent and interpret data.

		<p>MGSE5.MD.4 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions with common denominators by using information presented in line plots. <i>For example, from a line plot, find and interpret the difference in length between the longest and shortest specimens in an insect collection.</i></p>	
<p>Module 6</p> <p>Decimal Fractions</p>	<p>In this module students will:</p> <p>Topic A: Exploration of Tenths</p> <p>Topic B: Tenths and Hundredths</p> <p>Topic C: Decimal Comparison</p> <p>Topic D: Addition with Tenths and Hundredths</p> <p>Topic E: Money Amounts as Decimal Numbers</p>	<p><u>Understand decimal notation for fractions, and compare decimal fractions.</u></p> <p>MGSE4.NF.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.22 For example, express $\frac{3}{10}$ as $\frac{30}{100}$, and add $\frac{3}{10} + \frac{4}{100} = \frac{34}{100}$.</p> <p>MGSE4.NF.6 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as $\frac{62}{100}$; describe a length as 0.62 meters; locate 0.62 on a number line diagram.</p> <p>MGSE4.NF.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual model.</p>	<p>Approximately 3 weeks</p>

		<p><u>Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.</u></p> <p>MGSE4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.</p>	
<p>Module 7</p> <p>Exploring Multiplication</p>	<p>In this module students will:</p> <p>Topic A: Measurement Conversion Tables</p> <p>Topic B: Problem Solving with Measurement</p> <p>Topic C: Investigation of Measurements Expressed as Mixed Numbers</p> <p>Topic D: Year in Review</p>	<p><u>Use the four operations with whole numbers to solve problems.</u></p> <p>MGSE4.OA.1 Understand that a multiplicative comparison is a situation in which one quantity is multiplied by a specified number to get another quantity.</p> <ol style="list-style-type: none"> Interpret a multiplication equation as a comparison e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication sentences. <p>MGSE4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison. Use drawings and equations with a symbol or letter for the unknown number</p>	<p>Approximately 5 weeks</p>

Use place value understanding and properties of operations to perform multi-digit arithmetic.

MGSE4.OA.3 Solve multistep word problems with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a symbol or letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

MGSE4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr., min, sec.

- a. Understand the relationship between gallons, cups, quarts, and pints.
- b. Express larger units in terms of smaller units within the same measurement system.
- c. Record measurement equivalents in a two-column table.

MGSE4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.