Elementary School Teaching and Learning

2022-2023 Scope and Sequence

Mathematics – Grade 3

FIRST NINE WEEKS	OVERVIEW
	In module 1, students relate repeated addition, equal groups, and arrays to multiplication and division. With a focus on units of 2, 3, 4, 5, and 10, students use the commutative and distributive properties as strategies to multiply, and they write expressions with three factors as a foundation of the associative property. Students express division as both unknown factor problems and division equations and break apart and distribute the total to divide. They use their understanding of multiplication and division concepts to reason about and solve one- and two-step word problems. In module 2, students compose and decompose customary measurement units. They use place value understanding and the vertical number line to round two- and three-digit numbers. Students also add and subtract two- and three-digit numbers within 1,000 by using a variety of strategies, including the standard algorithm.
ASSESSMENTS	
ASSESSMENT WINDOW	**ASSESSMENT NAME**
September 6- October 4	Aims Web+ Beginning of the Year

*Please see the assessment description at the bottom of this document.

UNIT	UNIT DURATION	PARENT/FAMILY RESOURCES	NORTH CAROLINA STANDARDS
Module 1 Multiplication and Division with Units of 2, 3, 4, and 10	23 lessons	Family Math Mod. 1	NC.3.OA.1 For products of whole numbers with two factors up to and including 10: • Interpret the factors as representing the number of equal groups and the number of objects in each group. • Illustrate and explain strategies including arrays, repeated addition, decomposing a factor, and applying the commutative and associative properties. NC.3.OA.2 For whole-number quotients of whole numbers with a one-digit divisor and a one-digit quotient: • Interpret the divisor and quotient in a division equation as representing the number of equal groups and the number of objects in each group. • Illustrate and explain strategies including arrays, repeated addition or subtraction, and decomposing a factor. NC.3.OA.3 Represent, interpret, and solve one-step problems involving multiplication and division. • Solve multiplication word problems with factors up to and including 10. Represent the problem using arrays, pictures, and/or equations with a symbol for the unknown number to represent the problem. • Solve division word problems with a divisor and quotient up to and including 10. Represent the problem using arrays, pictures, repeated subtraction and/or equations with a symbol for the unknown number to represent the problem.

			NC.3.OA.6 Solve an unknown-factor problem, by using division strategies and/or changing it to a multiplication problem.
Module 2 Place Value Concepts Through Measurement	25 Lessons	Family Math Mod. 2	NC.3.OA.3- Represent, interpret, and solve one-step problems involving multiplication and division. • Solve multiplication word problems with factors up to and including 10. Represent the problem using arrays, pictures, and/or equations with a symbol for the unknown number to represent the problem. • Solve division word problems with a divisor and quotient up to and including 10. Represent the problem using arrays, pictures, repeated subtraction and/or equations with a symbol for the unknown number to represent the problem. NC.3.NBT.2- Add and subtract whole numbers up to and including 1,000. • Use estimation strategies to assess reasonableness of answers. • Model and explain how the relationship between addition and subtraction can be applied to solve addition and subtraction problems. • Use expanded form to decompose numbers and then find sums and differences. NC.3.MD.2- Solve problems involving customary measurement. • Estimate and measure lengths in customary units to the quarter-inch and half-inch, and feet and yards to the whole unit. • Estimate and measure capacity and weight in customary units to a whole number: cups, pints, quarts, gallons, ounces, and pounds. • Add, subtract, multiply, or divide to solve one-step word problems involving whole number measurements of length, weight, and capacity in the same customary units. NC.3.MD.3- Represent and interpret scaled picture and bar graphs: • Collect data by asking a question that yields data in up to four categories. • Make a representation of data and interpret data in a frequency table, scaled picture graph, and/or scaled bar graph with axes provided. • Solve one and two-step “how many more” and “how many less” problems using information from these graph

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SECOND NINE WEEKS	OVERVIEW
	In module 3, students extend their learning of multiplication and division to units of 6, 7, 8, 9, 0, and 1 by applying conceptual understanding and by using the commutative, distributive, and associative properties, as applicable. They multiply with two-digit multiples of 10 and solve one- and two-step word problems involving the four operations.

ASSESSMENTS	
ASSESSMENT WINDOW	**ASSESSMENT NAME**
Close by December 9th	Check IN 1

UNIT	UNIT DURATION	PARENT/FAMILY RESOURCES	NORTH CAROLINA STANDARDS
Module 3 Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9	25 Lessons	Family Math Mod.3	NC.3.OA.1 For products of whole numbers with two factors up to and including 10: • Interpret the factors as representing the number of equal groups and the number of objects in each group. • Illustrate and explain strategies including arrays, repeated addition, decomposing a factor, and applying the commutative and associative properties. NC.3.OA.2 For whole-number quotients of whole numbers with a one-digit divisor and a one-digit quotient: • Interpret the divisor and quotient in a division equation as representing the number of equal groups and the number of objects in each group. • Illustrate and explain strategies including arrays, repeated addition or subtraction, and decomposing a factor. NC.3.OA.3 Represent, interpret, and solve one-step problems involving multiplication and division. • Solve multiplication word problems with factors up to and including 10. Represent the problem using arrays, pictures, and/or equations with a symbol for the unknown number to represent the problem. • Solve division word problems with a divisor and quotient up to and including 10. Represent the problem using arrays, pictures, repeated subtraction and/or equations with a symbol for the unknown number to represent the problem. NC.3.OA.6 Solve an unknown-factor problem, by using division strategies and/or changing it to a multiplication problem. NC.3.OA.8 Solve two-step word problems using addition, subtraction, and multiplication, representing problems using equations with a symbol for the unknown number. NC.3.OA.9 Interpret patterns of multiplication on a hundreds board and/or multiplication table. NC. NBT.3 Use concrete and pictorial models, based on place value and the properties of operations, to find the product of a one-digit whole number by a multiple of 10 in the range 10–90.

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THIRD NINE WEEKS	OVERVIEW
	In module 4, students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-sized square units required to cover the shape without gaps or overlaps. Students understand that rectangular arrays can be decomposed into identical rows or identical columns. They connect the number of rows and columns to the side lengths and then connect area to multiplication. Students use multiplication to determine the area of a rectangle and apply area concepts and strategies to mathematical and real-world problems. In module 5, students develop an understanding of fractions as numbers. They partition a whole into equal parts and recognize 1 of a fractional unit as a unit fraction. Students compose non-unit fractions from unit fractions and use visual fraction models and written fractions to represent parts of a whole. Students use fractions to represent numbers equal to, less than, and greater than 1. They compare fractions by using visual fraction models and by reasoning about the size of fractions that have the same numerator or denominator. Students identify equivalent fractions, and they apply fraction concepts by using rulers to measure to the nearest quarter inch.
ASSESSMENTS	
ASSESSMENT WINDOW	**ASSESSMENT NAME**
January 3- February 2	AimsWeb+ Middle of the Year
Close by February 16th	Check IN 2

UNIT	UNIT DURATION	PARENT/FAMILY RESOURCES	NORTH CAROLINA STANDARDS
Module 4 Multiplication and Area	19 lessons	Family Math Mod. 4	NC.3.MD.5-Find the area of a rectangle with whole-number side lengths by tiling without gaps or overlaps and counting unit squares. NC.3.MD.7-Relate area to the operations of multiplication and addition. • Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. • Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving problems, and represent whole-number products as rectangular areas in mathematical reasoning. • Use tiles and/or arrays to illustrate and explain that the area of a rectangle can be found by partitioning it into two smaller rectangles, and that the area of the large rectangle is the sum of the two smaller rectangles. NC.3.G.1- Reason with two-dimensional shapes and their attributes. • Investigate, describe, and reason about composing triangles and quadrilaterals and decomposing quadrilaterals. • Recognize and draw examples and non-examples of types of quadrilaterals including rhombuses, rectangles, squares, parallelograms, and trapezoids.
Module 5	27 lessons	Family Math Mod. 5	NC.3.NF.1- Interpret unit fractions with denominators of 2, 3, 4, 6, and 8 as quantities formed when a whole is partitioned into equal parts; • Explain that a unit fraction is one of those parts. • Represent and identify unit fractions using area and length models. NC.3.NF.2- Interpret fractions with denominators of 2, 3, 4, 6, and 8 using area and length models.

			• Using an area model, explain that the numerator of a fraction represents the number of equal parts of the unit fraction. • Using a number line, explain that the numerator of a fraction represents the number of lengths of the unit fraction from 0. NC.3.NF.4- Compare two fractions with the same numerator or the same denominator by reasoning about their size, using area and length models, and using the >, <, and = symbols. Recognize that comparisons are valid only when the two fractions refer to the same whole with denominators: halves, fourths and eighths; thirds and sixths

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Mathematics – Grade 3

FOURTH NINE WEEKS	OVERVIEW
	In module 6, students tell time to the nearest minute and use linear models to solve and represent elapsed time word problems. Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by the number of sides and angles and make connections to the attributes of shapes. Students recognize perimeter as an attribute of plane figures and solve real-world and mathematical problems involving perimeter. Students also represent and interpret data by using scaled picture graphs, scaled bar graphs, and line plots.

ASSESSMENTS	
ASSESSMENT WINDOW	**ASSESSMENT NAME**
Close by April 28th	Check IN 3

UNIT	UNIT DURATION	PARENT/FAMILY RESOURCES	NORTH CAROLINA STANDARDS
Module 6	26 lessons	Family Math Mod. 6	NC.3.OA.7- Demonstrate fluency with multiplication and division with factors, quotients and divisors up to and including 10. • Know from memory all products with factors up to and including 10. • Illustrate and explain using the relationship between multiplication and division. • Determine the unknown whole number in a multiplication or division equation relating three whole numbers. NC.3.OA.8 Solve two-step word problems using addition, subtraction, and multiplication, representing problems using equations with a symbol for the unknown number. NC.3.NBT.2 Add and subtract whole numbers up to and including 1,000. • Use estimation strategies to assess reasonableness of answers. • Model and explain how the relationship between addition and subtraction can be applied to solve addition and subtraction problems. • Use expanded form to decompose numbers and then find sums and differences

***Family Math Resources**

The Family Math Resources provide information by topic about what students are learning, examples of the concepts, and At-Home activities to align with classroom learning

***aimsWeb+**

aimswebPlus is a universal screening assessment given to all students three times a year. Universal screeners are quick, standardized assessments that measure academic skills for reading and math. These measures help schools inform instruction, identify students at risk, and help teachers determine why the student may be at risk.

***NC Check-Ins Mathematics Grades 3-8**

NC Check-Ins are interim assessments aligned to North Carolina grade-level content standards in mathematics for grades 3–8 developed by the North Carolina Department of Public Instruction (NCDPI).

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The main purpose of NC Check-Ins is to provide students, teachers, parents, and stakeholders with immediate in-depth action-data and a reliable estimate of students' current performance on the selected sub-set of content standards. A secondary purpose is derived from NC Check-Ins strong relationship with grade-level end-of-grade (EOG) summative assessments. Both EOGs and NC Check-Ins share a common item bank, and performance on the NC Check-Ins serves as an early indicator of a student's level of preparedness for the EOG summative assessment.

GRADE 3 MATHEMATICS		
NC Check-In 1 Assessed Standards	**NC Check-In 2 Assessed Standards**	**NC Check-In 3 Assessed Standards**
3.MD.3	3.NBT.3	3.G.1
3.NBT.2	3.OA.2	3.MD.7
3.OA.1*	3.OA.3	3.NF.2
3.OA.3†	3.OA.6	3.NF.3
3.OA.8‡	3.OA.8	3.NF.4

* 3.OA.1 will focus on the entire standard except decomposing a factor and the associative property of multiplication.

† 3.OA.3 will focus on multiplication.

‡ 3.OA.8 will focus on addition and subtraction.