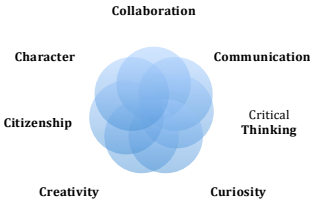
Content Area: Mathematics	Course: Mathematics	Grade Level: 3
	R14 The Seven Cs of Learning 	

Unit Titles	Length of Unit
Unit 1-Beginning Multiplication and Division Concepts and Strategies	6 weeks
Unit 2-Place Value Concepts (Addition and Subtraction)	6 weeks
Unit 3-Fractions	6 weeks
Unit 4-Intermediate Multiplication and Division Concepts and Strategies	6 weeks
Unit 5-Area	5 weeks
Unit 6-Geometry, Measurement and Time	5 weeks

Strands	Course Level Expectations
Number and Operations in Base-Ten	1. Students use place value understanding and properties of operations to perform multi-digit arithmetic. 2. Required Fluencies: Add and subtract within 1000.
Number and Operations with Fractions	1. Students begin their study of fractions with an understanding of unit fractions. 2. Students understand that fractions in general are built out of unit fractions and represent parts of a whole. 3. Students understand the size of the fraction is relative to the size of the whole 4. Students use fractions to represent numbers equal to, less than, and greater than one. 5. Students solve problems involving comparing fractions by using visual fraction models, equal numerators, and equal denominators.
Operations and Algebraic Thinking	1. Students understand the meanings of multiplication and division of whole numbers through activities with equal-sized groups, arrays and area models. 2. Students use multiplication to find unknown products and division to find unknown quotients: both equal-sized groups and unknown group size (partitive and quotative) 3. Students use properties of operations to calculate products of whole numbers using strategies based on these properties. 4. Students understand the relationship between multiplication and division. 5. Required Fluencies: Products of two one digit numbers

Strands	Course Level Expectations
Geometry	1. Students recognize area as an attribute of two-dimensional regions. 2. Students measure the area of a shape by finding the total number of same-size units of area required to cover the shape 3. Students connect the decomposition of rectangles into rectangular arrays of squares to multiplication and justify using multiplication to determine the area of a rectangle. 4. Students describe, analyze and compare properties of two-dimensional shapes 5. Students compare and classify shapes by their sides and angles, and connect this with definitions of shapes 6. Students relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.
Measurement and Data	1. Students solve problems involving measurement and estimation of time, liquid volumes, and masses of objects. 2. Students relate pictographs to their study of equal groups in multiplication and use this to solve problems. 3. Students relate bar graphs to their study of comparing numbers and solving problems using addition and subtraction.

Unit Title	Beginning Multiplication and Division Concepts and Strategies	Length of Unit	6 weeks

Inquiry Questions (Engaging & Debatable)	● How can we represent multiplication and division situations? ● How can we use the properties of operations and other strategies to solve multiplication and division problems? ● How can we use the relationship between multiplication and division to multiply and divide within 100?
Standards	**Operations and Algebraic Thinking** 3.OA.A1, 3.OA.A2, 3.OA.A3, 3.OA.A4, 3.OA.B5, 3.OA.B6, 3.OA.C7, 3.OA.D9
Unit Strands & Concepts	● Meaning of multiplication and division ● Properties of operations ● Multiplication and division situations ● Fact strategies ● Arithmetic patterns
Key Vocabulary	Multiplications, division, product, groups of, equal shares, partition, array, equations, factor, addition table, multiplication table

Standards based on Common Core State Standards
For more information visit: http://www.corestandards.org/Math/Content/3/introduction/

Unit Title	Beginning Multiplication and Division Concepts and Strategies	Length of Unit	6 weeks

Critical Content: My students will Know…	**Key Skills: My students will be able to (Do)…**
● Multiplication can represent a variety of situations including equal groups, arrays, and combinations ● Arithmetic patterns can be used to solve more complex multiplication problems. ● Relationship between multiplication and division ● Division refers to the number of groups or the size of the groups. ● How the commutative and distributive property relate to multiplication	● Use a variety of strategies to find products of single digit factors. ● Use understanding of multiplication to solve division as an unknown factor problem. ● By the end of Grade 3 students should be fluent and automatic with all single digit multiplication facts. ● Use known facts to figure out unknown facts ● Use decomposition strategies to solve single digit multiplication problems ● Solve basic multiplication and division problems using properties of operations ● Model and solve multiplication and division stories ● Determine the unknown whole number in a multiplication or division equation relating three whole numbers ● Identify arithmetic patterns

Assessments:	Performance task focusing on conceptual understanding of multiplication and division situations, strategies for solving multiplication and division problems, relationship between multiplication and division, and pattern recognition.
Teacher esources:	MyMath, Engage NY, 3 Act Task Bank, CCSS aligned anchor tasks, Illustrative Mathematics, Georgia Department of Education CCSS aligned tasks, North Carolina Department of Instruction, CCSS aligned tasks.

Unit Title	Place Value Concepts (Addition and Subtraction)	Length of Unit	6 weeks

Inquiry Questions (Engaging & Debatable)	● How do we solve problems, and assess the reasonableness of answers? ● What methods are most efficient for attaining fluency with addition and subtraction within 1,000?
Standards	**Operations and Algebraic Thinking** 3.OA.D8, **Number and Operations in Base-Ten** 3.NBT.A1, 3.NBT.A2
Unit Strands & Concepts	• Unitizing • Composing and decomposing • Base ten and place value patterns • Relationship between addition and subtraction • Meaning of the equal sign • Addition and subtraction methods
Key Vocabulary	Addition, subtraction, multiplication, division, operations, equations, estimation, rounding, mental computation, whole numbers, place value

Unit Title	Place Value Concepts (Addition and Subtraction)	Length of Unit	6 weeks

Critical Content: My students will Know…	**Key Skills: My students will be able to (Do)…**
● The difference between a digit's value and its magnitude, (800 vs. 8 hundreds). ● Numbers can be decomposed in multiple ways (37 = 3 tens and 7 ones), or (37 = 2 tens and 17 ones), etc. ● How the associative property can be used to simplify multi-step calculations ● Whole numbers can be added and subtracted with or without regrouping. ● In adding and subtracting multi-digit numbers one must add like units and sometimes it is necessary to compose or decompose tens, hundreds, and/or thousands ● Subtraction can be represented as an unknown addend addition problem ● Recognize and interpret different situations for addition and subtraction ● The equal sign means, "is the same as" and does not always come before the sum or difference. ● Sometimes it may be necessary to compose or decompose more than one ten, hundred, or thousand	● Compose and decompose numbers in a variety of different ways ● Add and subtract multi-digit whole numbers using strategies based on place value and properties of operations (students do not need to master the standard algorithm for addition and subtraction) ● Solve two-step word problems using the four operations ● Assess the reasonableness of answers using mental computation and estimation strategies including rounding. ● 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 ● Use place value understanding to round numbers to the nearest 10 or 100

Assessments:	Performance task focused on composing and decomposing, unitizing, base ten patterns, addition and subtraction strategies, estimation, and multi-step problem solving
Teacher Resources:	MyMath, Engage NY, 3 Act Task Bank, CCSS aligned anchor tasks, Illustrative Mathematics, Georgia Department of Education CCSS aligned tasks, North Carolina Department of Instruction, CCSS aligned tasks.

Unit Title	Fractions	Length of Unit	6 weeks

Inquiry Questions (Engaging & Debatable)	● What is a fraction? ● How do we represent a fraction on a number line? ● How can we compare fractions?
Standards	**Number and Operations with Fractions** 3.NF.A1, 3.NF.A2, 3.NF.A3
Unit Strands & Concepts	● Fractional meaning and representation ● "Equal parts" ● Fractional Equivalence ● Importance of unit Fractions
Key Vocabulary	Fraction, part, whole, equal parts, number line, equivalence, equivalent fractions, compare

Unit Title	Fractions	Length of Unit	6 weeks

Critical Content: **My students will Know…**	**Key Skills:** **My students will be able to (Do)…**
● Fractions are composed by partitioning a whole into equal sized parts. ● Equal parts are parts with equal measurement (length or area), but not necessarily the same shape. ● The size of a fractional part is relative to the size of the whole. ● A denominator is a noun which refers to the name and size of the pieces of a partitioned whole. ● All fractions can be built from unit fractions. ● Equivalent fractions are ways of describing the same amount by using different-sized fractional parts. ● Two fractions are equivalent if they are the same point on a number line	● Represent and identify both unit and non-unit fractions using concrete manipulatives (paper strips, fraction tiles), pictorial models, number lines, and words. ● Identify fractional parts when the whole has been partitioned into congruent and non-congruent parts. ● Compare fractions with the same numerator or denominator using concrete manipulatives, number lines, and pictures. ● Represent and identify equivalent fractions using concrete manipulatives, pictures, and number lines. ● Represent fractions on a number line ● Express whole numbers as fractions

Assessments:	Performance task assessing creating and identifying fractional parts, decomposition strategies, and comparing strategies
Teacher Resources:	MyMath, Engage NY, 3 Act Task Bank, CCSS aligned anchor tasks, Illustrative Mathematics, Georgia Department of Education CCSS aligned tasks, North Carolina Department of Instruction, CCSS aligned tasks.

Unit Title	Intermediate Multiplication and Division Concepts and Strategies	Length of Unit	6 weeks

Inquiry Questions (Engaging & Debatable)	● How can we represent multiplication and division situations? ● How can we use the properties of operations and other strategies to solve multiplication and division problems? ● How can we use the relationship between multiplication and division to multiply and divide within 100? ● What arithmetic patterns can be derived from the multiplication tables? ● How does area relate to the operations of multiplication and addition?
Standards	**Operations and Algebraic Thinking** 3.OA.A1, 3.OA.A2, 3.OA.A3, 3.OA.A4, 3.OA.A5, 3.OA.B6, 3.OA.C7, 3.OA.D8, 3.OA.D9, **Number and Operations in Base-Ten** 3.NBT.A3, **Measurement and Data** 3.MD.C7
Unit Strands & Concepts	● Meaning of multiplication and division ● Properties of operations ● Multiplication and division situations ● Fact strategies ● Arithmetic patterns ● Unitizing
Key Vocabulary	Multiplications, division, product, groups of, equal shares, partition, array, equations, factor, addition table, multiplication table, estimation, rounding, area

Unit Title	Intermediate Multiplication and Division Concepts and Strategies	Length of Unit	6 weeks

Critical Content: My students will Know…	Key Skills: My students will be able to (Do)…
● Numbers can be expressed in different base ten units (i.e.120 ones=12 tens= 1 hundred and 2 tens) ● Division situations can involve finding the size of a given group or the number of groups. ● Division and multiplication problems with large numbers can be decomposed into several smaller problems. ● Larger quotients and products can be derived using foundational and familiar facts ● Arithmetic patterns can be used to solve more complex multiplication problems. ● Relationship between multiplication and division ● How the commutative, associative, and distributive property relate to multiplication	● Represent numbers in different units (i.e. 120 ones or 12 tens). ● Decompose numbers in order to simplify larger multiplication and division problems ● Apply various computational strategies to compute products and quotients (distributive property, associative property, commutative property, doubles, derived facts, missing factor, doubling and halving, landmark numbers, unitizing, etc.) ● Use various concrete and pictorial models to represent multiplication and division situations (arrays, number bonds, area models, equal groups, counters, base ten blocks, etc.) ● Relate multiplication and division equations to pictorial and concrete models ● Model and solve multiplication and division stories ● Determine the unknown whole number in a multiplication or division equation relating three whole numbers ● Identify arithmetic patterns ● Multiply one digit whole numbers by multiples of 10 in the range 10-90 ● Begin to relate area to multiplication

Assessments:	Performance task focusing on number decomposition, multiplication and division strategies, pattern recognition, models for multiplication and division, and unitizing.
Teacher Resources:	MyMath, Fosnet The Big Dinner Unit, Engage NY, 3 Act Task Bank, CCSS aligned anchor tasks, Illustrative Mathematics, Georgia Department of Education CCSS aligned tasks, North Carolina Department of Instruction

Unit Title	**Area**	**Length of Unit**	5 weeks

Inquiry Questions **(Engaging & Debatable)**	● How do we measure area of a plane figure? ● How do concepts of area relate to multiplication and addition? ● How can we use area to solve problems?
Standards	**Measurement and Data:** 3.MD.C5, 3.MD.C6, 3.MD.C7
Unit Strands & Concepts	● Geometric and arithmetic properties of area ● Spatial structuring ● Area as a type of measurement
Key Vocabulary	Area, plane figures, rows, columns, square unit, square cm, square m, square in, square ft, sides, flip, rotation, models

Unit Title	Area	Length of Unit	5 weeks

Critical Content: My students will **Know**…	Key Skills: My students will be able to **(Do)**…
● Area is the amount of two-dimensional surface that is contained within a plane figure ● Area is related to addition and multiplication. ● Rearranging an area based on its dimensions or factors does NOT change the amount of area being covered ● Area models can be used as a strategy for solving multiplication problems. ● Shapes with equal areas may not necessarily have the same dimensions ● Recognize area as additive ● Area remains constant despite flips, rotations, or turns of a given Figure	● Measure the area of a shape by finding the total number of same-size units required to cover the shape without gaps or overlaps ● Relate multiplication to the concept of area, specifically to arrays and the area model ● Use area models to decompose arrays and rectangles in various ways (distributive property). ● Partition shapes into parts with equal areas and expresses those parts as a fraction of the shapes total area. ● Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas found

Assessments:	Performance task focused on measuring and calculating the area of rectilinear figures, using the distributive property to calculate area, partition shapes so the parts contain equal areas.
Teacher Resources:	MyMath, Engage NY, 3 Act Task Bank, CCSS aligned anchor tasks, Illustrative Mathematics, Georgia Department of Education CCSS aligned tasks, North Carolina Department of Instruction, CCSS aligned tasks.

Unit Title	Geometry, Measurement and Time	Length of Unit	5 weeks

Inquiry Questions (Engaging & Debatable)	● How do we solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects? ● How can we collect, organize and represent data to solve problems? ● How do we solve problems involving perimeters of polygons? ● How can we organize and classify shapes into categories and subcategories?
Standards	**Measurement and Data:** 3.MD.A1, 3.MD.A2, 3.MD.B3, 3.MD.B4, 3.MD.D8, **Geometry:** 3.G.A1, 3.G.A2
Unit Strands & Concepts	● Linear properties of perimeter ● Geometric attributes ● Part-whole relationships ● Scaled graphs ● Elapsed time ● Multiplicative reasoning ● Volume and mass
Key Vocabulary	Interval, number line diagram, volume, mass, grams (g), kilograms (kg), liters (l), length halves, fourths, quarters, inch, scaled picture graph, scaled bar graph, line plot, horizontal, vertical, scale, perimeter, plane figure, linear measures, attributes, categories, quadrilaterals, partition, area, unit fraction

Unit Title	Geometry, Measurement and Time	Length of Unit	5 weeks

Critical Content: My students will Know…	**Key Skills: My students will be able to (Do)…**
● Shapes (esp. quadrilaterals) can be grouped by their attributes. ● Shapes can be partitioned into equal parts. These parts can be expressed as fractions. ● Length, volume and mass are measured in standard units using appropriate tools. ● For a polygon, the length of the perimeter is the sum of the lengths of the sides. ● Objects with different sizes can be measured and can be displayed using different graphical representations, (e.g., line plots) ● A larger perimeter does not necessarily coincide with a larger area.	● Group quadrilaterals into categories such as rectangles, rhombuses and trapezoids based on their attributes. ● Partition shapes into equal parts, express those equal parts as fractions e.g. ¼, and add those fractions together to make other fractions or represent the whole shape e.g. ¼ + ¼ = 2/4 or ¼ + ¼ + ¼ + ¼ = 4/4 = 1 whole. ● Solve problems involving perimeter ● Reason about the perimeter of a shape based on its attributes ● Measure the mass of an object in grams or kilograms using a balance. ● Measure the length of an object or shape in inches using a ruler. Use a ruler matching the end of the object with the beginning of the scale of the ruler (includes halves and fourths of an inch) ● Measure and estimate liquid volumes and masses of objects using standard units ● Use a Line plot to display length data gathered from different sources to compare the frequency of data ● Draw a scaled bar graph and a scaled picture graph to represent a data set with several categories ● Tell and write time to the nearest minute ● Solve problems involving intervals of time ● Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.

Assessments:	Performance task focusing on categorizing and identifying quadrilaterals according to their attributes, partitioning shapes into equal fractional parts, calculating perimeter, measuring length, liquid volume, and mass, graphing data sets, and telling time.
Teacher Resources:	MyMath, Engage NY, 3 Act Task Bank, CCSS aligned anchor tasks, Illustrative Mathematics, Georgia Department of Education CCSS aligned tasks, North Carolina Department of Instruction,