Unit Name	Unit Description / Overview	Enduring Understandings - Students will understand that...	Essential Questions	Standards
Module 1 - Place Value and Decimal Fractions	In Module 1, students' understandings of the patterns in the base ten system are extended from Grade 4's work with place value to include decimals to the thousandths place. In Grade 5, students deepen their knowledge through a more generalized understanding of the relationships between and among adjacent places on the place value chart, e.g., 1 tenth times any digit on the place value chart moves the digit one place value to the right (5.NBT.1). Toward the module's end, students apply these new understandings as they reason about and perform decimal operations through the hundredths place.	Each position in a decimal number has a value that is a power of 10 Metric measurements for length can be converted using powers of ten Decimals can be represented in a variety of different ways Similar to whole number operations, a variety of strategies can be used to add and subtract decimals	How does multiplying and dividing a number by a power of 10 affect its value? What is the relationship between metric conversions and powers of ten? How can understanding different representations of decimals be helpful? What is the best strategy for adding and subtracting decimals? Why?	5.MD.A Convert like measurement units within a given measurement system. 5.MD.A.1 Convert among different-sized standard measurement units within a given measurement system (e.g. convert 5 cm to 0.05 m) and use these conversions in solving multi-step real-world problems. 5.NBT.A Understand the place value system. 5.NBT.A.1 Recognize that in a multi-digit number including decimals a digit in any place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. 5.NBT.A.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10 and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. 5.NBT.A.3 Read write and compare decimals to thousandths. 5.NBT.A.3.a Read and write decimals to thousandths using base-ten numerals number names and expanded form e.g. 347.392 = 3 x 100 + 4 x 10 + 7 x 1 + 3 x (1/10) + 9 x (1/100) + 2 x (1/1000). 5.NBT.A.3.b Compare two decimals to thousandths based on meanings of the digits in each place using > = and 5.NBT.A.4 Use place value understanding to round decimals to any place. 5.NBT.B Perform operations with multi-digit whole numbers and with decimals to hundredths. 5.NBT.B.7 Add subtract multiply and divide decimals to hundredths using concrete models or drawings and strategies based on place value properties of operations and/or the relationship between addition and subtraction and between multiplication and division; relate the strategy to a written method and explain the reasoning used.

Unit Name	Unit Description / Overview	Enduring Understandings - Students will understand that...	Essential Questions	Standards
Module 2 - Multi-Digit Whole Number and Decimal Fraction Operations	In Module 1, students explored the relationships of adjacent units on the place value chart to generalize whole number algorithms to decimal fraction operations. In Module 2, students apply the patterns of the base ten system to mental strategies and the multiplication and division algorithms.	Understanding place value is critical when working with both whole numbers and decimals Processes associated with multiplication of whole numbers apply to multiplication of decimals Using estimation is important when performing operations to check for reasonableness	What is the role of place value when multiplying whole numbers and decimals? Which strategy for multiplying whole numbers do you think is the best? Why? And decimals? Why? How can I use properties and number relationship to multiply decimals? How does estimation help to solve problems?	5.MD.A.1 Convert among different-sized standard measurement units within a given measurement system (e.g. convert 5 cm to 0.05 m) and use these conversions in solving multi-step real-world problems. 5.NBT.A.1 Recognize that in a multi-digit number including decimals a digit in any place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. 5.NBT.A.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10 and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. 5.NBT.B.5 Fluently multiply multi-digit whole numbers. (Include two-digit xfour-digit numbers and three-digit x three-digit numbers) using the standard algorithm. 5.NBT.B.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-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. 5.NBT.B.7 Add subtract multiply and divide decimals to hundredths using concrete models or drawings and strategies based on place value properties of operations and/or the relationship between addition and subtraction and between multiplication and division; relate the strategy to a written method and explain the reasoning used. 5.OA.A.1 Use parentheses brackets or braces in numerical expressions and evaluate expressions with these symbols e.g.(6 x 30) + (6 x ½). 5.OA.A.2 Write simple expressions that record calculations with numbers and interpret numerical expressions without evaluating them. MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.
Module 3 - Addition and Subtraction of Fractions	In Module 3, students' understanding of addition and subtraction of fractions extends from earlier work with fraction equivalence and decimals. This module marks a significant shift away from the elementary grades' centrality of base ten units to the study and use of the full set of fractional units from Grade 5 forward, especially as applied to algebra.			5.NF.A Use equivalent fractions as a strategy to add and subtract fractions. 5.NF.A.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. 5.NF.A.2 Solve word problems involving addition and subtraction of fractions referring to the same whole (the whole can be a set of objects) including cases of unlike denominators e.g. by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. MP.1 Make sense of problems and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.

Unit Name	Unit Description / Overview	Enduring Understandings - Students will understand that...	Essential Questions	Standards
Module 4 - Multiplication and Division of Fractions and Decimal Fractions	In Module 4, students learn to multiply fractions and decimal fractions and begin working with fraction division. Topic A opens the 38-day module with an exploration of fractional measurement. Students construct line plots by measuring the same objects using three different rulers accurate to 1/2, 1/4, 1/8 of an inch (5.MD.2)	Mental estimation of fractions can be used to assess the reasonableness of answers Previous understandings of multiplication and division can be applied and extended when multiplying and dividing fractions Multiplication and division of fractions represent real-life problems that can be solved using a variety of different models and strategies	How can you use mental estimation of fractions to assess the reasonableness of an answer? How can understanding multiplication and division of whole numbers help you to multiply and divide fractions? What is the best strategy for solving problems involving multiplication of fractions? Division of fractions? Why? How are fraction multiplication and division related?	5.MD.A Convert like measurement units within a given measurement system. 5.MD.B.2 Make a line plot (dot plot) to display a data set of measurements in fractions of a unit. Use operations on fractions for this grade to solve problems involving information presented in line plot. 5.NBT.B.7 Add subtract multiply and divide decimals to hundredths using concrete models or drawings and strategies based on place value properties of operations and/or the relationship between addition and subtraction and between multiplication and division; relate the strategy to a written method and explain the reasoning used. 5.NF.B.3 Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed #'s 5.NF.B.4.a Interpret the product (a/b) x q as a parts of a partition of q into b equal parts; equivalently as the result of a sequence of operations a x q ÷ b. 5.NF.B.4.b Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles and represent fraction products as rectangular areas. 5.NF.B.6 Solve real-world problems involving multiplication of fractions and mixed numbers e.g. by using visual fraction models or equations to represent the problem. 5.NF.B.7.a Interpret division of a unit fraction by a non-zero whole number and compute such quotients. 5.NF.B.7.b Interpret division of a whole number by a unit fraction and compute such quotients. 5.NF.B.7.c Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions. 5.OA.A.1 Use parentheses brackets or braces in numerical expressions and evaluate the expressions. 5.OA.A.2 Write simple expressions that record calculations with numbers and interpret numerical expressions without evaluating them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.

Unit Name	Unit Description / Overview	Enduring Understandings - Students will understand that...	Essential Questions	Standards
Module 5 - Addition and Multiplication with Volume and Area	In this module, students work with two- and three-dimensional figures. Volume is introduced to students through concrete exploration of cubic units and culminates with the development of the volume formula for right rectangular prisms. The second half of the module turns to extending students' understanding of two-dimensional figures. Students combine prior knowledge of area with newly acquired knowledge of fraction multiplication to determine the area of rectangular figures with fractional side lengths. They then engage in hands-on construction of two-dimensional shapes, developing a foundation for classifying the shapes by reasoning about their attributes. This module fills a gap between Grade 4's work with two-dimensional figures and Grade 6's work with volume and area.	volume is an attribute of solid figures and understand concepts of volume measurement. - A) A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. - B) A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units. attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.	Apply and extend previous understandings of multiplication to multiply a fraction or a whole number by a fraction Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths and show that the area is the same as would be found by multiplying side lengths Solve real world problems involving multiplication of fractions and mixed numbers. Recognize volume as an attribute of solid figures and understand concepts of volume measurement. Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft., and improvised units Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems Recognize volume as additive Classify two-dimensional figures in a hierarchy based on properties.	5.G.B.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. 5.MD.C.3.a A cube with side length 1 unit called a "unit cube" is said to have "one cubic unit" of volume and can be used to measure volume. 5.MD.C.3.b A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units. 5.MD.C.4 Measure volumes by counting unit cubes using cubic cm or in. or ft. and non-standard units. 5.MD.C.5.a Find the volume of a right rectangular prism with whole-number edge lengths by packing it with unit cubes and show that the volume is the same as would be found by multiplying the edge lengths equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes e.g. to represent the associative property of multiplication. 5.MD.C.5.b Apply the formula $V = l \times w \times h$ and $V = B \times h$ (where B stands for the area of the base) for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real-world and mathematical problems. 5.MD.C.5.c Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts applying this technique to solve real-world problems. 5.NF.B.4.a Interpret the product (a/b) x q as a parts of a partition of q into b equal parts; equivalently as the result of a sequence of operations a x q ÷ b. 5.NF.B.6 Solve real-world problems involving multiplication of fractions and mixed numbers e.g. by using visual fraction models or equations to represent the problem. MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.6 Attend to precision. MP.7 Look for and make use of structure.

Unit Name	Unit Description / Overview	Enduring Understandings - Students will understand that...	Essential Questions	Standards
Module 6 - Problem Solving with the Coordinate Plane	In this module, students develop a coordinate system for the first quadrant of the coordinate plane and use it to solve problems. Students use the familiar number line as an introduction to the idea of a coordinate and construct two perpendicular number lines to create a coordinate system on the plane. They see that just as points on the line can be located by their distance from 0, the plane's coordinate system can be used to locate and plot points using two coordinates. They then use the coordinate system to explore relationships between points, ordered pairs, patterns, lines and, more abstractly, the rules that generate them. This study culminates in an exploration of the coordinate plane in real world applications.	any line, regardless of orientation, can be made into a number line by first locating zero, choosing a unit length, and partitioning the length-unit into fractional lengths as desired.	What did you know about the number line, how are they used and why are they useful? How are coordinate planes and systems designed? How do we understand and graph patterns on the coordinate plane? How do we draw figures on the coordinate plane? How can we solve problems using a coordinate plane?How do we solve multi-step word problems?	5.G.A Graph points on the coordinate plane to solve real-world and mathematical problems. 5.G.A.1 Use a pair of perpendicular number lines called axes to define a coordinate system with the intersection of the lines (the origin) arranged to coincide with the zero on each line and a given point in the plane located by using an ordered pair of numbers called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis and the second number indicates how far to travel in the direction of the second axis with the convention that the names of the two axes and the coordinates correspond (e.g. x-axis and x-coordinate y-axis and y-coordinate). 5.G.A.2 Represent real-world and mathematical problems by graphing points in the first quadrant of the coordinate plane and interpret coordinate values of points in the context of the situation. 5.OA.A Write and interpret numerical expressions. 5.OA.A.2 Write simple expressions that record calculations with numbers and interpret numerical expressions without evaluating them. 5.OA.B Analyze patterns and relationships. 5.OA.B.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns and graph the ordered pairs on a coordinate plane. MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision. MP.7 Look for and make use of structure.