MARLBORO CENTRAL SCHOOLS – GRADE 5 MATHEMATICS CURRICULUM MAP – QUARTER 1			
NYS STANDARDS	CONCEPTS/SKILLS	RESOURCES	ASSESSMENTS
Place Value and Decimal Fractions **5.NBT.1** Recognize that in a multi-digit number, a digit in one 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.2** Explain patterns in the number of zeroes 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 wholenumber exponents to denote powers of 10. **5.NBT.3** Read, write, and compare decimals to thousandths. **5.NBT.4** Use place value understanding to round decimals to any place. **5.NBT.7** Add, subtract, multiply, and divide decimals to hundredths. **5.MD.1** Convert among different-sized standard measurement units within a given measurement system and use these conversions in solving multi-step, real world problems. *Multi-Digit Whole Number and Decimal Fraction Operations* **5.OA.1** Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. **5.OA.2** Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. **5.NBT.1** Recognize that in a multi-digit number, a digit in one 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.2** Explain patterns in the number of zeroes 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	In Module 1, students' understanding of the patterns in the base ten system are extended from Grade 4's work with place value of multi-digit whole numbers and decimals to hundredths 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 it one place value to the right. Toward the module's end students apply these new understandings as they reason about and perform decimal operations through the hundredths place. In Module 2, students apply patterns of the base ten system to mental strategies and a sequential study of multiplication via area diagrams and the distributive property leading to fluency with the standard algorithm. Students move from whole numbers to multiplication with decimals, again using place value as a guide to reason and make estimations about products. Multiplication is explored as a method for expressing equivalent measures in both whole number and decimal forms. A similar sequence for division begins concretely with number disks as an introduction to division with multi-digit divisors and leads student to divide multi-digit whole number and decimal dividends by two-digit divisors using a vertical written method. In addition, students evaluate and write expressions, recording their calculations using the associative property and parentheses. Students apply the work of the module to solve multi-step word problems using multi-digit multiplication and division with unknowns representing either the group size or number of	- MODULE 1 WORKBOOK - MODULE 2 WORKBOOK - LESSON SPRINTS	- MID-MODULE 1 ASSESSMENT - END OF MODULE 1 ASSESSMENT - MID-MODULE 2 ASSESSMENT - LESSON EXIT TICKETS

divided by a power of 10. Use wholenumber exponents to denote powers of 10. **5.NBT.5** Fluently multiply multi-digit whole numbers using the standard algorithm. **5.NBT.6** Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors. **5.NBT.7** Add, subtract, multiply, and divide decimals to hundredths. **5.MD.1** Convert among different-sized standard measurement units within a given measurement system and use these conversions in solving multi-step, real world problems.	groups. An emphasis on the reasonableness of both products and quotients, interpretation of remainders and reasoning about the placement of decimals draws on skills learned throughout the module, including refining knowledge of place value, rounding, and estimation.		

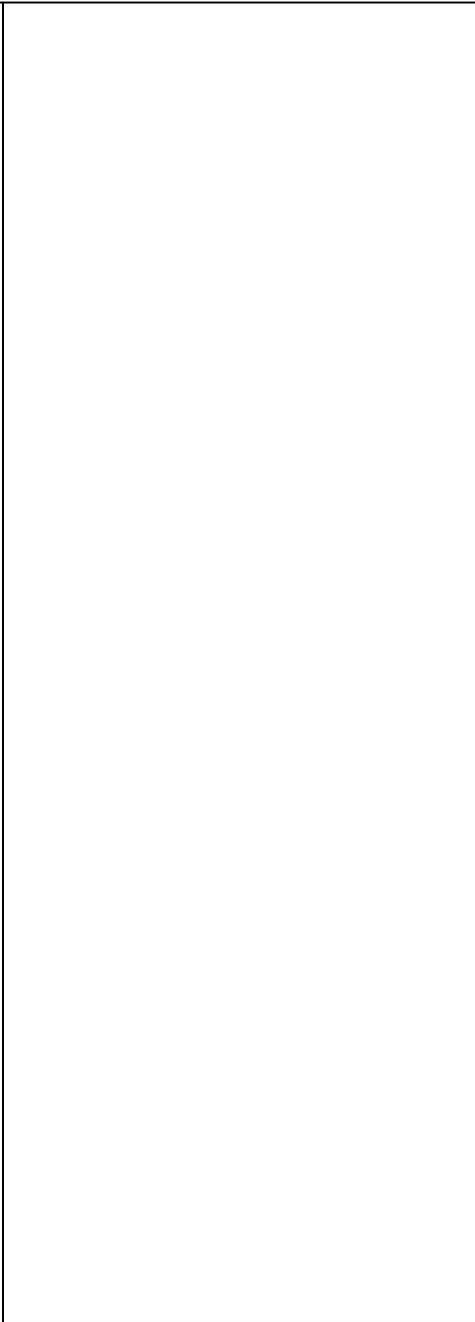| MARLBORO CENTRAL SCHOOLS – GRADE 5 MATHEMATICS CURRICULUM MAP – QUARTER 2			
NYS STANDARDS	CONCEPTS/SKILLS	RESOURCES	ASSESSMENTS
Addition and Subtraction of Fractions **5.NF.1** Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. **5.NF.2** Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators. ***Multiplication and Division of Fractions and Decimal Fractions*** **5.OA.1** Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. **5.OA.2** Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. **5.NBT.7** Add, subtract, multiply, and divide decimals to hundredths. **5.NF.3** Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers. **5.NF.4** Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.	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.	- MODULE 2 WORKBOOK - MODULE 3 WORKBOOK - LESSON SPRINTS	- END OF MODULE 2 ASSESSMENT - MID-MODULE 3 ASSESSMENT - LESSON EXIT TICKETS

MARLBORO CENTRAL SCHOOLS – GRADE 5 MATHEMATICS CURRICULUM MAP – QUARTER 3			
NYS STANDARDS	CONCEPTS/SKILLS	RESOURCES	ASSESSMENTS
Multiplication and Division of Fractions and Decimal Fractions (continued) **5.NF.5** Interpret multiplication as scaling (resizing). **5.NF.6** Solve real world problems involving multiplication of fractions and mixed numbers. **5.NF.7** Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. **5.MD.1** Convert among different-sized standard measurement units within a given measurement system and use these conversions in solving multi-step, real world problems. **5.MD.2** Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. **Addition and Multiplication with Volume and Area** **5.NF.4** Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. **5.MD.3** Recognize volume as an attribute of solid figures and understand concepts of volume measurement. **5.MD.4** Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units. **5.MD.5** Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. **5.G.3** Understand that attributes belonging to a category of two	Grade 5's Module 4 extends student understanding of fraction operations to multiplication and division of both fractions and decimal fractions. Work proceeds from interpretation of line plots which include fractional measurements to interpreting fractions as division and reasoning about finding fractions of sets through fraction by whole number multiplication. The module proceeds to fraction by fraction multiplication in both fraction and decimal forms. An understanding of multiplication as scaling and multiplication by n/n as multiplication by 1 allows students to reason about products and convert fractions to decimals and vice versa. Students are introduced to the work of division with fractions and decimal fractions. Division cases are limited to division of whole numbers by unit fractions and unit fractions by whole numbers. Decimal fraction divisors are introduced and equivalent fraction and place value thinking allow student to reason about the size of quotients, calculate quotients and sensibly place decimals in quotients. Throughout the module students are asked to reason about these important concepts by interpreting numerical expressions which include fraction and decimal operations and by persevering in solving real-world, multistep problems which include all fraction operations supported by the use of tape diagrams. In module 5, 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	- MODULE 3 WORKBOOK - MODULE 4 WORKBOOK - MODULE 5 WORKBOOK - LESSON SPRINTS	- END OF MODULE 3 ASSESSMENT - MID-MODULE 4 ASSESSMENT - END OF MODULE 4 ASSESSMENT - MID-MODULE 5 ASSESSMENT - END OF MODULE 5 ASSESSMENT - LESSON EXIT TICKETS

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. **5.G.4** Classify two-dimensional figures in a hierarchy based on properties.	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.		

MARLBORO CENTRAL SCHOOLS – GRADE 5 MATHEMATICS CURRICULUM MAP – QUARTER 4			
NYS STANDARDS	CONCEPTS/SKILLS	RESOURCES	ASSESSMENTS
Problem Solving with the Coordinate Plane **5.OA.2** Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. **5.OA.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. **5.G.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 0 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. **5.G.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.	In Module 6, 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 they construct two perpendicular number lines to create a coordinate system on the plane. Students 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.	- MODULE 6 WORKBOOK - LESSON SPRINTS	- MID-MODULE 6 ASSESSMENT - END OF MODULE 6 ASSESSMENT - LESSON EXIT TICKETS