| (11) Grade 4 Year-At-A-Glance Math |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A Note to Parents: Instructional pacing may vary slightly in each classroom. |  |  |  |  |  |
| Benchmark | Code | Ol | Q2 | Q3 | Q4 |
| Mathematical Thinking and Reasoning Skills |  |  |  |  |  |
| Actively participate in effortful learning both individually and collectively. | MA.K12.MTR.1.1 | X | X | X | X |
| Demonstrate understanding by representing problems in multiple ways. | MA.KI2.MTR.2. 1 | X | X | X | X |
| Complete tasks with mathematical fluency. | MA.K12.MTR.3.1 | X | X | X | X |
| Engage in discussions that reflect on the mathematical thinking of self and others | MA.K12.MTR.4.1 | X | X | X | X |
| Use patterns and structure to help understand and connect mathematical concepts. | MA.KI2.MTR.5.1 | X | X | X | X |
| Assess the reasonableness of solutions | MA.KI2.MTR.6. 1 | X | X | X | X |
| Apply mathematics to real-world contexts | MA.K12.MTR.7.1 | X | X | X | X |
| Number Sense and Operations |  |  |  |  |  |
| MA.4.NSO. 1 Understand place value for multi-digit numbers. |  |  |  |  |  |
| Express how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left or right. | MA.4.NSO.1.1 | X |  |  |  |
| Read and write multi-digit whole numbers from 0 to $1,000,000$ using standard form, expanded form and word form. | MA.4.NSO.I.2 | X |  |  |  |
| Plot, order and compare multi-digit whole numbers up to $1,000,000$. | MA.4.NSO.1.3 | X |  |  |  |
| Round whole numbers from 0 to 10,000 to the nearest 10, 100 or 1,000 . | MA.4.NSO.1.4 | X |  |  |  |
| Plot, order and compare decimals up to the hundredths. | MA.4.NSO.1.5 |  |  | X |  |
| MA.4.NSO. 2 Build an understanding of operations with multi-digit numbers including decimals. |  |  |  |  |  |
| Recall multiplication facts with factors up to 12 and related division facts with automaticity. | MA.4.NSO.2.1 | X |  |  |  |
| Multiply two whole numbers, up to three digits by up to two digits, with procedural reliability. | MA.4.NSO.2.2 | X | X |  |  |
| Multiply two whole numbers, each up to two digits, including using a standard algorithm with procedural fluency. | MA.4.NSO.2.3 | X | X |  |  |
| Divide a whole number up to four digits by a onedigit whole number with procedural reliability. Represent remainders as fractional parts of the divisor. | MA.4.NSO.2.4 |  | X |  |  |
| Explore the multiplication and division of multidigit whole numbers using estimation, rounding and place value. | MA.4.NSO.2.5 | X | X |  |  |
| Identify the number that is one-tenth more, onetenth less, one-hundredth more and onehundredth less than a given number. | MA.4.NSO.2.6 |  |  | X |  |
| Explore the addition and subtraction of multi-digit numbers with decimals to the hundredths. | MA.4.NSO.2.7 |  |  | X |  |

MA.4.FR.l Develop an understanding of the relationship between different fractions and the relationship between fractions and decimals.

| Model and express a fraction, including mixed numbers and fractions greater than one, with the denominator 10 as an equivalent fraction with the denominator 100 . | MA.4.FR.1.1 |  |  | X |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Use decimal notation to represent fractions with denominators of 10 or 100 , including mixed numbers and fractions greater than 1 , and use fractional notation with denominators of 10 or 100 to represent decimals. | MA.4.FR.1.2 |  |  | X |  |
| Identify and generate equivalent fractions, including fractions greater than one. Describe how the numerator and denominator are affected when the equivalent fraction is created. | MA.4.FR.1.3 |  | X | X |  |
| Plot, order and compare fractions, including mixed numbers and fractions greater than one, with different numerators and different denominators. | MA.4.FR.1. 4 |  | X | X |  |
| MA.4.FR.2 Build a foundation of addition, subtra | and multip |  |  |  |  |
| Decompose a fraction, including mixed numbers and fractions greater than one, into a sum of fractions with the same denominator in multiple ways. Demonstrate each decomposition with objects, drawings and equations. | MA.4.FR.2.1 |  |  | X |  |
| Add and subtract fractions with like denominators, including mixed numbers and fractions greater than one, with procedural reliability. | MA.4.FR.2.2 |  |  | X |  |
| Explore the addition of a fraction with denominator of 10 to a fraction with denominator of 100 using equivalent fractions. | MA.4.FR.2.3 |  |  | X |  |
| Extend previous understanding of multiplication to explore the multiplication of a fraction by a whole number or a whole number by a fraction. | MA.4.FR.2. 4 |  |  | X |  |
| Algebraic Reasoning |  |  |  |  |  |
| MA.4.AR.l Represent and solve problems involving the four operations with whole numbers and fractions. |  |  |  |  |  |
| Solve real-world problems involving multiplication and division of whole numbers including problems in which remainders must be interpreted within the context. | MA.4.AR.1.1 | X | X |  |  |
| Solve real-world problems involving addition and subtraction of fractions with like denominators, including mixed numbers and fractions greater than one. | MA.4.AR.1.2 |  |  | X |  |
| Solve real-world problems involving multiplication of a fraction by a whole number or a whole number by a fraction. | MA.4.AR.1.3 |  |  | X |  |
| MA.4.AR.2 Demonstrate an understanding of equality and operations with whole numbers. |  |  |  |  |  |
| Determine and explain whether an equation involving any of the four operations with whole numbers is true or false. | MA.4.AR.2.1 | X |  |  |  |


| Given a mathematical or real-world context, write an equation involving multiplication or division to determine the unknown whole number with the unknown in any position. | MA.4.AR.2.2 | X |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MA.4.AR. 3 Recognize numerical patterns, including patterns that follow a given rule. |  |  |  |  |  |
| Determine factor pairs for a whole number from O to 144. Determine whether a whole number from 0 to 144 is prime, composite or neither. | MA.4.AR.3.1 | X |  |  |  |
| Generate, describe and extend a numerical pattern that follows a given rule | MA.4.AR.3.2 | X |  |  |  |
| Measurement |  |  |  |  |  |
| MA.4.M.l Measure the length of objects and solve problems involving measurement. |  |  |  |  |  |
| Select and use appropriate tools to measure attributes of objects. | MA.4.M.1.1 |  |  |  | X |
| Convert within a single system of measurement using the units: yards, feet, inches; kilometers, meters, centimeters, millimeters; pounds, ounces; kilograms, grams; gallons, quarts, pints, cups; liter, milliliter; and hours, minutes, seconds. | MA.4.M.1.2 |  |  |  | X |
| MA.4.M.2 Solve problems involving time and money. |  |  |  |  |  |
| Solve two-step real-world problems involving distances and intervals of time using any combination of the four operations. | MA.4.M.2.1 |  |  |  | X |
| Solve one- and two-step addition and subtraction real-world problems involving money using decimal notation. | MA.4.M.2.2 |  |  | X |  |
| Geometric Reasoning |  |  |  |  |  |
| MA.4.GR.l Draw, classify and measure angles |  |  |  |  |  |
| Informally explore angles as an attribute of twodimensional figures. Identify and classify angles as acute, right, obtuse, straight or reflex. | MA.4.GR.1.1 |  | X |  |  |
| Estimate angle measures. Using a protractor, measure angles in whole-number degrees and draw angles of specified measure in wholenumber degrees. Demonstrate that angle measure is additive. | MA.4.GR.1.2 |  | X |  |  |
| Solve real-world and mathematical problems involving unknown whole number angle measures. Write an equation to represent the unknown. | MA.4.GR.1.3 |  | X |  |  |
| MA.4.GR.2 Solve problems involving the perimeter and area of rectangles. |  |  |  |  |  |
| Solve perimeter and area mathematical and realworld problems, including problems with unknown sides, for rectangles with whole-number side lengths. | MA.4.GR.2.1 |  | X |  |  |
| Solve problems involving rectangles with the same perimeter and different areas or with the same area and different perimeters. | MA.4.GR.2.2 |  | X |  |  |
| Data Analysis and Probability |  |  |  |  |  |
| MA.4.DP.l Collect, represent and interpret data and | find the mod | dian | nge | dat |  |


| Collect and represent numerical data, including <br> fractional values, using tables, stem-and-leaf plots <br> or line plots. | MA.4.DP.l.1 |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Determine the mode, median or range to interpret <br> numerical data including fractional values, <br> represented with tables, stem-and-leaf plots or <br> line plots. | MA.4.DP.l.2 |  |  |  |  |
| Solve real-world problems involving numerical <br> data. | MA.4.DP.1.3 |  |  |  |  |

