



### **KCDS Mathematics: Fourth Grade**

In Grade 4, there are four critical areas for instruction in mathematics: (1) developing understanding and fluency with multi-digit multiplication, and division to find quotients involving multi-digit dividends; (2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like and unlike denominators by finding common multiples and factors; (3) developing an understanding of addition and subtraction with decimals; (4) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and congruence.

## KCDS Fourth Grade: Mathematics (Grade Level at a Glance)

### 1<sup>st</sup> Trimester

<p><b><u>Unit 1: Operations and Algebraic Thinking (3 weeks)</u></b></p> <ul style="list-style-type: none"> <li>• Understand Patterns for Relating Multiplication and Division</li> <li>• Generate Shape Patterns that Follow Given rules.</li> <li>• Describe the Associative Property for Addition and Multiplication.</li> <li>• Sustain Fluency with Multiplication and Division Facts to 12</li> </ul>	<p><b><u>Unit 2: Numbers &amp; Base Ten Operations (2-3 weeks)</u></b></p> <ul style="list-style-type: none"> <li>• Extend Place Value to Millions</li> <li>• Comparing Numbers to Millions</li> <li>• Rounding Whole Numbers</li> <li>• Using Addition and Subtraction Strategies to Solve Practical Problems</li> <li>• Estimating Sums and Differences of Whole Numbers</li> </ul>	<p><b><u>Unit 3: Expanding Knowledge of Numbers &amp; Base Ten (2-3 weeks)</u></b></p> <ul style="list-style-type: none"> <li>• Arrays and Multiplying by 10 and 100</li> <li>• Connecting Expanded and Standard Algorithms</li> <li>• Multiplying Multi-digit Numbers</li> <li>• Using Multiplication and Division Concepts in Problem Solving</li> </ul>
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### 2<sup>nd</sup> Trimester

<p><b><u>Unit 4: Multiplication (2 weeks)</u></b></p> <ul style="list-style-type: none"> <li>• Using Mental Math to Multiply 2-digit numbers</li> <li>• Using Rounding to Estimate</li> <li>• Using Compatible Numbers to Estimate</li> <li>• Multiplying Multi-Digit Numbers in Practical Applications</li> </ul>	<p><b><u>Unit 5: Division (3 weeks)</u></b></p> <ul style="list-style-type: none"> <li>• Using Mental Math to Divide 2-digit Numbers</li> <li>• Estimating Quotients for 2 and 3 Digit Dividends</li> <li>• Dividing with Remainders</li> <li>• Dividing as Repeated Subtraction</li> <li>• Dividing 2 by 1, 3 by 1, and 4 by 1 Numbers</li> <li>• Dividing Multi-Digit Numbers in Practical Applications</li> </ul>	<p><b><u>Unit 6: Fractions (4 weeks)</u></b></p> <ul style="list-style-type: none"> <li>• Understanding Factors</li> <li>• Understanding Prime and Composite Numbers</li> <li>• Using Number Lines for Equivalent Fractions</li> <li>• Comparing and Ordering Fractions</li> <li>• Addition of Fractions with Like Denominators</li> <li>• Subtraction of Fractions with Like Denominators</li> <li>• Understanding Improper Fractions/Mixed Numbers</li> <li>• Decomposing/Composing Fractions in Story Problems</li> </ul>	<p><b><u>Unit 7: Extending Fraction Concepts (2 weeks)</u></b></p> <ul style="list-style-type: none"> <li>• Multiplying Fractions by Whole Numbers</li> <li>• Comparing Fractions and Decimals</li> <li>• Writing Equivalent Fractions and Decimals</li> <li>• Comparing and Ordering Decimals</li> <li>• Using Money to Understand Decimals</li> <li>• Solve Practical Problems with Fractional Numbers</li> </ul>
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### 3rd Trimester

<p><b><u>Unit 8: Measurement &amp; Data (3-4 weeks)</u></b></p> <ul style="list-style-type: none"> <li>• Using Customary Units of Length, Weight, and Capacity</li> <li>• Converting Customary Units</li> <li>• Using Metric Units of Length, Weight, and Capacity</li> <li>• Calculating Units of Time</li> <li>• Solving Perimeter, Area, and Volume Problems</li> <li>• Solving Problems with Money, Line Plots, and Measurement</li> </ul>	<p><b><u>Unit 9: Geometry (3 Weeks)</u></b></p> <ul style="list-style-type: none"> <li>• Understanding Points, Lines, and Planes, Angles</li> <li>• Measuring Unit Angles</li> <li>• Adding and Subtracting Angle Measures</li> <li>• Creating Polygons, Triangles, and Quadrilaterals</li> <li>• Explaining Line Symmetry, Parallel, Perpendicular and Intersecting Lines</li> </ul>	<p><b><u>Unit 10: Step Up (2 weeks)</u></b></p> <ul style="list-style-type: none"> <li>• Interpreting Data From Graphs and Charts</li> <li>• Writing With Mathematical Concepts</li> <li>• Sustain Fluency With Multiplication and Division Facts to 12.</li> </ul>
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