

# Advanced Math: Grade 4

UNIT/Weeks	Timeline/Topics	Essential Questions
1	<p><b><u>Place Value</u></b></p> <ul style="list-style-type: none"> <li>• Place Value</li> <li>• Read and Write Multi-Digit Numbers</li> <li>• Compare Numbers</li> <li>• Order Numbers</li> <li>• Use Place Value to Round</li> <li>• Problem Solving Strategy: Use the Four Step Plan</li> </ul>	<ul style="list-style-type: none"> <li>• How does place value help represent the value of numbers?</li> </ul>
2	<p><b><u>Add and Subtract Whole Numbers</u></b></p> <ul style="list-style-type: none"> <li>• Addition Properties and Subtraction Rules</li> <li>• Addition and Subtraction Patterns</li> <li>• Add and Subtract Mentally</li> <li>• Estimate Sums and Differences</li> <li>• Add Whole Numbers</li> <li>• Subtract Whole Numbers</li> <li>• Subtract Across Zeros</li> <li>• Problem- Solving Investigation: Draw a Diagram</li> <li>• Solve Multi-Step Word Problems</li> </ul>	<ul style="list-style-type: none"> <li>• What strategies can I use to add or subtract?</li> </ul>
3	<p><b><u>Understand Multiplication and Division</u></b></p> <ul style="list-style-type: none"> <li>• Relate Multiplication and Division</li> <li>• Relate Division and Subtraction</li> <li>• Multiplication as Comparison</li> <li>• Compare to Solve Problems</li> <li>• Multiplication Properties and Division Rules</li> <li>• The Associative Property of Multiplication</li> <li>• Factors and Multiples</li> <li>• Problem Solving Investigation: Reasonable Answers</li> </ul>	<ul style="list-style-type: none"> <li>• How are multiplication and division related?</li> </ul>
4	<p><b><u>Multiply with One-Digit Numbers</u></b></p> <ul style="list-style-type: none"> <li>• Multiples of 10, 100, and 1,000</li> <li>• Round to Estimate Products</li> <li>• Hands On: Use Place Value to Multiply</li> <li>• Hands On: Use Models to Multiply</li> <li>• Multiply by a Two-Digit Number</li> <li>• Hands-On: Model Regrouping</li> <li>• The Distributive Property</li> <li>• Multiply with Regrouping</li> <li>• Multiply by a Multi- Digit Number</li> <li>• Problem Solving Investigation: Estimate or Exact Answer</li> <li>• Multiply Across Zeros</li> </ul>	<ul style="list-style-type: none"> <li>• How can I communicate multiplication?</li> </ul>

5	<p><b><u>Multiply with Two-Digit Numbers</u></b></p> <ul style="list-style-type: none"> <li>• Multiply by Tens</li> <li>• Estimate Products</li> <li>• Hands-On: Use the Distributive Property to Multiply</li> <li>• Multiply by a Two- Digit Number</li> <li>• Solve Multi-Step Word Problems</li> <li>• Problem Solving Investigation: Make a Table</li> </ul>	<ul style="list-style-type: none"> <li>• How can I multiply by a two-digit number?</li> </ul>
6	<p><b><u>Divide by a One-Digit Number</u></b></p> <ul style="list-style-type: none"> <li>• Divide Multiples of 10, 100, and 1,000</li> <li>• Estimate Quotients</li> <li>• Hands-On: Use Place Value to Divide</li> <li>• Problem Solving Investigation: Make a Model</li> <li>• Divide with Remainders</li> <li>• Interpret Remainders</li> <li>• Place the First Digit</li> <li>• Divide Greater Numbers</li> <li>• Quotients with Zeros</li> <li>• Solve Multi-Step Word Problems</li> </ul>	<ul style="list-style-type: none"> <li>• How does division affect numbers?</li> </ul>
7	<p><b><u>Fractions</u></b></p> <ul style="list-style-type: none"> <li>• Factors and Multiples</li> <li>• Prime and Composite Numbers</li> <li>• Hands-On: Model Equivalent Fractions</li> <li>• Equivalent Fractions</li> <li>• Simplest Form</li> <li>• Compare and Order Fractions</li> <li>• Use Benchmark Fractions to Compare and Order</li> <li>• Problem Solving Investigation: Use Logical reasoning</li> <li>• Mixed Numbers</li> <li>• Mixed Numbers and Improper Fractions</li> </ul>	<ul style="list-style-type: none"> <li>• How can different fractions name the same amount?</li> </ul>
8	<p><b><u>Operations with Fractions</u></b></p> <ul style="list-style-type: none"> <li>• Hands-On: Use Models to Add Like Fractions</li> <li>• Add Like Fractions</li> <li>• Hands-On: Use Models to Subtract Like Fractions</li> <li>• Subtract Like Fractions</li> <li>• Problem Solving Investigation: Work Backward</li> <li>• Add Mixed Numbers</li> <li>• Subtract Mixed Numbers</li> <li>• Hands-On: Model Fractions and Multiplication</li> <li>• Multiply Fractions by Whole Numbers</li> </ul>	<ul style="list-style-type: none"> <li>• How can I use operations to model real-world fractions?</li> </ul>
9	<p><b><u>Fractions and Decimals</u></b></p> <ul style="list-style-type: none"> <li>• Hands-On: Place Value Through Tenths and Hundredths</li> <li>• Tenths</li> <li>• Hundredths</li> <li>• Hands-On: Model Decimals and Fractions</li> <li>• Decimals and Fractions</li> </ul>	<ul style="list-style-type: none"> <li>• How are fractions and decimals related?</li> </ul>

	<ul style="list-style-type: none"> <li>• Use Place Value and Models to Add</li> <li>• Compare and Order Decimals</li> <li>• Problem Solving Investigation: Extra or Missing Information</li> </ul>	
10	<p><b><u>Patterns and Sequences</u></b></p> <ul style="list-style-type: none"> <li>• Nonnumeric Patterns</li> <li>• Numeric Patterns</li> <li>• Sequences</li> <li>• Problem Solving Investigation: Look for a Pattern</li> <li>• Addition and Subtraction Rules</li> <li>• Multiplication and Division Rules</li> <li>• Order of Operations</li> <li>• Hands-On: Equations with Two Operations</li> <li>• Equations with Multiple Operations</li> </ul>	<ul style="list-style-type: none"> <li>• How are patterns used in mathematics?</li> </ul>
11	<p><b><u>Perimeter and Area</u></b></p> <ul style="list-style-type: none"> <li>• Measure Perimeter</li> <li>• Problem Solving Investigation: Solve a Simpler Problem</li> <li>• Hands-On: Model Area</li> <li>• Measure Area</li> <li>• Relate Area and Perimeter</li> </ul>	<ul style="list-style-type: none"> <li>• Why is it important to measure perimeter and area?</li> </ul>
12	<p><b><u>Customary Measurement</u></b></p> <ul style="list-style-type: none"> <li>• Customary Units of Length</li> <li>• Convert Customary Units of Length</li> <li>• Customary Units of Capacity</li> <li>• Customary Units of Weight</li> <li>• Convert Customary Units of Weight</li> <li>• Convert Units of Time</li> <li>• Display Measurement Data in a Line Plot</li> <li>• Solve Measurement Problems</li> <li>• Problem Solving Investigation: Guess, Check, and Revise</li> </ul>	<ul style="list-style-type: none"> <li>• Why do we convert measurements?</li> </ul>
13	<p><b><u>Metric Measurement</u></b></p> <ul style="list-style-type: none"> <li>• Metric Units of Length</li> <li>• Metric Units of Capacity</li> <li>• Metric Units of Mass</li> <li>• Problem- Solving Investigation: Make an Organized List</li> <li>• Convert Metric Units</li> <li>• Solve Measurement Problems</li> </ul>	<ul style="list-style-type: none"> <li>• How can conversion of measurement help solve real-world problems?</li> </ul>
14	<p><b><u>Geometry</u></b></p> <ul style="list-style-type: none"> <li>• Draw Points, Lines, and Rays and Perpendicular Lines</li> <li>• Classify, Measure and Draw Angles</li> </ul>	<ul style="list-style-type: none"> <li>• How are different ideas about geometry connected?</li> </ul>

	<ul style="list-style-type: none"> <li>• Triangles and Quadrilaterals</li> <li>• Symmetry</li> <li>• Problem Solving Investigation: Make a Model</li> </ul>	
15	<p><b><u>Introduction to Grade 5</u></b></p> <ul style="list-style-type: none"> <li>• Prime Factorization and Patterns</li> <li>• Powers and Exponents</li> <li>• Multiplication Patterns</li> <li>• Problem Solving: Making Tables</li> <li>• Estimate Products</li> <li>• The Distributive Property</li> <li>• Multiply One and Two Digit Numbers</li> </ul>	<ul style="list-style-type: none"> <li>• What strategies can be used to multiply whole numbers?</li> <li>• How Can Prime Numbers be Identified?</li> </ul>