

5<sup>th</sup> Grade  
Math in Focus

Chapter 1: Whole Numbers				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Numbers to 10,000,000	<ul style="list-style-type: none"> <li>Count by ten thousands an hundred thousands to 10,000,000</li> <li>Use place-value charts to show numbers to 10,000,000</li> <li>Read and write numbers to 10,000,000 in standard form and in word form.</li> </ul>	5.NBT.1	M05.A-T.1.1.1	Mastery Provide adequate time for Mastery
Lesson 2 Place Value	<ul style="list-style-type: none"> <li>Identify the place value of any digit in numbers to 10,000,000</li> <li>Read and write numbers to 10,000,000 in expanded form.</li> </ul>	5.NBT.1	M05.A-T.1.1.1	Mastery Provide adequate time for Mastery
Lesson 3 Comparing Numbers to 10,000,000	<ul style="list-style-type: none"> <li>Compare and order numbers to 10,000,000</li> <li>Identify and complete a number pattern</li> <li>Find a rule for a number pattern</li> </ul>	5.NBT.1	M05.A-T.1.1.1	Mastery Provide adequate time for Mastery
Lesson 4 Rounding and Estimating	<ul style="list-style-type: none"> <li>Round numbers to the nearest thousand</li> <li>Locate numbers on a number line</li> <li>Use rounding to estimate or check sums, differences, and products</li> <li>Use related multiplication facts to estimate quotients</li> </ul>			Mastery Provide adequate time for Mastery

Chapter 2-Whole Number Multiplication and Division				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Using a Calculator	<ul style="list-style-type: none"> <li>Use a calculator to add, subtract, multiply, and divide whole numbers</li> </ul>	5.NBT.5 5.NBT.6	M05.A-T.2.1.1 M05.A-T.2.1.2	Mastery Provide adequate time for Mastery
Lesson 2 Multiplying by Tens, Hundreds, or Thousands	<ul style="list-style-type: none"> <li>Multiply numbers by 10, 100, or 1,000 using patterns</li> <li>Multiply numbers up to 4 digits by multiples of 1, 100, or 1,000</li> <li>Use rounding to estimate products</li> </ul>	5.NBT.1 5.NBT.2 5.NBT.5	M05.A-T.1.1.1 M05.A-T.1.1.2 M05.A-T.2.1.1	Mastery Provide adequate time for Mastery
Lesson 3 Multiplying by Powers of Ten	<ul style="list-style-type: none"> <li>Multiply whole numbers by 10 squared or 10 cubed</li> </ul>	5.NBT.2	M05.A-T.1.1.2	Exposure Skill must be addressed but not mastered
Lesson 4 Multiplying by 2-Digit Numbers	<ul style="list-style-type: none"> <li>Multiply a 2-, 3-, or 4-digit number by a 2-digit number</li> </ul>	5.NBT.5 5.OA.1	M05.A-T.2.1.1 M05.B-O.1.1.1	Exposure Skill must be addressed but not mastered
Lesson 5 Dividing by Tens,	<ul style="list-style-type: none"> <li>Divide numbers by 10, 100, or 1,000 using patterns.</li> <li>Divide numbers up to 4 digits by</li> </ul>	5.NBT.1 5.NBT.6	M05.A-T.1.1.1 M05.A-T.2.1.2	Mastery Provide adequate time for Mastery

Hundreds, or Thousands	<ul style="list-style-type: none"> <li>• multiples of 10, 100, or 1,000</li> <li>• Use rounding and related multiplication facts to estimate quotients</li> </ul>			
Lesson 6 Dividing by 2-Digit Numbers	<ul style="list-style-type: none"> <li>• Divide a 2-, 3-, or 4-digit number by a 2-digit number</li> </ul>	5.NBT.6	M05.A-T.2.1.2	Exposure Skill must be addressed but not mastered
Lesson 7 Order of Operations	<ul style="list-style-type: none"> <li>• Use order of operations to simplify a numeric expression</li> <li>• Evaluate numerical expressions with parentheses, brackets, and braces</li> </ul>	5.OA.1 5.OA.2	M05.B-O.1.1.1 M05.B-O.1.1.2	Mastery-with exposure Provide adequate time for Mastery
Lesson 8 Real-World Problems: Multiplication and Division	<ul style="list-style-type: none"> <li>• Use efficient strategies to solve multi-step problems involving multiplication and division</li> <li>• Express and interpret a product or quotient appropriately</li> </ul>	5.NBT.5 5.NBT.6 5.OA.1 5.OA.2	M05.A-T.2.1.1 M05.A-T.2.1.2 M05.B-O.1.1.1 M05.B-O.1.1.2	

Chapter 3-Fractions and Mixed Numbers				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Adding Unlike Fractions	<ul style="list-style-type: none"> <li>• Add two unlike fractions where one denominator is not a multiple of the other</li> <li>• Estimate sums of fractions</li> </ul>	5.NF.1 5.NF.2	M05.A-F.1.1.1 M05.A-F.2.1.1	Mastery Provide adequate time for Mastery
Lesson 2 Subtracting Unlike Fractions	<ul style="list-style-type: none"> <li>• Subtract two unlike fractions where one denominator is not a multiple of the other</li> <li>• Estimate differences between fractions</li> </ul>	5.NF.1 5.NF.2	M05.A-F.1.1.1 M05.A-F.2.1.1	Mastery Provide adequate time for Mastery
Lesson 3 Fractions, Mixed Numbers, and Division Expressions	<ul style="list-style-type: none"> <li>• Understand and apply the relationships between fractions, mixed numbers, and division expressions.</li> </ul>	5.NF.3	M05.A-F.2.1.1	Mastery Provide adequate time for Mastery
Lesson 4 Expressing Fractions, Division Expressions, and Mixed Numbers as Decimals	<ul style="list-style-type: none"> <li>• Express fractions, division expressions, and mixed numbers as decimals</li> </ul>	5.NF.3	M05.A-F.2.1.1	Mastery Provide adequate time for Mastery
Lesson 5 Adding Mixed Numbers	<ul style="list-style-type: none"> <li>• Add mixed numbers with or without renaming</li> <li>• Estimate sums of mixed numbers</li> </ul>	5.NF.1	M05.A-F.1.1.1	Exposure to Mastery Provide adequate time for Mastery
Lesson 6	<ul style="list-style-type: none"> <li>• Subtract mixed numbers with or without</li> </ul>	5.NF.1	M05.A-F.1.1.1	Exposure to

Subtracting Mixed Numbers	<ul style="list-style-type: none"> <li>renaming</li> <li>Estimate differences between mixed numbers</li> </ul>			Mastery Provide adequate time for Mastery
Lesson 7 Real-World Problems: Fractions and Mixed Numbers	<ul style="list-style-type: none"> <li>Solve real-world problems involving fractions and mixed numbers</li> </ul>	5.NF.1 5.NF.2	M05.A-F.1.1.1 M05.A-F.2.1.1	Exposure to Mastery Provide adequate time for Mastery

Chapter 4-Multiplying and Dividing Fractions and Mixed Numbers				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Multiplying Proper Fractions	<ul style="list-style-type: none"> <li>Multiply proper fractions</li> </ul>	5.NF.4.a 5.NF.4.b	M05.A-F.2.1.2	Exposure to Mastery Provide adequate time for Mastery
Lesson 2 Real-World Problems: Multiplying with Proper Fractions	<ul style="list-style-type: none"> <li>Solve real-world problems involving multiplication of proper fractions</li> </ul>	5.NF.4.a 5.NF.6	M05.A-F.2.1.2	Exposure to Mastery Provide adequate time for Mastery
Lesson 3 Multiplying Improper Fractions by Fractions	<ul style="list-style-type: none"> <li>Multiply improper fractions by proper fractions</li> </ul>	5.NF.4.a 5.NF.4.b	M05.A-F.2.1.2	Exposure to Mastery Provide adequate time for Mastery
Lesson 4 Multiplying Mixed Numbers and Whole Numbers	<ul style="list-style-type: none"> <li>Multiply a mixed number by a whole number</li> <li>Compare the size of a product to the size of its factors</li> <li>Multiply whole numbers by proper fractions</li> </ul>	5.NF.5.a 5.NF.5.b 5.NF.6	M05.A-F.2.1.3 M05.A-F.2.1.2	Exposure to Mastery Provide adequate time for Mastery
Lesson 5 Real-World Problems: Multiplying with Mixed Numbers	<ul style="list-style-type: none"> <li>Solve real-world problems involving multiplication of whole numbers and mixed numbers</li> </ul>	5.NF.4.a 5.NF.6	M05.A-F.2.1.2	Exposure to Mastery Provide adequate time for Mastery
Lesson 6 Dividing Fractions and Whole Numbers	<ul style="list-style-type: none"> <li>Divide a fraction by a whole number</li> <li>Divide a whole number by a unit fraction</li> </ul>	5.NF.7.a 5.NF.7.b 5.NF.7.c	M05.A-F.2.1.4	Exposure to Mastery Provide adequate time for Mastery
Lesson 7 Real-World	<ul style="list-style-type: none"> <li>Solve real-world problems involving multiplication and division in fractions.</li> </ul>	5.NF.6 5.NF.7.a	M05.A-F.2.1.2 M05.A-F.2.1.4	Exposure to Mastery

Problems: Multiplying and Dividing with Fractions	<ul style="list-style-type: none"> <li>Solve real-world problems involving division of a whole number by a unit fraction</li> </ul>	5.NF.7.c		Provide adequate time for Mastery
---	---	----------	--	-----------------------------------

Chapter 5-Algebra				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Number Patterns and Relationships	<ul style="list-style-type: none"> <li>Identify and extend number patterns</li> <li>Identify the relationship between two sets of numbers</li> </ul>	5.OA.3	M05.B-O.2.1.1 M05.B-O.2.1.2	Exposure Skill must be addressed but not mastered
Lesson 2 Using Letters as Numbers	<ul style="list-style-type: none"> <li>Recognize, write, and evaluate simple algebraic expressions in one variable</li> </ul>	5.OA.1 5.OA.2	M05.B-O.1.1.1 M05.B-O.1.1.2	Exposure Skill must be addressed but not mastered
Lesson 3 Simplifying Algebraic Expressions	<ul style="list-style-type: none"> <li>Simplify algebraic expressions in one variable</li> </ul>			Exposure Skill must be addressed but not mastered
Lesson 4 Inequalities and Equations	<ul style="list-style-type: none"> <li>Write and evaluate inequalities</li> <li>Solve simple equations</li> </ul>	5.OA.1	M05.B-O.1.1.1	Exposure Skill must be addressed but not mastered
Lesson 5 Real-World Problems: Algebra	<ul style="list-style-type: none"> <li>Solve real-world problems involving algebraic expressions</li> </ul>	5.OA.1	M05.B-O.1.1.1	Exposure Skill must be addressed but not mastered

Chapter 6-Area				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Finding the Area of a Rectangle with fractional Side Lengths	<ul style="list-style-type: none"> <li>Find the area of a rectangle with fractional side lengths by counting square units, and by using a formula</li> </ul>	5.NF.4.b		
Lesson 2 Base and Height of a Triangle	<ul style="list-style-type: none"> <li>Identify the base given the height of a triangle</li> <li>Identify the height given the base of a triangle</li> </ul>			
Lesson 3 Finding the Area of a	<ul style="list-style-type: none"> <li>Find the area of a triangle given its base and its height</li> </ul>	5.G.3 5.G.4	M05.C-G.2.1.1	

Triangle				
----------	--	--	--	--

Chapter 7-Ratio				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Finding Ratio	<ul style="list-style-type: none"> <li>Read and write ratios</li> </ul>			
Lesson 2 Equivalent Ratios	<ul style="list-style-type: none"> <li>Find equivalent ratios</li> </ul>	5.NF.5 5.NF.5.a	M05.A-F.2.1.3	
Lesson 3 Real-World Problems: Ratios	<ul style="list-style-type: none"> <li>Solve real-world problems involving ratios</li> </ul>			
Lesson 4 Ratios in Fraction Form	<ul style="list-style-type: none"> <li>Interpret ratios given in fraction form</li> <li>Write ratios in fraction form to find how many times as large as one number another number is</li> </ul>			
Lesson 5 Comparing Three Quantities	<ul style="list-style-type: none"> <li>Read and write ratios with three quantities</li> <li>Express equivalent ratios with three quantities</li> </ul>	5.NF.5 5.NF.5.a	M05.A-F.2.1.3	
Lesson 6 Real-World Problems; More Ratios	<ul style="list-style-type: none"> <li>Solve real-world problems involving ratios and fractions</li> <li>Solve real-world problems involving ratios with three quantities</li> </ul>	5.NF.5 5.NF.5.a	M05.A-F.2.1.3	

Chapter 8-Decimals				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Understanding Thousandths	<ul style="list-style-type: none"> <li>Read and write thousandths in decimal and fractional forms</li> <li>Represent and interpret thousandths in models or in place-value charts</li> <li>Write a fraction with denominator 1,000 as a decimal</li> </ul>	5.NBT.1 5.NBT.3.a 5.NBT.7	M05.A-T.1.1.1 M05.A-T.1.1.3 M05.A-T.2.1.3	Mastery Provide adequate time for Mastery
Lesson 2 Comparing and Rounding Decimals	<ul style="list-style-type: none"> <li>Compare and order decimals to 3 decimal places</li> <li>Round decimals to the nearest hundredth</li> </ul>	5.NBT.1 5.NBT.3.b 5.NBT.4	M05.A-T.1.1.1 M05.A-T.1.1.4 M05.A-T.1.1.5	Mastery Provide adequate time for Mastery
Lesson 3 Rewriting Decimals as Fractions and Mixed Numbers	<ul style="list-style-type: none"> <li>Rewrite decimals as fractions and mixed numbers in simplest form</li> </ul>	5.NBT.1 5.NBT.3.a	M05.A-T.1.1.1 M05.A-T.1.1.3	Mastery Provide adequate time for Mastery

Chapter 9-Multiplying and Dividing Decimals				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Multiplying Decimals	<ul style="list-style-type: none"> <li>Multiply tenths and hundredths by a 1-digit whole number</li> </ul>	5.NBT.1 5.NBT.7	M05.A-T.1.1.1 M05.A-T.2.1.3	Exposure to Mastery Provide adequate time for Mastery
Lesson 2 Multiplying by Tens, Hundreds, or Thousands	<ul style="list-style-type: none"> <li>Multiply tenths and hundredths by 10, 100, or 1,000</li> <li>Multiply tenths and hundredths by powers of 10</li> <li>Multiply tenths and hundredths by multiples of 10, 100, and 1,000</li> </ul>	5.NBT.1 5.NBT.2 5.NBT.7	M05.A-T.1.1.1 M05.A-T.1.1.2 M05.A-T.2.1.3	Exposure to Mastery Provide adequate time for Mastery
Lesson 3 Dividing Decimals	<ul style="list-style-type: none"> <li>Divide tenths and hundredths by a 1-digit whole number</li> <li>Round quotients to the nearest tenth or hundredth</li> </ul>	5.NBT.1 5.NBT.4 5.NBT.7	M05.A-T.1.1.1 M05.A-T.1.1.5 M05.A-T.2.1.3	Exposure to Mastery Provide adequate time for Mastery
Lesson 4 Dividing by Tens, Hundreds, or Thousands	<ul style="list-style-type: none"> <li>Divide tenths and hundredths by 10, 100, or 1,000</li> <li>Divide tenths and hundredths by multiples of 10, 100, or 1,000</li> </ul>	5.NBT.1 5.NBT.2 5.NBT.7	M05.A-T.1.1.1 M05.A-T.1.1.2 M05.A-T.2.1.3	Exposure to Mastery Provide adequate time for Mastery
Lesson 5 Estimating Decimals	<ul style="list-style-type: none"> <li>Estimate decimal sums, differences, products, and quotients</li> </ul>	5.NBT.4 5.NBT.7	M05.A-T.1.1.5 M05.A-T.2.1.3	Exposure to Mastery Provide adequate time for Mastery
Lesson 6 Converting Metric Units	<ul style="list-style-type: none"> <li>Convert from a larger metric unit to a smaller metric unit</li> <li>Convert from a smaller metric unit to a larger metric unit</li> </ul>	5.MD.1	M05.D-M.1.1.1	Exposure Skill must be addressed but not mastered
Lesson 7 Real-World Problems: Decimals	<ul style="list-style-type: none"> <li>Solve real-world problems involving decimals</li> </ul>	5.NBT.4 5.NBT.7	M05.A-T.1.1.5 M05.A-T.2.1.3	Exposure Skill must be addressed but not mastered

Chapter 10-Percent				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Percent	<ul style="list-style-type: none"> <li>Relate and compare percents, decimals, and fractions</li> </ul>			
Lesson 2 Expressing Fractions as Percents	<ul style="list-style-type: none"> <li>Express fractions as percents</li> </ul>			
Lesson 3	<ul style="list-style-type: none"> <li>Use different ways to find the number</li> </ul>			

Percent of a Number	represented by a percent			
Lesson 4 Real-World Problems: Percent	<ul style="list-style-type: none"> <li>Solve real-world problems involving percents</li> </ul>			

Chapter 11-Graphs and Probability				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Making and interpreting Line Plots	<ul style="list-style-type: none"> <li>Make a line plot to represent data given in fractions of a unit</li> <li>Use fractions and their operations to solve problems using data</li> </ul>	5.MD.2	M05.D-M.2.1.1	
Lesson 2 Making and Interpreting Double Bar Graphs	<ul style="list-style-type: none"> <li>Make and interpret a double bar graph</li> </ul>			
Lesson 3 Graphing an Equation	<ul style="list-style-type: none"> <li>Read points on a coordinate grid</li> <li>Plot points on a coordinate grid</li> <li>Graph an equation</li> </ul>	5.G.1 5.G.2	M05.c-G.1.1.1 M05.C-G.1.1.2	
Lesson 4 Comparing Data Using Line Graphs	<ul style="list-style-type: none"> <li>Compare two sets of data using tables, graphs, and equations</li> <li>Generate, graph, and compare two number patterns.</li> </ul>	5.OA.3	M05.B-O.2.1.1 M05.B-O.2.1.2	
Lesson 5 Combinations	<ul style="list-style-type: none"> <li>List and count all possible combinations</li> <li>Draw a tree diagram to show all possible combinations</li> <li>Use multiplication to find the number of combinations</li> </ul>			
Lesson 6 Theoretical Probability and Experimental Probability	<ul style="list-style-type: none"> <li>Find the experimental probability of an outcome</li> <li>Compare the results of an experiment with the theoretical probability</li> </ul>			

Chapter 12-Angles				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Angles on a Line	<ul style="list-style-type: none"> <li>Understand and apply the property that the sum of angle measures on a line is 180 degrees</li> </ul>			
Lesson 2 Angles at a Point	<ul style="list-style-type: none"> <li>Understand and apply the property that the sum of angle measure at a point is 360 degrees</li> </ul>			
Lesson 3	<ul style="list-style-type: none"> <li>Understand and apply the property</li> </ul>			

Vertical Angles	that vertical angles have equal measures.			
-----------------	---	--	--	--

Chapter 13-Properties of Triangles and Four-Sided Figures				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Classifying Triangles	<ul style="list-style-type: none"> <li>Classify triangles by their side lengths and angle measures</li> </ul>	5.G.3 5.G.4	M05.C-G.2.1.1	
Lesson 2 Measures of Angles of a Triangle	<ul style="list-style-type: none"> <li>Understand and apply the property that the sum of the angle measures of a triangle is 180 degrees</li> </ul>			
Lesson 3 Right, Isosceles, and Equilateral Triangles	<ul style="list-style-type: none"> <li>Understand and apply the properties of right, isosceles, and equilateral triangles</li> </ul>	5.G.3 5.G.4	M05.C-G.2.1.1	
Lesson 4 Triangle Inequalities	<ul style="list-style-type: none"> <li>Understand that the sum of the length of any two sides of a triangle is greater than the length of the third side</li> </ul>		M05.C-G.2.1.1	
Lesson 5 Parallelogram, Rhombus, and Trapezoid	<ul style="list-style-type: none"> <li>Understand and apply the properties of parallelogram, rhombus, and trapezoid</li> </ul>	5.G.3 5.G.4		

Chapter 14-Surface Area and Volume				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Building Solids Using Unit Cubes	<ul style="list-style-type: none"> <li>Build solids using unit cubes</li> <li>Determine the number of unit cubes in an irregular solid</li> </ul>			Exposure to Mastery Provide adequate time for Mastery
Lesson 2 Drawing Cubes and Rectangular Prisms	<ul style="list-style-type: none"> <li>Draw a cube and a rectangular prism on dot paper</li> <li>Complete a partially drawn cube and rectangular prism on dot paper</li> </ul>			Exposure to Mastery Provide adequate time for Mastery
Lesson 3 Prisms and Pyramids	<ul style="list-style-type: none"> <li>Identify and classify prisms and pyramids</li> <li>Identify the solid figure that can be formed from a net</li> </ul>			Exposure to Mastery Provide adequate time for Mastery
Lesson 4 Nets and Surface Area	<ul style="list-style-type: none"> <li>Find the surface area of a prism by adding the areas of all faces</li> </ul>	5.NBT.5	M05.A-T.2.1.1	Exposure to Mastery Provide adequate time for Mastery
Lesson 5 Understanding	<ul style="list-style-type: none"> <li>Find the volumes of cubes and rectangular prisms</li> </ul>	5.MD.3 5.MD.3.a		Exposure to Mastery



and Measuring Volume	<ul style="list-style-type: none"> <li>Find the volume of a solid constructed from unit cubes</li> <li>Compare volumes of cubes, rectangular prisms, and other objects</li> </ul>	5.MD.3.b 5.MD.4 5.MD.5 5.MD.5.a		Provide adequate time for Mastery
Lesson 6 Volume of a Rectangular Prism and Liquid	<ul style="list-style-type: none"> <li>Use a formula to find the volume of a rectangular prism</li> <li>Find the capacity of a rectangular container</li> <li>Solve word problems involving volume of rectangular prisms and liquids</li> </ul>	5.MD.1 5.MD.3 5.MD.3.a 5.MD.3.b 5.MD.4 5.MD.5 5.MD.5.a 5.MD.5.b	M05.D-M.1.1.1 M05.D-M.3.1.1	Exposure to Mastery Provide adequate time for Mastery
Lesson 7 Volume of Composite Solids	<ul style="list-style-type: none"> <li>Find the volume of a solid figure composed of two rectangular prisms</li> <li>Solve real-world problems on the volume of a composite solid</li> </ul>	5.MD.5.c	M05.D-m.3.1.2	Exposure to Mastery Provide adequate time for Mastery