

4th Grade
Math in Focus

Chapter 1-Working with Whole Numbers				
Lesson	Objective	Common Core	PA Core	Mastery/ Exposure
Lesson 1 Numbers to 100,000	<ul style="list-style-type: none"> Write numbers to 100,000 in standard form, word form, and expanded form 	4.NBT.1 4.NBT.2 4.OA.5	M04.A-T.1.1.1 M04.A-T.1.1.2 M04.A-T.1.1.3	Mastery Provide adequate time for Mastery
Lesson 2 Comparing Numbers to 100,000	<ul style="list-style-type: none"> Compare and order numbers to 100,000 Identify how much greater or less one number is than another number Find the rule in a number pattern 	4.NBT.1 4.NBT.2 4.OA.5	M04.A-T.1.1.1 M04.A-T.1.1.2 M04.A-T.1.1.3	Mastery Provide adequate time for Mastery
Lesson 3 Adding and Subtracting Multi-Digit Numbers	<ul style="list-style-type: none"> Add whole numbers up to 100,000 using the standard algorithm Add multi-digit numbers with and without regrouping Subtract whole numbers up to 100,000 using the standard algorithm Subtract multi-digit numbers with and without regrouping 	4.NBT.4	M04.A-T.2.1.1	Mastery Provide adequate time for Mastery

Chapter 2-Estimation and Number Theory				
Lesson	Objective	Common Core	PA Core	Mastery/ Exposure
Lesson 1 Estimation	<ul style="list-style-type: none"> Round numbers to estimate sums, differences, products, and quotients Estimate to check that an answer is reasonable Decide whether an estimate or an exact answer is needed 	4.OA.3	M04.B-O.1.1.3	Mastery Provide adequate time for Mastery
Lesson 2 Factors	<ul style="list-style-type: none"> Find the common factors and greatest common factor of two whole numbers Identify prime numbers and composite numbers 	4.OA.4	M04.B-O.2.1.1	Exposure Skill must be addressed but not mastered
Lesson 3 Multiples	<ul style="list-style-type: none"> Find multiples of whole numbers Find common multiples and the least common multiple of two or more numbers 	4.NBT.2 4.OA.4	M04.A-T.1.1.2 M04.A-T.1.1.3 M04.B-O.2.1.1	Exposure Skill must be addressed but not mastered
Lesson 4 Multiplying Using Models	<ul style="list-style-type: none"> Multiply a 2-digit number by a 1-digit number using an array model and an area model 	4.NBT.5	M04.A-T.2.1.2	Exposure to Mastery Provide adequate time for Mastery

Chapter 3-Whole Number Multiplication and Division				
Lesson	Objective	Common Core	PA Core	Mastery/ Exposure
Lesson 1	<ul style="list-style-type: none"> Use different methods to multiply up to 4 	4.NBT.1	M04.A-T.1.1.1	Mastery

Multiplying by a 1-Digit Number	digit numbers by 1-digit numbers, with or without regrouping	4.NBT.5 4.NBT.6	M04.A-T.2.1.2 M04.A-T.2.1.3	Provide adequate time for Mastery
Lesson 2 Multiplying by a 2-Digit Number	<ul style="list-style-type: none"> Multiply by 2-digit numbers, with or without regrouping Estimate products 	4.NBT.1 4.NBT.5 4.OA.2	M04.A-T.1.1.1 M04.A-T.2.1.2 M04.B-O.1.1.2	Exposure to Mastery Provide adequate time for Mastery
Lesson 3 Modeling Division with Regrouping	<ul style="list-style-type: none"> Model regrouping in division Divide a 3-digit number by a 1-digit number with regrouping 	4.NBT.3 4.NBT.5	M04.A-T.1.1.4 M04.A-T.2.1.2	Mastery Provide adequate time for Mastery
Lesson 4 Dividing by a 1-Digit Number	<ul style="list-style-type: none"> Divide up to a 4-digit number by a 1-digit number with regrouping and with or without remainders Estimate quotients 	4.NBT.1 4.NBT.6	M04.A-T.1.1.1 M04.A-T.2.1.3	Mastery Provide adequate time for Mastery
Lesson 5 Real-World Problems: Multiplication and Division	<ul style="list-style-type: none"> Solve real-world problems Solve multi-step problems using the four operations Represent the problems with a letter standing for the unknown quantity 	4.NBT.6	M04.A-T.2.1.3	Mastery Provide adequate time for Mastery

Chapter 4-Tables and Line Graphs				
Lesson	Objective	Common Core	PA Core	Mastery/ Exposure
Lesson 1 Making and Interpreting a Table	<ul style="list-style-type: none"> Collect, organize, and interpret data in a table Create a table from data in a tally chart and a bar graph 			
Lesson 2 Using a Table	<ul style="list-style-type: none"> Read and interpret data in a table, using rows, columns, and intersections 			
Lesson 3 Line Graphs	<ul style="list-style-type: none"> Make, read, and interpret line graphs Choose an appropriate graph to display a given data set 			

Chapter 5-Data and Probability				
Lesson	Objective	Common Core	PA Core	Mastery/ Exposure
Lesson 1 Average	<ul style="list-style-type: none"> Describe a data set using the average or mean 			
Lesson 2 Median, Mode, and Range	<ul style="list-style-type: none"> Find the mean, median, mode and range of a set of data Make and interpret line plots 			
Lesson 3 Stem-and-Leaf Plots	<ul style="list-style-type: none"> Organize and represent data in a stem-and-leaf plot Use a stem-and-leaf plot to find median, 			Exposure Skill must be addressed but

	mode, and range			not mastered
Lesson 4 Outcomes	<ul style="list-style-type: none"> Decide whether an outcome is certain, more likely, equally likely, less likely, or impossible 			Exposure Skill must be addressed but not mastered
Lesson 5 Probability as a Fraction	<ul style="list-style-type: none"> Determine the probability of an event Express probability as a fraction 	4.NF.1	M04.A-F.1.1.1	Exposure Skill must be addressed but not mastered
Lesson 6 Real-World Problems Data and Probability	<ul style="list-style-type: none"> Solve real-world problems involving probability and measures of central tendency 	4.NF.1 4.OA.3	M04.A-F.1.1.1 M04.B-O.1.1.3	Exposure Skill must be addressed but not mastered

Chapter 6-Fractions and Mixed Numbers				
Lesson	Objective	Common Core	PA Core	Mastery/ Exposure
Lesson 1 Adding Fractions	<ul style="list-style-type: none"> Find equivalent fractions Add fractions 	4.MD.1 4.NF.3a	M04.D-M.1.1.1 M04.A-F.2.1.1	Mastery Provide adequate time for Mastery
Lesson 2 Subtracting Fractions	<ul style="list-style-type: none"> Find equivalent fractions Subtract fractions 	4.NF.1 4.NF.3a	M04.A-F.1.1.1 M04.A-F.2.1.1	Mastery Provide adequate time for Mastery
Lesson 3 Mixed Numbers	<ul style="list-style-type: none"> Write a mixed number for a model Draw models to represent mixed numbers 	4.NF.1 4.NF.3a	M04.A-F.1.1.1 M04.A-F.2.1.1	Mastery Provide adequate time for Mastery
Lesson 4 Improper Fractions	<ul style="list-style-type: none"> Write an improper fraction for a model Express mixed numbers as improper fractions 	4.NF.3a 4.NF.3b	M04.A-F.2.1.1 M04.A-F.2.1.2	Mastery Provide adequate time for Mastery
Lesson 5 Renaming Improper Fractions and Mixed Numbers	<ul style="list-style-type: none"> Use multiplication and division to rename improper fractions and mixed numbers 	4.NF.3b 4.NF.4a	M04.A-F.2.1.2 M-4.A-F.2.1.5	Mastery Provide adequate time for Mastery
Lesson 6 Renaming Whole Numbers when Adding and Subtracting Fractions	<ul style="list-style-type: none"> Add fractions to get mixed numbers sums Subtract fractions from whole numbers 	4.NF.1 4.NF.3a 4.NF.3c	M04.A-F.1.1.1 M04.A-F.2.1.1 M04.A-F.2.1.3	Mastery Provide adequate time for Mastery
Lesson 7 Fraction of a Set	<ul style="list-style-type: none"> Use a bar model to represent a fraction of a set Find a fractional part of a number 	4.NF.4b 4.NF.4c	M04.A-F.2.1.6 M04.A-F.2.1.7	Mastery Provide adequate time

	<ul style="list-style-type: none"> Multiply a fraction and a whole number 			for Mastery
Lesson 8 Real-World Problems: Fractions	<ul style="list-style-type: none"> Solve real-world problems involving fractions 	4.NF.3d 4.NF.4c 4.OA.2	M04.A-F.2.1.4 M04.A-F.2.1.7 M04.B-O.2.1.1	Mastery Provide adequate time for Mastery
Lesson 9 Line Plots with Fractional Units	<ul style="list-style-type: none"> Show measurements in a line plot with a scale of fractions of a unit Solve problems by adding and subtracting fractions using data in a line plot 	4.MD.4	M04.D-m.2.1.1 M04.D-M.2.1.2	Mastery Provide adequate time for Mastery

Chapter 7-Decimals				
Lesson	Objective	Common Core	PA Core	Mastery/ Exposure
Lesson 1 Understandin g Tenths	<ul style="list-style-type: none"> Read and write tenths in decimal and fractional forms Represent and interpret tenths models 	4.NF.5 4.NF.6	M04.A-F.3.1.1 M04.A-F.3.1.2	Mastery Provide adequate time for Mastery
Lesson 2 Understandin g Hundredths	<ul style="list-style-type: none"> Read and write hundredths in decimal and fractional forms Represent and interpret hundredths models 	4.NF.5 4.NF.6	M04.A-F.3.1.1 M04.A-F.3.1.2	Mastery Provide adequate time for Mastery
Lesson 3 Comparing Decimals	<ul style="list-style-type: none"> Compare and order decimals Complete number patterns 	4.NF.7 4.OA.5	M04.A-F.3.1.3 M04.B-O.3.1.1	Mastery Provide adequate time for Mastery
Lesson 4 Rounding Decimals	<ul style="list-style-type: none"> Round decimals to the nearest whole number or tenth 	4.MD.1	M04.D-M.1.1.1	Mastery Provide adequate time for Mastery
Lesson 5 Fractions and Decimals	<ul style="list-style-type: none"> Express a fraction as a decimal and a decimal as a fraction 	4.NF.1 4.NF.3a 4.NF.6 4.NF.7	M04.A-F.1.1.1 M04.A-F.2.1.1 M04.A-F.3.1.2 M04.A-F.3.1.3	Mastery Provide adequate time for Mastery

Chapter 8-Adding and Subtracting Decimals				
Lesson	Objective	Common Core	PA Core	Mastery/ Exposure
Lesson 1 Adding Decimals	<ul style="list-style-type: none"> Add decimals up to two decimal places 	4.NBT.1 4.NBT.2 4.NBT.4 4.NF.5	M04.A-T.1.1.1 M04.A-T.1.1.2 M04.A-T.1.1.3 M04.A-T.2.1.1 M04.A-T.2.1.2	Mastery Provide adequate time for Mastery
Lesson 2 Subtracting Decimals	<ul style="list-style-type: none"> Subtract decimals up to two decimal places 	4.NBT.1 4.NBT.2 4.NBT.4	M04.A-T.1.1.1 M04.A-T.1.1.2 M04.A-T.1.1.3 M04.A-T.2.1.1	Mastery Provide adequate time for Mastery
Lesson 3 Real-World Problems:	<ul style="list-style-type: none"> Solve real-world problems involving addition and subtraction of decimals 	4.MD.1 4.MD.2	M04.D-M.1.1.1 M04.D-M.1.1.2	Mastery Provide adequate time

Decimals				for Mastery
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Chapter 9-Angles				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Understanding and Measuring Angles	<ul style="list-style-type: none"> Estimate and measure angles with a protractor Estimate whether the measure of an angle is less than or greater than a right angle 	4.G.1 4.MD.5 4.MD.6	M04.C-G.1.1.1 M04.D-M.3.1.1	Mastery Provide adequate time for Mastery
Lesson 2 Drawing Angles to 180 degrees	<ul style="list-style-type: none"> Use a protractor to draw acute and obtuse angles 	4.G.1 4.MD.6	M04.C-G.1.1.1 M04.D-M.3.1.1	Mastery Provide adequate time for Mastery
Lesson 3 Turns and Angle Measures	<ul style="list-style-type: none"> Relate $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and full turns to the number of right angles Understand that an angle that turns through $\frac{1}{360}$ of a circle is called a "one-degree angle" Find unknown angles using addition or subtraction Solve addition and subtraction problems to find unknown angles on a diagram in real-world problems 	4.MD.5 4.MD.5a 4.MD.5b 4.MD.7	M04.D-M.3.1.2	Mastery Provide adequate time for Mastery

Chapter 10-Perpendicular and Parallel Line Segments				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Drawing Perpendicular Line Segments	<ul style="list-style-type: none"> Draw perpendicular line segments 	4.G.1 4.G.2	M04.C-G.1.1.1 M04.C-G.1.1.2	Mastery Provide adequate time for Mastery
Lesson 2 Drawing Parallel Line Segments	<ul style="list-style-type: none"> Draw parallel line segments 	4.G.1 4.G.2	M04.C-G.1.1.1 M04.C-G.1.1.2	Mastery Provide adequate time for Mastery
Lesson 3 Horizontal and Vertical Lines	<ul style="list-style-type: none"> Identify horizontal and vertical lines 	4.G.1	M04.C-G.1.1.1	Mastery Provide adequate time for Mastery

Chapter 11-Squares and Rectangles				
Lesson	Objective	Common Core	PA Core	Mastery/Exposure
Lesson 1 Squares and Rectangles	<ul style="list-style-type: none"> Understand and apply the properties of squares and rectangles 	4.G.2 4.MD.1 4.MD.2	M04.C-G.1.1.2 M04.D-M.1.1.1 M04.D-M.1.1.2	Mastery Provide adequate time for Mastery

Lesson 2 Properties of Squares and Rectangles	<ul style="list-style-type: none"> Find unknown angle measures and side lengths of squares and rectangles 	4.OA.3 4.MD.1 4.MD.2 4.MD.7	M04.B-O.1.1.3 M04.D-M.1.1.1 M04.D-M.1.1.2 M04.D-M.3.1.2	Mastery Provide adequate time for Mastery
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Chapter 12-Conversion of Measurements				
Lesson	Objective	Common Core	PA Core	Mastery/ Exposure
Lesson 1 Length	<ul style="list-style-type: none"> Understand the relative size of measurement units Convert metric units of length Convert customary units of length 	4.MD.1	M04.D-M.1.1.1	Mastery Provide adequate time for Mastery
Lesson 2 Mass, Weight, and Volume	<ul style="list-style-type: none"> Understand the relative size of measurement units Convert metric units of mass Convert customary units of weight 	4.MD.1	M04.D-M.1.1.1	Mastery Provide adequate time for Mastery
Lesson 3 Time	<ul style="list-style-type: none"> Understand the relative size of measurement units Convert units of time 	4.MD.1	M04.D-M.1.1.1	Mastery Provide adequate time for Mastery
Lesson 4 Real-World Problems: Measurement	<ul style="list-style-type: none"> Use the four operations to solve word problems involving distance, time, volume, mass and money Represent measurement quantities using line diagrams 	4.MD.1	M04.D-M.1.1.1	Mastery Provide adequate time for Mastery

Chapter 13-Area and Perimeter				
Lesson	Objective	Common Core	PA Core	Mastery/ Exposure
Lesson 1 Area of a Rectangle	<ul style="list-style-type: none"> Estimate the area of a rectangle by counting grid squares Find the area of rectangles using a formula 	4.MD.2 4.MD.3	M04.D-M.1.1.2 M04.D-M.1.1.3	Mastery Provide adequate time for Mastery
Lesson 2 Rectangles and Squares	<ul style="list-style-type: none"> Solve problems involving the area and perimeter of squares and rectangles 	4.MD.2 4.MD.3	M04.D-M.1.1.2 M04.D-M.1.1.3	Mastery Provide adequate time for Mastery
Lesson 3 Composite Figures	<ul style="list-style-type: none"> Find the perimeter and area of a composite figure 	4.OA.3 4.MD.3	M04.B-O.1.1.3 M04.D-M.1.1.3	Mastery Provide adequate time for Mastery
Lesson 4 Using Formulas for Area and Perimeter	<ul style="list-style-type: none"> Solve word problems involving estimating area of figures Solve word problems involving area and perimeter of composite figures 	4.OA.3 4.MD.3	M04.B-O.1.1.3 M04.D-M.1.1.3	Mastery Provide adequate time for Mastery

Chapter 14-Symmetry				
Lesson	Objective	Common	PA Core	Mastery/

		Core		Exposure
Lesson1 Identifying Lines of Symmetry	<ul style="list-style-type: none"> Identify a line of symmetry of a figure 	4.G.3	M04.C-G.1.1.3	Mastery Provide adequate time for Mastery
Lesson 2 Rotational Symmetry	<ul style="list-style-type: none"> Relate rotational symmetry to turns Trace a figure to determine whether it has rotational symmetry 			
Lesson 3 Making Symmetric Shapes and Patterns	<ul style="list-style-type: none"> Draw a shape or pattern about a line of symmetry and check for rotational symmetry Complete a symmetric shape or pattern Create symmetric patterns on grid paper 	4.G.3 4.OA.5	M04.C-G.1.1.3 M04.B-O.3.1.1	Mastery Provide adequate time for Mastery

Chapter 15-Tessellations				
Lesson	Objective	Common Core	PA Core	Mastery/ Exposure
Lesson 1 Identifying Tessellations	<ul style="list-style-type: none"> Recognize and make tessellations Identify the unit shape used in a tessellation 	4.OA.5	M04.B-O.3.1.1	Mastery Provide adequate time for Mastery
Lesson 2 More Tessellations	<ul style="list-style-type: none"> Tessellate shapes in different ways 	4.OA.5	M04.B-O.3.1.1	Mastery Provide adequate time for Mastery

Missing Standards	Resources
M04.A-T.2.1.4	
M04.A-F.1.1.2	
M04.B-O.1.1.1	
M04.B-O.1.1.4	
M04.B-O.3.1.2	
M04.B-O.3.1.3	
M04.D-M.1.1.4	
M04.D-M.2.1.3	