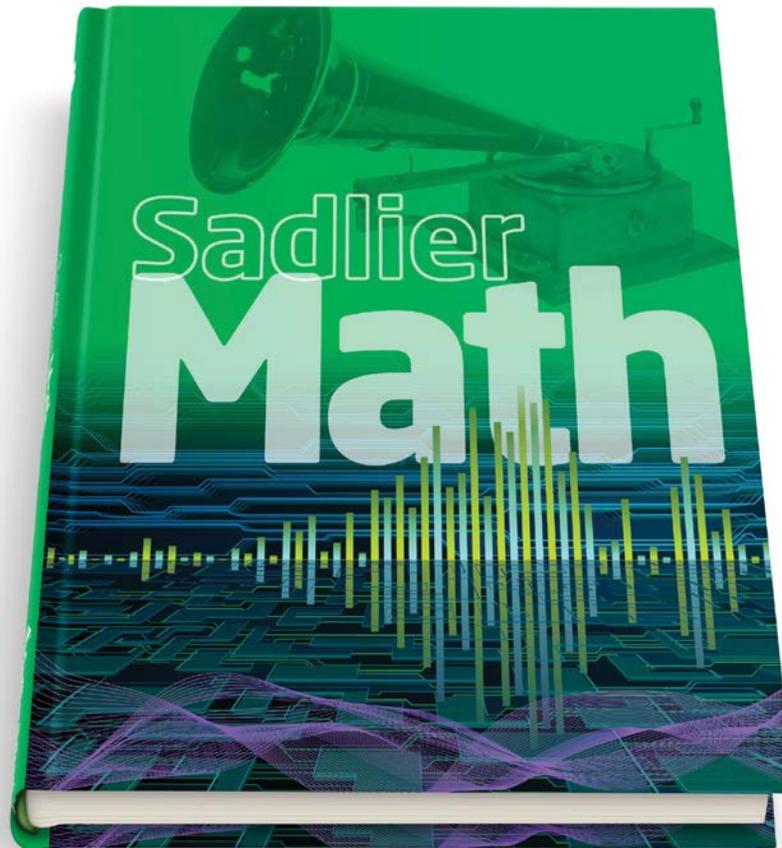# *Sadlier Math*™

Correlation to the Archdiocese of Cincinnati
2020 Graded Course of Study for Mathematics

Grade 3

Learn more at www.SadlierSchool.com/SadlierMath

STANDARD 1 – OPERATION AND ALGEBRAIC THINKING (OA)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3

M.OA.3.1 Represent and solve problems involving multiplications and divisions.

M.OA.3.1.1 Interpret products of whole numbers. For example, interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each.	**Chapter 4 Multiplication and Division Concepts**
	    4-1 Represent Multiplication as Repeated Addition—pp. 66–67
	    4-2 Represent Multiplication on a Number Line—pp. 68–69
	    4-3 Represent Multiplication as Arrays—pp. 70–71
	    4-7 Problem Solving: Write an Equation—pp. 80–81
	
	Chapter 5 Multiplication Facts
	    5-1 Multiply by 2—pp. 88–89
	    5-2 Multiply by 5—pp. 90–91
	    5-3 Multiply by 9—pp. 92–93
	    5-4 Multiply by 1 and 10—pp. 96–97
	
	Chapter 6 More Multiplication Facts
	    6-2 Multiply by 3—pp. 114–115
	    6-3 Multiply by 4—pp. 116–117
	    6-4 Multiply by 6—pp. 118–119
	    6-5 Multiply by 7—pp. 120–121
	    6-6 Multiply by 8—pp. 122–123
	
	Chapter 8 More Division Facts
	    8-7 Fact Families—pp. 176–177
	    8-8 Use Facts to Solve Problems—pp. 178–179

M.OA.3.1.2 Interpret whole-number quotients of whole numbers. For example, interpret 56 ÷ 8 as the of objects in each share when 56 objects are portioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each.	**Chapter 4 Multiplication and Division Concepts**
	    4-5 Represent Division by Sharing—pp. 76–77
	    4-6 Represent Division by Repeated Subtraction—pp. 78–79
	
	Chapter 7 Division Facts
	    7-2 Divide by 2—pp. 144–145
	    7-3 Divide by 3—pp. 146–147
	    7-4 Divide by 4—pp. 150–151
	    7-5 Divide by 5—pp. 152–153
	
	Chapter 8 More Division Facts
	    8-1 Divide by 6—pp. 162–163
	    8-2 Divide by 7—pp. 164–165
	    8-3 Divide by 8—pp. 166–167
	    8-4 Divide by 9—pp. 168–169
	    8-5 One and Zero in Division—pp. 172–173
	    8-7 Fact Families—pp. 176–177
	    8-8 Use Facts to Solve Problems—pp. 178–179

STANDARD 1 – OPERATION AND ALGEBRAIC THINKING (OA)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3

M.OA.3.1 Represent and solve problems involving multiplications and divisions.

M.OA.3.1.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities.

M.OA.3.1.4 Using drawings and equations with a symbol for the unknown to represent the problems, solve word problems involving equal groups, arrays, and measurement quantities.

Chapter 4 Multiplication and Division Concepts
  4-1 Represent Multiplication as Repeated Addition—pp. 66–67
  4-2 Represent Multiplication on a Number Line—pp. 68–69
  4-3 Represent Multiplication as Arrays—pp. 70–71
  4-4 Multiply with the Commutative Property—pp. 74–75
  4-5 Represent Division by Sharing—pp. 76–77
  4-6 Represent Division by Repeated Subtraction—pp. 78–79
  4-7 Problem Solving: Write an Equation—pp. 80–81

Chapter 5 Multiplication Facts
  5-1 Multiply by 2—pp. 88–89
  5-2 Multiply by 5—pp. 90–91
  5-3 Multiply by 9—pp. 92–93
  5-4 Multiply by 1 and 10—pp. 96–97
  5-5 Multiply by 10—pp. 98–99
  5-7 Solve for Unknowns—pp. 102–103
  5-8 Problem Solving: Use a Model—pp. 104–105

Chapter 6 More Multiplication Facts
  6-1 Break Apart to Multiply—pp. 112–113
  6-2 Multiply by 3—pp. 114–115
  6-3 Multiply by 4—pp. 116–117
  6-4 Multiply by 6—pp. 118–119
  6-5 Multiply by 7—pp. 120–121
  6-6 Multiply by 8—pp. 122–123
  6-7 Use a Bar Model to Multiply—pp. 126–127
  6-9 Use the Associative Property to Multiply—pp. 130–131

Chapter 7 Division Facts
  7-1 Relate Multiplication and Division—pp. 142–143
  7-2 Divide by 2—pp. 144–145
  7-3 Divide by 3—pp. 146–147
  7-4 Divide by 4—pp. 150–151
  7-5 Divide by 5—pp. 152–153
  7-6 Problem Solving: Use Drawings to Solve Problems—pp. 154–155

Chapter 8 More Division Facts
  8-1 Divide by 6—pp. 162–163
  8-2 Divide by 7—pp. 164–165

STANDARD 1 – OPERATION AND ALGEBRAIC THINKING (OA)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3

M.OA.3.1 Represent and solve problems involving multiplications and divisions.

	8-3 Divide by 8—pp. 166–167 8-4 Divide by 9—pp. 168–169 8-5 One and Zero in Division—pp. 172–173 8-8 Use Facts to Solve Problems—pp. 178–179

M.OA.3.1.5 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true. $8 \times \square = 48$, $5 = \square + 3$, $6 \times 6 = \square$.	**Chapter 5 Multiplication Facts**
	  5-7 Solve for Unknowns—pp. 102–103
	Chapter 6 More Multiplication Facts
	  6-7 Use a Bar Model to Multiply—pp. 126–127
	  6-9 Use the Associative Property to Multiply—pp. 130–131
	Chapter 7 Division Facts
	  7-1 Relate Multiplication and Division—pp. 142–143
	  7-2 Divide by 2—pp. 144–145
	  7-3 Divide by 3—pp. 146–147
	  7-4 Divide by 4—pp. 150–151
	  7-5 Divide by 5—pp. 152–153

M.OA.3.2 Understand properties of multiplication and the relationship between multiplication and division.

M.OA.3.2.1 Apply properties of operations as strategies to multiply and divide. For example, if $6 \times 4 = 24$ is the known, then $4 \times 6 = 24$ is also known (Commutative Property of Multiplication). For example, $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$ (Associative Property of Multiplication); for example, knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ (Distributive Property).	**Chapter 4 Multiplication and Division Concepts**
	  4-4 Multiply with the Commutative Property—pp. 74–75
	Chapter 5 Multiplication Facts
	  5-4 Multiply by 1 and 10—pp. 96–97
	Chapter 6 More Multiplication Facts
	  6-1 Break Apart to Multiply—pp. 112–113
	  6-2 Multiply by 3—pp. 114–115
	  6-3 Multiply by 4—pp. 116–117
	  6-4 Multiply by 6—pp. 118–119
	  6-5 Multiply by 7—pp. 120–121
	  6-6 Multiply by 8—pp. 122–123
	  6-7 Use a Bar Model to Multiply—pp. 126–127
	  6-9 Use the Associative Property to Multiply—pp. 130–131

STANDARD 1 – OPERATION AND ALGEBRAIC THINKING (OA)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3

M.OA.3.2 Understand properties of multiplication and the relationship between multiplication and division.

M.OA.3.2.2 Understand division as an unknown-factor problem. For example, 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.	**Chapter 7 Division Facts** 7-1 Relate Multiplication and Division—pp. 142–143 7-2 Divide by 2—pp. 144–145 7-3 Divide by 3—pp. 146–147 7-4 Divide by 4—pp. 150–151 7-5 Divide by 5—pp. 152–153 7-6 Problem Solving: Use Drawings to Solve Problems—pp. 154–155 **Chapter 8 More Division Facts** 8-1 Divide by 6—pp. 162–163 8-2 Divide by 7—pp. 164–165 8-3 Divide by 8—pp. 166–167 8-4 Divide by 9—pp. 168–169 8-5 One and Zero in Division—pp. 172–173 8-7 Fact Families—pp. 176–177 8-8 Use Facts to Solve Problems—pp. 178–179

M.OA.3.3 Multiply and Divide within 100.

M.OA.3.3.1 Fluently multiple and divide within 100, using strategies such as the relationship between multiplication and division. For example, knowing that 8 x 5 = 40, one knows 40 ÷ 5 = 8 or properties of operations.	**Chapter 5 Multiplication Facts** 5-1 Multiply by 2—pp. 88–89 5-2 Multiply by 5—pp. 90–91 5-3 Multiply by 9—pp. 92–93 5-4 Multiply by 1 and 10—pp. 96–97 5-5 Multiply by 10—pp. 98–99 5-6 Find Patterns in the Multiplication Table—pp. 100–101 5-7 Solve for Unknowns—pp. 102–103 **Chapter 6 More Multiplication Facts** 6-1 Break Apart to Multiply—pp. 112–113 6-2 Multiply by 3—pp. 114–115 6-3 Multiply by 4—pp. 116–117 6-4 Multiply by 6—pp. 118–119 6-5 Multiply by 7—pp. 120–121 6-6 Multiply by 8—pp. 122–123 6-7 Use a Bar Model to Multiply—pp. 126–127 6-8 Problem Solving: Make a Table—pp. 128–129 6-9 Use the Associative Property to Multiply—pp. 130–131 *continued*

STANDARD 1 – OPERATION AND ALGEBRAIC THINKING (OA)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3

M.OA.3.3 Multiply and Divide within 100.

	6-10 Find More Multiplication Patterns—pp. 132–133 6-11 Multiply by Multiples of 10—pp. 134–135 **Chapter 7 Division Facts** 7-1 Relate Multiplication and Division—pp. 142–143 7-2 Divide by 2—pp. 144–145 7-3 Divide by 3—pp. 146–147 7-4 Divide by 4—pp. 150–151 7-5 Divide by 5—pp. 152–153 **Chapter 8 More Division Facts** 8-1 Divide by 6—pp. 162–163 8-2 Divide by 7—pp. 164–165 8-3 Divide by 8—pp. 166–167 8-4 Divide by 9—pp. 168–169 8-5 One and Zero in Division—pp. 172–173 8-7 Fact Families—pp. 176–177 8-8 Use Facts to Solve Problems—pp. 178–179

M.OA.3.4 Solve problems involving the four operations and identify and explain patterns in arithmetic.

M.OA.3.4.1 Solve two-steps word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity.	**Chapter 2 Addition Within 1000** 2-8 Problem Solving: Use a Model—pp. 38–39 **Chapter 6 More Multiplication Facts** 6-8 Problem Solving: Make a Table—pp. 128–129 **Chapter 8 More Division Facts** 8-6 Problem Solving: Work Backward—pp. 174–175 **Chapter 11 Measurement** 11-6 Problem Solving: Write an Equation—pp. 244–245 **Chapter 12 Data** 12-5 Data and Two-Step Problems—pp. 260–261
M.OA.3.4.2 Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	**Chapter 1 Number Sense** 1-4 Round Numbers to the Nearest Ten—pp. 10–11 1-5 Round Numbers to the Nearest Hundred—pp. 12–13 1-6 Problem Solving: Use a Four-Step Process (does the answer makes sense?)—pp. 14–15 *continued*

STANDARD 1 – OPERATION AND ALGEBRAIC THINKING (OA)

Grade 3 Standard & Benchmark Description	Sadlier Math, Grade 3
M.OA.3.4 Solve problems involving the four operations and identify and explain patterns in arithmetic.	
	Chapter 2 Addition Within 1000 2-3 Estimate Sums—pp. 26–27 **Chapter 3 Subtraction Within 1000** 3-1 Estimate Differences—pp. 46–47 3-4 Subtract Three-Digit Numbers (estimate by rounding)—pp. 54–55 3-5 Subtract Across Zeros (answer is reasonable)—pp. 56–57
M.OA.3.4.3 Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations. For example, identify that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.	**Chapter 2 Addition Within 1000** 2-2 Explore Addition Patterns—pp. 24–25 **Chapter 5 Multiplication Facts** 5-1 Multiply by 2 (patterns)—pp. 88–89 5-5 Multiply by 10—pp. 98–99 5-6 Find Patterns in the Multiplication Table—pp. 100–101 **Chapter 6 More Multiplication Facts** 6-2 Multiply by 3—pp. 114–115 6-3 Multiply by 4—pp. 116–117 6-4 Multiply by 6—pp. 118–119 6-5 Multiply by 7—pp. 120–121 6-6 Multiply by 8—pp. 122–123 6-10 Find More Multiplication Patterns—pp. 132–133

STANDARD 2 – NUMBERS AND OPERATIONS IN BASE TEN (NBT)

Grade 3 Standard. & Benchmark Description	Sadlier Math, Grade 3
M.NBT.3.1 Use place value understanding and properties of operations to perform multi-digit arithmetic.	
M.NBT.3.1.1 Use place value understanding to round whole numbers to the nearest 10 or 100.	**Chapter 1 Number Sense** 1-4 Round Numbers to the Nearest Ten—pp. 10–11 1-5 Round Numbers to the Nearest Hundred—pp. 12–13

STANDARD 2 – NUMBERS AND OPERATIONS IN BASE TEN (NBT)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3

M.NBT.3.1 Use place value understanding and properties of operations to perform multi-digit arithmetic.

M.NBT.3.1.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/ or the relationship between addition and subtraction.	**Chapter 2 Addition Within 1000**
	  2-1 Use Addition Properties—pp. 22–23
	  2-3 Estimate Sums—pp. 26–27
	  2-4 Add with Partial Sums—pp. 30–31
	  2-5 Use Place Value to Add: Regroup Once (whole dollar amounts)—pp. 32–33
	  2-6 Use Place Value to Add: Regroup Twice—pp. 34–35
	  2-7 Add with Three or More Addends—pp. 36–37
	  2-8 Problem Solving: Use a Model (whole dollar amounts)—pp. 38–39
	
	Chapter 3 Subtraction Within 1000
	  3-1 Estimate Differences—pp. 46–47
	  3-2 Relate Addition and Subtraction—pp. 48–49
	  3-3 Subtract with Partial Differences—pp. 50–51
	  3-4 Subtract Three-Digit Numbers—pp. 54–55
	  3-5 Subtract Across Zeros—pp. 56–57
	  3-6 Problem Solving: Write and Solve an Equation—pp. 58–59

M.NBT.3.1.3 Multiply one-digit whole numbers by multiples of 10 in the range 10 – 90. For example, 9 x 80, 5 x 60 using strategies based on place value and properties of operations.	**Chapter 5 Multiplication Facts**
	  5-5 Multiply by 10—pp. 98–99
	
	Chapter 6 More Multiplication Facts
	  6-11 Multiply by Multiples of 10—pp. 134–135

STANDARD 3 – NUMBER AND OPERATIONS — FRACTIONS (NF)

Grade 3 Standard. & Benchmark Description	*Sadlier Math*, Grade 3

M.NF.3.1 Develop understanding of fractions as numbers.

M.NF.3.1.1 Grade 3 expectations for fractions are limited to denominators of 2, 3, 4, 6, and 8.
 	
M.NF.3.1.2 Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts.
	Chapter 9 Fraction Concepts
	  9-1 Understand Equal Parts—pp. 188–189
	  9-2 Name Unit Fractions of a Whole—pp. 190–191
	  9-4 Name Fractions of a Whole—pp. 196–197

STANDARD 3 – NUMBER AND OPERATIONS — FRACTIONS (NF)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3
M.NF.3.1 Develop understanding of fractions as numbers.	
M.NF.3.1.3 Understand a fraction a/b as the quantity formed by a parts of size $1/b$.	**Chapter 9 Fraction Concepts** 9-1 Understand Equal Parts—pp. 188–189 9-2 Name Unit Fractions of a Whole—pp. 190–191 9-4 Name Fractions of a Whole—pp. 196–197
M.NF.3.1.4 Understand a fraction as a number on the number line; represent fractions on a number line diagram.	**Chapter 9 Fraction Concepts** 9-5 Find Fractions on a Number Line—pp. 198–199
M.NF.3.1.5 Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as the whole and portioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line.	**Chapter 9 Fraction Concepts** 9-3 Find Unit Fractions on a Number Line—pp. 192–193
M.NF.3.1.6 Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.	**Chapter 9 Fraction Concepts** 9-5 Find Fractions on a Number Line—pp. 198–199
M.NF.3.1.7 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.	**Chapter 10 Fractions: Comparison and Equivalence** 10-2 Find Equivalent Fractions—pp. 212–213 10-3 Find Equivalent Fractions on a Number Line—pp. 214–215
M.NF.3.1.8 Understand two fractions as equivalent (equal) if they are the same size or the same point on a number line.	**Chapter 10 Fractions: Comparison and Equivalence** 10-2 Find Equivalent Fractions—pp. 212–213 10-3 Find Equivalent Fractions on a Number Line—pp. 214–215
M.NF.3.1.9 Recognize and generate as equivalent fractions, for example, 1/2 = 2/4, 4/6 = 2/3. Explain why the fractions are equivalent, for example, by using a visual fraction model.	**Chapter 10 Fractions: Comparison and Equivalence** 10-2 Find Equivalent Fractions—pp. 212–213 10-3 Find Equivalent Fractions on a Number Line—pp. 214–215

STANDARD 3 – NUMBER AND OPERATIONS — FRACTIONS (NF)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3
M.NF.3.1 Develop understanding of fractions as numbers.	
M.NF.3.1.10 Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. Example: Express 3 in the form 3 = 3/1, recognize that 6/1 = 6; locate 4/4 and 1 at the same point on a number line.	**Chapter 9 Fraction Concepts** 9-6 Use a Fraction to Find the Whole—pp. 200–201 **Chapter 10 Fractions: Comparison and Equivalence** 10-1 Whole Numbers and Fractions—pp. 210–211
M.NF.3.1.11 Compare two fractions with the same numerator or the same denominator by reasoning about their size.	**Chapter 10 Fractions: Comparison and Equivalence** 10-4 Compare Fractions with the Same Denominator—pp. 218–219 10-5 Compare Fractions with the Same Numerator—pp. 220–221 10-6 Order Fractions—pp. 222–223
M.NF.3.1.12 Recognize that comparisons of fractions are valid only when two fractions, refer to the same whole.	**Chapter 10 Fractions: Comparison and Equivalence** 10-4 Compare Fractions with the Same Denominator—pp. 218–219 10-5 Compare Fractions with the Same Numerator—pp. 220–221 10-6 Order Fractions—pp. 222–223
M.NF.3.1.13 Record the results of comparisons with the symbols ≥, =, or ≤, and justify the conclusion, for example by using a visual fraction model.	**Chapter 10 Fractions: Comparison and Equivalence** 10-4 Compare Fractions with the Same Denominator—pp. 218–219 10-5 Compare Fractions with the Same Numerator—pp. 220–221 10-6 Order Fractions—pp. 222–223

STANDARD 4 – MEASUREMENT AND DATA (MD)

Grade 3 Standard. & Benchmark Description	*Sadlier Math*, Grade 3
M.MD.3.1 Solve problems involving money, measurement, and estimation of intervals of time, liquid volumes, and masses of objects.	
M.MD.3.1.1 Work with time and money. Tell and write time to the nearest minute.	**Chapter 13 Time** 13-1 Tell Time to the Minute—pp. 276–277

STANDARD 4 – MEASUREMENT AND DATA (MD)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3

M.MD.3.1 Solve problems involving money, measurement, and estimation of intervals of time, liquid volumes, and masses of objects.

M.MD.3.1.2 Measure time intervals in minutes (within 90 minutes). **M.MD.3.1.3** Solve problems involving addition and subtraction of time intervals in minutes, for example, by representing the problem on a number line diagram or clock.	**Chapter 13 Time** 13-1 Tell Time to the Minute—pp. 276–277 13-2 Measure Elapsed Time—pp. 278–279 13-3 Find Start and End Times—pp. 282–283 13-4 Operations with Time—pp. 284–285 13-5 Problem Solving: Use Logical Reasoning—pp. 286–287
M.MD.3.1.4 Solve word problems by adding and subtracting within 1,000 dollars with dollars, and cents with cents (not using dollars and cents simultaneously). **M.MD.3.1.5** Use the $ and ¢ symbol appropriately (not including decimal notation).	**Chapter 2 Addition Within 1000** 2-4 Add with Partial Sums—pp. 30–31 2-5 Use Place Value to Add: Regroup Once—pp. 32–33 2-8 Problem Solving: Use a Model—pp. 38–39 **Chapter 3 Subtraction Within 1000** 3-1 Estimate Differences—pp. 46–47 **Chapter 8 More Division Facts** 8-6 Problem Solving: Work Backward—pp. 174–175 8-8 Use Facts to Solve Problems—pp. 178–179 **Chapter 12 Data** 12-5 Data and Two-Step Problems—pp. 260–261
M.MD.3.1.6 Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms, and liters.	**Chapter 11 Measurement** 11-2 Estimate and Measure Liquid Volume—pp. 234–235 11-3 Operations with Liquid Volume—pp. 236–237 11-4 Estimate and Measure Mass—pp. 240–241 11-5 Operations with Mass—pp. 242–243
M.MD.3.1.7 Add, subtract, multiply or divide whole numbers to solve one-step word problems involving masses or volumes that are given in the same units, for example, by using drawing (such as a beaker with a measurement scale) to represent a problem.	**Chapter 11 Measurement** 11-2 Estimate and Measure Liquid Volume—pp. 234–235 11-3 Operations with Liquid Volume—pp. 236–237 11-4 Estimate and Measure Mass—pp. 240–241 11-5 Operations with Mass—pp. 242–243 11-6 Problem Solving: Write an Equation—pp. 244–245

STANDARD 4 – MEASUREMENT AND DATA (MD)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3
M.MD.3.2 Represent and interpret data.	

M.MD.3.2.1 Create scaled picture graphs to represent a data set with several categories.	**Chapter 12 Data** 12-1 Read Picture Graphs—pp. 252–253 12-2 Make Picture Graphs—pp. 254–255
M.MD.3.2.2 Create scaled bar graphs to represent a data set with several categories.	**Chapter 12 Data** 12-3 Read Bar Graphs—pp. 256–257 12-4 Make Bar Graphs—pp. 258–259
M.MD.3.2.3 Solve one – and two steps "how many more" and "how many less" problems using information presented in the scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets, then determine how many more/less in two given categories.	**Chapter 12 Data** 12-3 Read Bar Graphs—pp. 256–257 12-4 Make Bar Graphs—pp. 258–259 12-5 Data and Two-Step Problems—pp. 260–261 12-6 Problem Solving: Compare Models—pp. 264–265
M.MD.3.2.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths on an inch. Show this data by creating a line plot, where the horizontal scale is marked off in appropriate units, whole numbers, halves, or quarters.	**Chapter 11 Measurement** 11-1 Measure Length—pp. 232–233 **Chapter 12 Data** 12-7 Read Line Plots—pp. 266–267 12-8 Make Line Plots—pp. 268–269

M.MD.3.3 Geometric measurement: Understand concepts of area and relate area to multiplication and to addition.	

M.MD.3.3.1 Recognize area as an attribute of plane figures and understand concepts of area measurement.	**Chapter 15 Area** 15-1 Understand Area—pp. 312–313
M.MD.3.3.2 A square with side length 1 unit, called " a unit square, is said to have "one square unit" of area, and can be used to measure area.	**Chapter 15 Area** 15-1 Understand Area—pp. 312–313
M.MD.3.3.3 A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.	**Chapter 15 Area** 15-1 Understand Area—pp. 312–313

STANDARD 4 – MEASUREMENT AND DATA (MD)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3
M.MD.3.3 Geometric measurement: Understand concepts of area and relate area to multiplication and to addition.	
M.MD.3.3.4 Measure areas by counting unit squares (square cm, square m, square in, square ft., and improvised units).	**Chapter 15 Area** 15-1 Understand Area—pp. 312–313 15-2 Find Area Using Standard Units—pp. 314–315 15-3 Find the Area of a Rectangle and a Square—pp. 316–317
M.MD.3.3.5 Relate area to the operation of multiplication and addition.	**Chapter 15 Area** 15-3 Find the Area of a Rectangle and a Square—pp. 316–317
M.MD.3.3.6 Find the area of a rectangle with whole–numbers side lengths by tiling it, and show that the area is the same as would be found by multiplying the side length.	**Chapter 15 Area** 15-3 Find the Area of a Rectangle and a Square—pp. 316–317
M.MD.3.3.7 Multiply side lengths to find areas of rectangles with whole–number side lengths in the context of solving real–world and mathematical problems, and represent whole–number products as rectangular areas in mathematical reasoning.	**Chapter 15 Area** 15-3 Find the Area of a Rectangle and a Square—pp. 316–317
M.MD.3.3.8 Use tiling to show in a concrete case that the area of a rectangle with whole–number side lengths a and $b + c$ is the sum of a x b and a x c.	**Chapter 15 Area** 15-4 Find Area Using the Distributive Property—pp. 320–321
M.MD.3.3.9 Recognize area as additive. Find the area of figures composed of rectangles by decomposing into non-overlapping rectangles and adding the area of the non-overlapping parts, applying this technique to solve real world problems.	**Chapter 15 Area** 15-5 Find Area of Composite Shapes—pp. 322–323

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STANDARD 4 – MEASUREMENT AND DATA (MD)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3

M.MD.3.4 Geometric measure: Recognize perimeter as an attribute of plane figure and distinguish between linear and area measure.

M.MD.3.4.1 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	**Chapter 16 Perimeter** 16-1 Understand Perimeter—pp. 332–333 16-2 Find Perimeter—pp. 334–335 16-3 Find Unknown Side Lengths—pp. 336–337 16-5 Same Perimeter, Different Areas—pp. 342–343 16-6 Same Area, Different Perimeter—pp. 344–345

STANDARD 5 – GEOMETRY (G)

Grade 3 Standard & Benchmark Description	*Sadlier Math*, Grade 3

M..G.3.1 Reason with shapes and their attributes.

M.G.3.1.1 Draw and understand that shapes in different categories, for example, rhombuses, rectangles and squares may share attributes, i.e. (having four sides); and shared attributes can define a larger category (e.g. quadrilaterals).	**Chapter 14 Two-Dimensional Shapes** 14-1 Classify Polygons—pp. 294–295 14-2 Classify Quadrilaterals—pp. 296–297 14-3 Draw Quadrilaterals—pp. 298–299
M.G.3.1.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole, for example, partition a shape into 4 parts with equal area, and describe the area of each part as ¼ of the area of the shape.	**Chapter 9 Fraction Concepts** 9-1 Understand Equal Parts—pp. 188–189 **Chapter 15 Area** 15-2 Find Area Using Standard Units—pp. 314–315