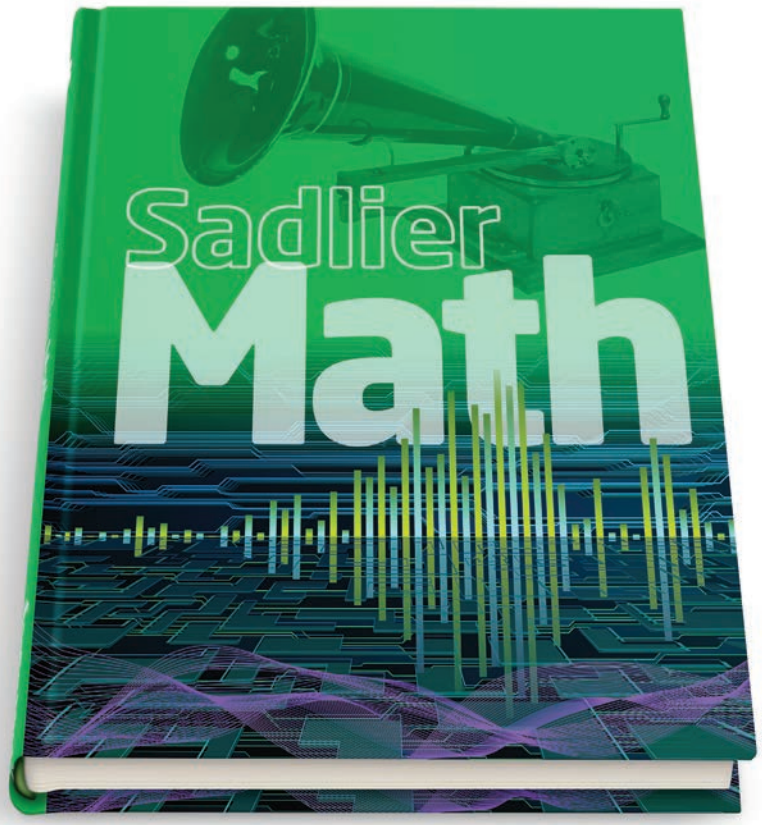
Sadlier Math™

Correlation to the Archdiocese of Louisville Mathematics Standards 2019

Grade 3



Learn more at www.SadlierSchool.com/SadlierMath

OPERATIONS AND ALGEBRAIC THINKING (OA)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
OCS.Math.3.1 Represent and solve problems involving multiplication and division.	
***OCS.Math.3.1a** Interpret and demonstrate products of whole numbers (for example, describe a context in which a total number of objects can be expressed as 5X7)	**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
OCS.Math.3.1b Interpret whole number quotients of whole numbers (for example, describe a context in which a number of shared or number of groups can be expressed as 56/8)	**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
***OCS.Math.3.1c** Use multiplication and division within 100 to solve word problems in situations 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 *continued*

OPERATIONS AND ALGEBRAIC THINKING (OA)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
	• 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 • 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
***OCS.Math.3.1d** Determine the unknown whole number in a multiplication or division equation relating three whole numbers	**Chapter 5 Multiplication Facts** • 5-7 Solve for Unknowns—pp. 102–103 **Chapter 6 More Multiplication Facts** • 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

*Essential Standard

OPERATIONS AND ALGEBRAIC THINKING (OA)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
OCS.Math.3.2 Understand properties of multiplication and the relationship between multiplication and division.	
OCS.Math.3.2a Apply the commutative property of multiplication and division	**Chapter 4 Multiplication and Division Concepts** • 4-4 Multiply with the Commutative Property—pp. 74–75 **Chapter 6 More Multiplication Facts** • 6-9 Use the Associative Property to Multiply (Commutative Property)—pp. 130–131
OCS.Math.3.2b Apply the associative property of multiplication and division	**Chapter 6 More Multiplication Facts** • 6-9 Use the Associative Property to Multiply—pp. 130–131 • 6-11 Multiply by Multiples of 10 (Associative Property)—pp. 134–135
OCS.Math.3.2c Apply the distributive property of multiplication and division	**Chapter 6 More Multiplication Facts** • 6-1 Break Apart to Multiply (Distributive Property)—pp. 112–113 • 6-2 Multiply by 3 (Distributive Property)—pp. 114–115 **Chapter 15 Area** • 15-4 Find Area Using the Distributive Property—pp. 320–321
***OCS.Math.3.2d** Recognize that the inverse of multiplication is division	**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 • 8-6 Problem Solving: Work Backward—pp. 174–175 • 8-7 Fact Families—pp. 176–177 • 8-8 Use Facts to Solve Problems—pp. 178–179
OCS.Math.3.3 Multiply and divide within 100.	
***OCS.Math.3.3a** Fluently find products of two numbers with factors up to ten	**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

continued

*Essential Standard

OPERATIONS AND ALGEBRAIC THINKING (OA)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
	• 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 • 6-10 Find More Multiplication Patterns—pp. 132–133 • 6-11 Multiply by Multiples of 10—pp. 134–135
***OCS.Math.3.3b** Fluently divide within 100	**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
***OCS.Math.3.3c** Recognize that the whole number quotient is comprised of equal groups of the divisor	**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

OCS.Math.3.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. (whole numbers/whole number answers)

***OCS.Math.3.4a** Solve problems using models, pictures, words and numbers	**Problem Solving Strategies** • Make an Organized List–p. xxiii • Draw a Picture–p. xxiv **Chapter 2 Addition Within 1000** • 2-8 Problem Solving: Use a Model—pp. 38–39 **Chapter 3 Subtraction Within 1000** • 3-6 Problem Solving: Write and Solve an Equation—pp. 58–59

continued

OPERATIONS AND ALGEBRAIC THINKING (OA)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
	Chapter 4 Multiplication and Division Concepts • 4-7 Problem Solving: Write an Equation—pp. 80–81 **Chapter 5 Multiplication Facts** • 5-8 Problem Solving: Use a Model—pp. 104–105 **Chapter 6 More Multiplication Facts** • 6-8 Problem Solving: Make a Table—pp. 128–129 **Chapter 7 Division Facts** • 7-6 Problem Solving: Use Drawings to Solve Problems—pp. 154–155 **Chapter 9 Fraction Concepts** • 9-7 Problem Solving: Use a Model—pp. 202–203 **Chapter 10 Fractions: Comparison and Equivalence** • 10-7 Problem Solving: Act It Out—pp. 224–225 **Chapter 11 Measurement** • 11-6 Problem Solving: Write an Equation—pp. 244–245 **Chapter 12 Data** • 12-6 Problem Solving: Use a Model—pp. 264–265 **Chapter 14 Two-Dimensional Shapes** • 14-5 Problem Solving: Make a Table—pp. 304–305
OCS.Math.3.4b Use various strategies to solve complex, multi-step word problems	**Problem Solving Strategies** • Four-Step Process—p. xxi • Work Backward–p. xxii • Make an Organized List–p. xxiii • Draw a Picture–p. xxiv • Write and Solve an Equation–p. xxv **Problem Solving Math Practices** • MP 1: Make sense of problem–p. xxvi • MP 2: Use reasoning–p. xxvi • MP 3: Justify your reasoning–p. xxvii • MP 4: Model with mathematics–p. xxvii • MP 5: Use the right tools–p. xxviii • MP 6: Be precise–p. xxviii • MP 7: Look for a pattern–p. xxix • MP 8: Generalize–p. xxx **Chapter 1 Number Sense** • 1-6 Problem Solving: Use the Four-Step Process—pp. 14–15 **Chapter 2 Addition Within 1000** • 2-8 Problem Solving: Use a Model—pp. 38–39 **Chapter 3 Subtraction Within 1000** • 3-6 Problem Solving: Write and Solve an Equation—pp. 58–59 *continued*

*Essential Standard

OPERATIONS AND ALGEBRAIC THINKING (OA)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
	Chapter 4 Multiplication and Division Concepts • 4-7 Problem Solving: Write an Equation—pp. 80–81 **Chapter 5 Multiplication Facts** • 5-8 Problem Solving: Use a Model—pp. 104–105 **Chapter 6 More Multiplication Facts** • 6-8 Problem Solving: Make a Table—pp. 128–129 **Chapter 7 Division Facts** • 7-6 Problem Solving: Use Drawings to Solve Problems—pp. 154–155 **Chapter 8 More Division Facts** • 8-6 Problem Solving: Work Backward—pp. 174–175 **Chapter 9 Fraction Concepts** • 9-7 Problem Solving: Use a Model—pp. 202–203 **Chapter 10 Fractions: Comparison and Equivalence** • 10-7 Problem Solving: Act It Out—pp. 224–225 **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 • 12-6 Problem Solving: Use a Model—pp. 264–265 **Chapter 13 Time** • 13-5 Problem Solving: Use Logical Reasoning—pp. 286–287 **Chapter 14 Two-Dimensional Shapes** • 14-5 Problem Solving: Make a Table—pp. 304–305 **Chapter 15 Two-Dimensional Shapes** • 15-6 Problem Solving: Guess and Test—pp. 324–325 **Chapter 16 Perimeter** • 16-4 Problem Solving: More Than One Way—pp. 340–341
***OCS.Math.3.4c** Apply estimation and rounding skills to determine reasonableness of answers	**Problem Solving Strategies** • Four-Step Process: Look Back: (Is your answer reasonable?)—p. xxi **Chapter 1 Number Sense** • 1-6 Problem Solving: Use the Four-Step Process—pp. 14–15 **Chapter 2 Addition Within 1000** • 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 (estimate by rounding/answer is reasonable)—pp. 32–33 • 2-6 Use Place Value to Add: Regroup Twice (estimate by rounding/check answer)—pp. 34–35 *continued*

*Essential Standard

OPERATIONS AND ALGEBRAIC THINKING (OA)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
	• 2-7 Add with Three or More Addends (estimate by rounding/check answer)—pp. 36–37 **Chapter 3 Subtraction Within 1000** • 3-1 Estimate Differences—pp. 46–47 • 3-3 Subtract with Partial Differences—pp. 50–51 • 3-4 Subtract Three-Digit Numbers (estimate by rounding)—pp. 54–55 • 3-5 Subtract Across Zeros (answer is reasonable)—pp. 56–57 • 3-6 Problem Solving: Write and Solve an Equation—pp. 58–59
OCS.Math.3.4d Identify arithmetic patterns and explain them using properties of operations	**Chapter 2 Addition Within 1000** • 2-2 Explore Addition Patterns—pp. 24–25 **Chapter 5 Multiplication Facts** • 5-5 Multiply by 10—pp. 98–99 • 5-6 Find Patterns in the Multiplication Table—pp. 100–101 **Chapter 6 More Multiplication Facts** • 6-10 Find More Multiplication Patterns—pp. 132–133

NUMBER AND OPERATIONS IN BASE TEN (NBT)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
OCS.Math.3.5 Use place value understanding and properties of operations to perform multi-digit arithmetic.	
OCS.Math.3.5a Interpret multi-digit whole numbers using base-ten numerals, word form, and expanded form	**Chapter 1 Number Sense** • 1-1 Read and Write Multi-Digit Numbers—pp. 2–3 • 1-2 Understand the Number Line—pp. 4–5
***OCS.Math.3.5b** Round whole numbers up to the hundred thousands to the nearest 10, 100, or 1,000	**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
***OCS.Math.3.5c** Order and compare whole numbers up to the hundred thousands using <, >, or =	**Chapter 1 Number Sense** • 1-3 Compare and Order Numbers—pp. 6–7
***OCS.Math.3.5d** Fluently add and subtract whole numbers with three digits (with and without regrouping) using strategies and algorithms	**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

continued

NUMBER AND OPERATIONS IN BASE TEN (NBT)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
	• 2-6 Use Place Value to Add: Regroup Twice—pp. 34–35 • 2-7 Add with Three or More Addends—pp. 36–37 **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
OCS.Math.3.5e Apply commutative, associative, and distributive properties as strategies to add and subtract	**Chapter 2 Addition Within 1000** • 2-1 Use Addition Properties—pp. 22–23 • 2-2 Explore Addition Patterns—pp. 24–25
***OCS.Math.3.5f** Multiply one-digit numbers by a multiple of ten	**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
OCS.Math.3.5g Read and write decimals to the tenths and hundredths place using base ten numerals and number names	*See Grade 4* **Chapter 13 Fractions and Decimals** • 13-5 Decimal Place Value (tenths/hundredths)—pp. 280–281
OCS.Math.3.5h Fluently add and subtract decimals with money	*See Grade 5* **Chapter 10 Decimals: Addition** • 10-7 Addition with Money—pp. 234–235 **Chapter 11 Decimals: Subtraction** • 11-5 Subtraction with Money—pp. 252–253

NUMBER AND OPERATIONS—FRACTIONS (NF)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
OCS.Math.3.6 Develop understanding of fractions as numbers. (Grade three expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.)	
***OCS.Math.3.6a** Understand a fraction as a quantity formed when a whole is divided into 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

NUMBER AND OPERATIONS—FRACTIONS (NF)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
OCS.Math.3.6b Represent fractions on a number line diagram	**Chapter 9 Fraction Concepts** • 9-3 Find Unit Fractions on a Number Line—pp. 192–193 **Chapter 9 Fraction Concepts** • 9-5 Find Fractions on a Number Line—pp. 198–199
OCS.Math.3.6c Recognize a unit fraction as 1/b on a number line where the interval between 0 and 1 has been divided into b equal parts	**Chapter 9 Fraction Concepts** • 9-3 Find Unit Fractions on a Number Line—pp. 192–193
***OCS.Math.3.6d** 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
OCS.Math.3.6e Generate simple equivalent fractions through illustrations	**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
***OCS.Math.3.6f** Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers	**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
***OCS.Math.3.6g** Compare two fractions with the same numerator or the same denominator by reasoning about their size with the symbols >, <, or =	**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
***OCS.Math.3.6h** Use models to add and subtract fractions with common denominators	*See Grade 4* **Chapter 11 Fractions: Addition and Subtraction** • 11-1 Use Models to Add Fractions—pp. 224–225 • 11-2 Add Fractions: Like Denominators—pp. 226–227 • 11-4 Use Models to Subtract Fractions—pp. 230–231 • 11-5 Subtract Fractions: Like Denominators—pp. 232–233

*Essential Standard

MEASUREMENT AND DATA (MD)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
OCS.Math.3.7 Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	
***OCS.Math.3.7a** Tell and write time to the nearest minute using analog and digital clocks	**Chapter 13 Time** • 13-1 Tell Time to the Minute—pp. 276–277
OCS.Math.3.7b Measure elapsed time across the hour and minutes	**Chapter 13 Time** • 13-2 Measure Elapsed Time—pp. 278–279 *Related content* **Chapter 13 Time** • 13-3 Find Start and End Times—pp. 282–283 • 13-4 Operations with Time—pp. 284–285
OCS.Math.3.7c Measure length using customary and metric linear units to the nearest inch, half-inch, and quarter-inch or whole centimeter	**Chapter 11 Measurement** • 11-1 Measure Length—pp. 232–233 *See also Grade 2* **Chapter 6 Measurement** • 6-1 Inches—pp. 241–244 • 6-4 Centimeters—pp. 253–256
***OCS.Math.3.7d** Measure and estimate masses and liquid volumes of objects using standard units of grams (g), kilograms (kg) and liters (L)	**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
***OCS.Math.3.7e** Measure and estimate masses and liquid volumes of objects using standard units of cups, pints, quarts, and gallons	**Chapter 11 Measurement** • 11-4 Estimate and Measure Mass—pp. 240–241 • 11-5 Operations with Mass—pp. 242–243 *See also Grade 4* **Chapter 14 Measurement** • 14-3 Customary Units of Capacity—pp. 300–301 • 14-4 Customary Units of Weight—pp. 302–303 • 14-5 Operations with Customary Units—pp. 304–305
OCS.Math.3.7f Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units	**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

*Essential Standard

MEASUREMENT AND DATA (MD)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
OCS.Math.3.8 Understand and apply the statistics process.	
***OCS.Math.3.8a** Identify a statistical question focused on categorical data and gather data	**Chapter 12 Data** • 12-1 Read Picture Graphs (poll/statistical questions)—pp. 252–253 • 12-4 Make Bar Graphs (surveys)—pp. 258–259 *See also Grade 4* **Chapter 15 Measurement and Data** • 15-7 Surveys and Line Plots (gather categorical data)—pp. 338–339
***OCS.Math.3.8b** Create a scaled pictograph and a scaled bar graph to represent a data set (using technology or by hand)	**Chapter 12 Data** • 12-2 Make Picture Graphs—pp. 254–255 • 12-2 Make Picture Graphs—pp. 254–255
***OCS.Math.3.8c** Make observations from the graph about the question posed, including "how many more" and "how many less" questions	**Chapter 12 Data** • 12-1 Read Picture Graphs—pp. 252–253 • 12-3 Read Bar Graphs—pp. 256–257 • 12-5 Data and Two-Step Problems—pp. 260–261 • 12-6 Problem Solving: Use a Model—pp. 264–265 • 12-7 Read Line Plots—pp. 266–267
***OCS.Math.3.8d** Investigate a statistical question focused on numerical data	**Chapter 12 Data** • 12-1 Read Picture Graphs—pp. 252–253 • 12-3 Read Bar Graphs—pp. 256–257 • 12-5 Data and Two-Step Problems—pp. 260–261 • 12-6 Problem Solving: Use a Model—pp. 264–265 • 12-7 Read Line Plots—pp. 266–267
OCS.Math.3.8e Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch	**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
OCS.Math.3.8f Show measurement data by making a line plot where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters	**Chapter 12 Data** • 12-8 Make Line Plots—pp. 268–269
OCS.Math.3.8g Make observations from the graph about the question posed, including questions about the shape of data and compare responses	**Chapter 12 Data** • 12-1 Read Picture Graphs—pp. 252–253 • 12-3 Read Bar Graphs—pp. 256–257 • 12-5 Data and Two-Step Problems—pp. 260–261 • 12-6 Problem Solving: Use a Model—pp. 264–265 • 12-7 Read Line Plots—pp. 266–267

*Essential Standard

MEASUREMENT AND DATA (MD)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
OCS.Math.3.8h Describe the likelihood of an event using mathematical language (impossible, unlikely, less likely, equally likely, more likely, certain, etc.)	N/A
OCS.Math.3.8i Compare the likelihood of events using mathematical language	N/A
OCS.Math.3.8j Predict the frequency of an outcome in simple games or probability experiments	N/A

OCS.Math.3.9 Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

***OCS.Math.3.9a** Recognize area as an attribute of plane figures	**Chapter 15 Area** • 15-1 Understand Area—pp. 312–313
***OCS.Math.3.9b** Measure area by counting unit squares	**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
***OCS.Math.3.9c** Relate area to the operations of multiplication and addition	**Chapter 15 Area** • 15-3 Find the Area of a Rectangle and a Square—pp. 316–317 *See also* **Chapter 4 Multiplication and Division Concepts** • 4-1 Represent Multiplication as Repeated Addition—pp. 66–67
***OCS.Math.3.9d** Find the area of a rectangle with whole-number side lengths by tiling it and show the area is the same as would be found by multiplying the side lengths	**Chapter 15 Area** • 15-3 Find the Area of a Rectangle and a Square—pp. 316–317
OCS.Math.3.9e Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems	**Chapter 15 Area** • 15-3 Find the Area of a Rectangle and a Square—pp. 316–317
OCS.Math.3.9f Recognize area as an additive. Find areas of figures that can be decomposed into non-overlapping rectangles by adding the areas 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

*Essential Standard

MEASUREMENT AND DATA (MD)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
OCS.Math.3.10 Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	
OCS.Math.3.10a Find the perimeter given the side lengths of a polygon	**Chapter 16 Perimeter** • 16-1 Understand Perimeter—pp. 332–333 • 16-2 Find Perimeter—pp. 334–335
***OCS.Math.3.10b** Find an unknown side length, given the perimeter and some lengths	**Chapter 16 Perimeter** • 16-3 Find Unknown Side Lengths—pp. 336–337
OCS.Math.3.10c Solve real world and mathematical problems involving perimeters of polygons	**Chapter 16 Perimeter** • 16-2 Find Perimeter—pp. 334–335 • 16-3 Find Unknown Side Lengths—pp. 336–337 • 16-4 Problem Solving: More Than One Way—pp. 340–341 • 16-5 Same Perimeter, Different Areas—pp. 342–343 • 16-6 Same Area, Different Perimeter—pp. 344–345
OCS.Math.3.10d Draw rectangles with the same perimeter and different areas or with the same area and different perimeters	**Chapter 16 Perimeter** • 16-5 Same Perimeter, Different Areas—pp. 342–343 • 16-6 Same Area, Different Perimeter—pp. 344–345

GEOMETRY (G)

Grade 3 Content Standards	*Sadlier Math*, Grade 3
OCS.Math.3.11 Reason with shapes and their attributes.	
***OCS.Math.3.11a** Recognize and classify polygons based on the number of sides, vertices and angles (triangles, quadrilaterals, pentagons, and hexagons	**Chapter 14 Two-Dimensional Shapes** • 14-1 Classify Polygons (triangle, quadrilateral, pentagon, hexagon, octagon)—pp. 294–295t
OCS.Math.3.11b Recognize and classify quadrilaterals (rectangles, squares, parallelograms, rhombuses, trapezoids) by side lengths and understanding shapes in different categories may share attributes and the shared attributes can define a larger category	**Chapter 14 Two-Dimensional Shapes** • 14-2 Classify Quadrilaterals—pp. 296–297 • 14-3 Draw Quadrilaterals—pp. 298–299
OCS.Math.3.11c Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.	**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
OCS.Math.3.11d Identify and draw lines of symmetry	*See Grade 4* **Chapter 17 Polygons** • 17-4 Symmetry—pp. 376–377

*Essential Standard