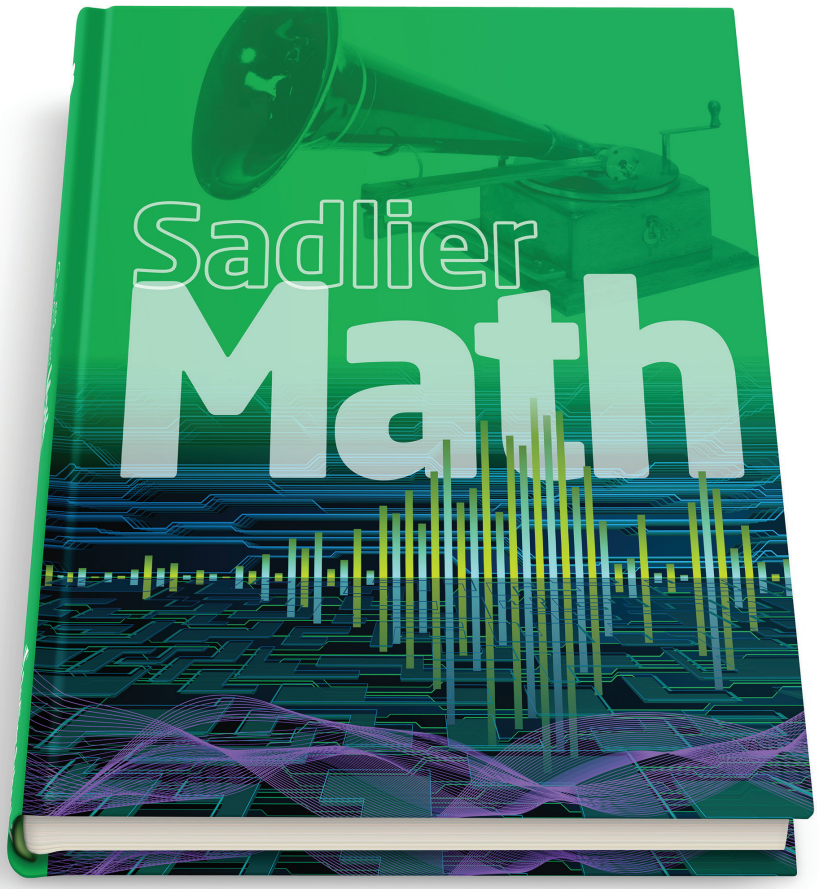
Sadlier Math™

Correlation to the Diocese of Raleigh Math Standards

Grade 3



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OPERATIONS AND ALGEBRAIC THINKING

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Achievement Standard: 3.OA.1 Represent and solve problems involving addition, subtraction, multiplication and division.	
3.OA.1.1 Fluently add and subtract using three digit whole numbers with and without regrouping using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	**Chapter 2: 2-1 through 2-8** • 2-1 Use Addition Properties—pp. 22–23 • 2-2 Explore Addition Patterns—pp. 24–25 • 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—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—pp. 38–39 **Chapter 3: 3-1 through 3-6** • 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: Read and Understand—pp. 58–59
3.OA.1.2 For products of whole numbers with two factors up to and including 12. • Interpret and solve products of whole numbers using repeated addition, arrays, and equal groups. • Solve one-step multiplication word problems using strategies and algorithms	**Chapter 4: 4-1 through 4-7** • 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: 5-1 through 5-8** • 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 0—pp. 96–97 • 5-5 Multiply by 10—pp. 98–99 **Chapter 6: 6-1 through 6-11** • 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
3.OA.1.3 For quotients of whole numbers with a one-digit divisor and a one-digit quotient: • Interpret the divisor and quotient in a division equation using subtraction, arrays, and equal groups. *continued*	**Chapter 4: 4- & 4-6** • 4-5 Represent Division by Sharing—pp. 76–77 • 4-6 Represent Division by Repeated Subtraction—pp. 78–79 **Chapter 7: 7-1 through 7-6** • 7-1 Relate Multiplication and Division—pp. 142–143 • 7-2 Divide by 2—pp. 144–145 *continued*

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OPERATIONS AND ALGEBRAIC THINKING

3rd Grade Content Standards	*Sadlier Math*, Grade 3
• Solve one-step division word problems using strategies and algorithms.	• 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: 8-1 through 8-9** • 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 • 8-9 Use Order of Operations—pp. 180–181
Achievement Standard: 3.OA.2 Understand properties of multiplication and the relationship between multiplication and division.	
3.OA.2.1 • Introduce commutative, associative, distributive and identity properties of operations as strategies to multiply and divide. • Understand that addition and subtraction as well as multiplication and division are inverse operations.	**Chapter 2: 2-1** • 2-1 Use Addition Properties—pp. 22–23 **Chapter 4: 4-4** • 4-4 Multiply with the Commutative Property—pp. 74–75 **Chapter 6: 6-9** • 6-9 Use the Associative Property to Multiply—pp. 130–131 **Chapter 8: 8-5** • 8-5 One and Zero in Division—pp. 172–173 **Chapter 15: 15-4** • 15-4 Find Area Using the Distributive Property—pp. 320–321
Achievement Standard: 3.OA.3 Multiply and divide within 144.	
3.OA.3.1 Demonstrate fluency of multiplication and division with factors, quotients and divisors up to and including 12. • Memorize multiplication and division facts with products and quotients through 144. • Determine the unknown whole number in a multiplication or division equation relating three whole numbers.	**Chapter 5: 5-1 through 5-5** • 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 0—pp. 96–97 • 5-5 Multiply by 10—pp. 98–99 **Chapter 6: 6-1 through 6-6** • 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 **Chapter 7: 7-1 through 7-5** • 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 *continued*

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OPERATIONS AND ALGEBRAIC THINKING

3rd Grade Content Standards	*Sadlier Math*, Grade 3
	• 7-4 Divide by 4—pp. 150–151 • 7-5 Divide by 5—pp. 152–153 **Chapter 8: 8-1 through 8-5, 8-7 & 8-8** • 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
3.OA.3.2 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	**Chapter 4: 4-13** • 4-3 Represent Multiplication as Arrays—pp. 70–71 **Chapter 15: 15-3** • 15-3 Find the Area of a Rectangle and a Square—pp. 316–317 (arrays) See also Grade 2 **Chapter 10: 10-1 through 10-5** • 10-3 Arrays: Repeated Addition—pp. 439–442 • 10-4 Arrays: Show the Same Number—pp. 443–446

NUMBER AND OPERATIONS IN BASE TEN

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Achievement Standard: 3.NBT.1 Generalize place value understanding for multi-digit numbers.	
3.NBT.1.1 Use place value to round whole numbers to the nearest 10 or 100.	**Chapter 1: 1-4 & 1-5** • 1-4 Round Numbers to the Nearest Ten—pp. 10–11 • 1-5 Round Numbers to the Nearest Hundred—pp. 12–13
3.NBT.1.2 Use place value to identify numbers to the 100,000 place. • Read and write whole numbers up to the 100,000 place. • Use standard, word and expanded forms to represent numbers. • Compare and order numbers to 100,000.	**Chapter 1: 1-1 through 1-3** • 1-1 Read and Write Multi-Digit Numbers—pp. 2–3 • 1-2 Understand the Number Line—pp. 4–5 • 1-3 Compare and Order Numbers—pp. 6–7

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NUMBER AND OPERATIONS IN BASE TEN

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Achievement Standard: 3.NBT.2 Use place value to perform multi-digit algorithms.	
3.NBT.2.1 Add and subtract whole numbers up to and including 1000. • Use expanded form to decompose numbers to find sums and differences.	**Chapter 2: 2-1 & 2-2, 2-4 through 2-8** • 2-1 Use Addition Properties—pp. 22–23 • 2-2 Explore Addition Patterns—pp. 24–25 • 2-4 Add with Partial Sums—pp. 30–31 • 2-5 Use Place Value to Add: Regroup Once—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—pp. 38–39 **Chapter 3: 3-2 through 3-6** • 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: Read and Understand—pp. 58–59
3.NBT.2.2 Multiply a one-digit whole number by a multiple of 10 in the range of 10-90, using concrete and pictorial models.	**Chapter 6: 6-11** • 6-11 Multiply by Multiples of 10—pp. 134–135
3.NBT.2.3 Assess the reasonableness of answers using mental computation and estimation strategies.	**Chapter 2: 2-3** • 2-3 Estimate Sums—pp. 26–27 • 2-5 Use Place Value to Add: Regroup Once—pp. 32–33 (check reasonableness of answer) • 2-6 Use Place Value to Add: Regroup Twice—pp. 34–35 (check reasonableness of answer) • 2-7 Add with Three or More Addends—pp. 36–37 (check reasonableness of answer) **Chapter 3: 3-1** • 3-1 Estimate Differences—pp. 46–47 • 3-4 Subtract Three-Digit Numbers—pp. 54–55 (check reasonableness of answer)

NUMBER AND OPERATIONS—FRACTIONS

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Achievement Standard: 3.NF.1 Understand fractions as numbers.	
3.NF.1.1 Understand fractions with denominators of 2,3,4,6, and 8 as quantities formed when a whole is divided into equal parts.	**Chapter 10: 10-1** • 10-1 Whole Numbers and Fractions—pp. 210–211
3.NF.1.2 Understand and represent a fraction as a number on a number line.	**Chapter 10: 10-3** • 10-3 Find Equivalent Fractions on a Number Line—pp. 214–215

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NUMBER AND OPERATIONS—FRACTIONS

3rd Grade Content Standards	*Sadlier Math*, Grade 3
3.NF.1.3 Explain equivalence of fractions by area and length models. • Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. • Recognize and generate simple equivalent fractions using halves, fourths, and eighths; thirds and sixths. • Explain that a fraction with the same numerator and denominator equal one. • Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.	**Chapter 10: 10-2 & 10-3** • 10-2 Find Equivalent Fractions—pp. 212–213 • 10-3 Find Equivalent Fractions on a Number Line—pp. 214–215
3.NF.1.4 Compare two fractions with the same numerator or the same denominator: • Reason about their size • Use area and length models • Use the >,< and = symbols	**Chapter 10: 10-4 through 10-6** • 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

MEASUREMENT AND DATA

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Achievement Standard: 3.MD.1 Solve problems involving measurement.	
3.MD.1.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time within the same hour.	**Chapter 13: 13-1 through 13-5** • 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
3.MD.1.2 Determine the value of sets of coins to $5.00. Estimate and compute the cost of items up to $10. • Create equivalent amounts of money with different coins. • Make change up to $10.	See Grade 2 **Chapter 12: 12-1 through 12-8** • 12-1 Pennies, Nickels, and Dimes—pp. 497–500 (¢) • 12-2 Quarters—pp. 501–504 (¢) • 12-3 Equal Amounts—pp. 505–508 (¢) • 12-4 Compare Money—pp. 509–512 (¢) • 12-5 Make Change—pp. 513–516 (¢) • 12-6 Add and Subtract Money—pp. 517–520 (¢) • 12-7 One Dollar—pp. 521–524 (¢ and $) • 12-8 Paper Money—pp. 525–528 ($)

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MEASUREMENT AND DATA

3rd Grade Content Standards	*Sadlier Math*, Grade 3
3.MD.1.3 Use customary and metric measurement to solve problems. • Estimate and measure length/distance, in customary and metric units: quarter inch, half-inch, feet and yards, meters (cm, m, km). • Estimate and measure capacity/volume in customary and metric units: cups, pints, quarts, gallons and, liters (ml, l). • Estimate and measure weight/mass in customary and metric units: ounces and pounds, grams (g, kg).	**Chapter 11: 11-1, 11-2 & 11-4** • 11-1 Measure Length—pp. 232–233 (quarter and half inch) • 11-2 Estimate and Measure Liquid Volume—pp. 234–235 (liter) • 11-4 Estimate and Measure Mass—pp. 240–241 (gram, kilogram) See also Grade 4 **Chapter 14: 14-1 through 14-4, 14-6 through 14-8** • 14-1 Measure with Inches—pp. 296–297 • 14-2 Customary Units of Length—pp. 298–299 • 14-3 Customary Units of Capacity—pp. 300–301 • 14-4 Customary Units of Weight—pp. 302–303 • 14-6 Metric Units of Length—pp. 308–311 • 14-7 Metric Units of Capacity—pp. 310–313 • 14-8 Metric Units of Mass—pp. 312–313
3.MD.1.4 Add, subtract, multiply or divide to solve one-step word problems involving measurement of length, capacity and weight.	**Chapter 11: 11-3, 11-5 & 11-6** • 11-3 Operations with Liquid Volume—pp. 236–237 • 11-5 Operations with Mass—pp. 242–243 • 11-6 Problem Solving: Write an Equation—pp. 244–245 See also Grade 4 **Chapter 14: 14-5 & 14-9** • 14-5 Operations with Customary Units—pp. 304–305 • 14-9 Operations with Metric Units—pp. 314–315
Achievement Standard: 3.MD.2 Represent and interpret data.	
3.MD.2.1 Draw and interpret picture and bar graphs • Collect and display data up to four categories using graphs with axes. • Solve one and two-step word problems using information from graphs.	**Chapter 12: 12-1 through 12-4** • 12-1 Read Picture Graphs—pp. 252–253 • 12-2 Make Picture Graphs—pp. 254–255 • 12-3 Read Bar Graphs—pp. 256–257 • 12-4 Make Bar Graphs—pp. 258–259 See also related content **Chapter 12: 12** • 12-7 Read Line Plots—pp. 266–267 • 12-8 Make Line Plots—pp. 268–269
Achievement Standard: 3.MD.3 Determine probability.	
3.MD.3.1 Conduct and summarize simple probability experiments and their outcome. Use results to predict future outcomes.	See Grade 6 **Chapter 18: 18-1 through 18-3, 18-5** • 18-1 Populations and Samples—online • 18-2 Drawing Conclusions from Samples—online • 18-3 Probability and Likelihood—online • 18-5 Relative Frequency and Experimental Probability—online

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MEASUREMENT AND DATA

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Achievement Standard: 3.MD.4 Understand the concept of area.	
3.MD.4.1 Recognize area as an attribute of a plane figure.	**Chapter 15: 15-1** • 15-1 Understand Area—pp. 312–313
3.MD.4.2 Find the area of rectangle with whole numbers by counting unit squares.	**Chapter 15: 15-2** • 15-2 Find Area Using Standard Units—pp. 314–315
3.MD.4.3 Relate area to the operations of multiplication and addition. • Find the area of a rectangle with whole-number side lengths by tiling, then show the area is the same when multiplying the side lengths. • Solve real world mathematical problems and represent products of side lengths (area) as square units. • Use tiles and/or arrays to illustrate and explain that the area of a rectangle can be found by partitioning it into two smaller rectangles, and that the area of the large rectangle is the sum of the two smaller rectangles.	**Chapter 15: 15-2 through 15-6** • 15-2 Find Area Using Standard Units—pp. 314–315 • 15-3 Find the Area of a Rectangle and a Square—pp. 316–317 • 15-4 Find Area Using the Distributive Property—pp. 320–321 • 15-5 Find Area of Composite Shapes—pp. 322–323
Achievement Standard: 3.MD.5 Understand the concept of perimeter.	
3.MD.5.1 Recognize perimeter as an attribute of a plane figure and distinguish between perimeter and area.	**Chapter 16: 16-1** • 16-1 Understand Perimeter—pp. 332–333
3.MD.5.2 Solve problems involving perimeter of polygons, including finding the perimeter given the side lengths, and finding an unknown side length.	**Chapter 16: 16-2, 16-4 through 16-6** • 16-2 Find Perimeter—pp. 334–335 • 16-4 Problem Solving: Compare Strategies—pp. 340–341 • 16-5 Same Perimeter, Different Areas—pp. 342–343 • 16-6 Same Area, Different Perimeters—pp. 344–345

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GEOMETRY

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Achievement Standard: 3.G.1 Reason with two and three-dimensional shapes and their attributes.	
3.G.1.1 Identify, describe, classify and compare polygons based on their attributes.	**Chapter 14: 14-1 through 14-3** • 14-1 Classify Polygons—pp. 294–295
3.G.1.2 Recognize and model examples and non-examples of quadrilaterals including rhombuses, rectangles, squares, parallelograms, and trapezoids.	**Chapter 14: 14-1 through 14-3** • 14-1 Classify Polygons—pp. 294–295 • 14-2 Classify Quadrilaterals—pp. 296–297 • 14-3 Draw Quadrilaterals—pp. 298–299
3.G.1.3 Identify and model symmetry and congruence with concrete materials and drawings.	See Grade 4 **Chapter 17: 17-4** • 17-4 Symmetry—pp. 376–377
3.G.1.4 Identify attributes of 3-dimensional solid figures including the faces, edges and vertices of cubes, cylinders, cones, spheres, rectangular and triangular prisms and pyramids.	See Grade 2 **Chapter 13: 13-3 & 13-4** • 13-3 Identify Three-Dimensional Shapes—pp. 565–568 • 13-4 Faces, Edges, Vertices—pp. 569–572

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