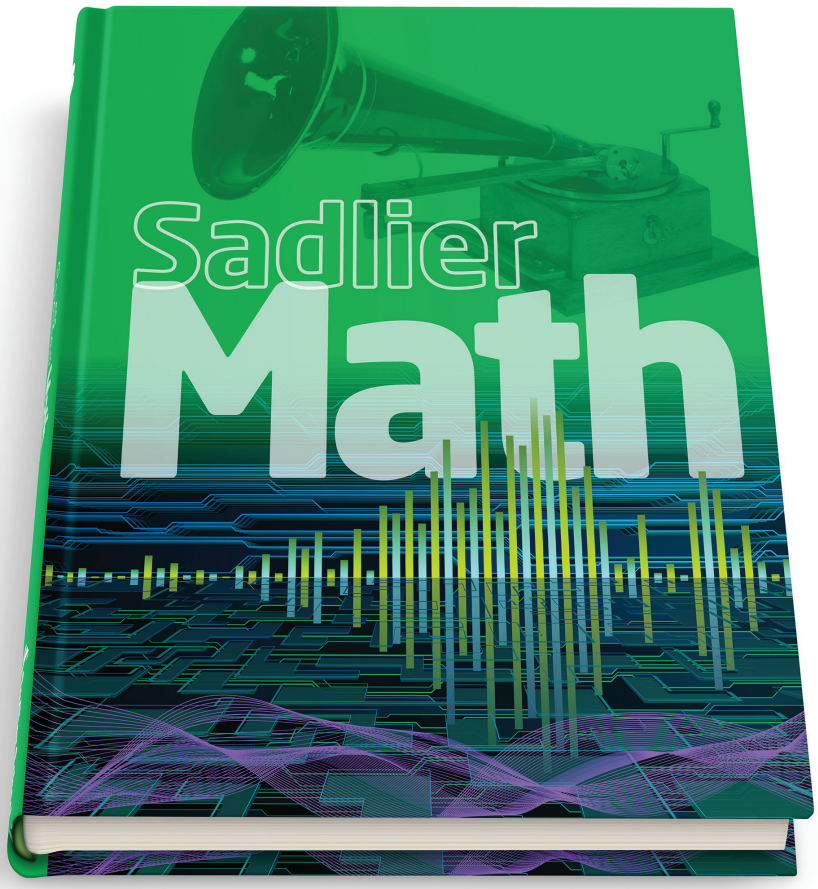
Sadlier Math™

Correlation to the Diocese of Richmond Mathematics Curriculum

Grade 3



Learn more at www.SadlierSchool.com/SadlierMath

Problem Solving (Strategies)

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Problem solving is integrated throughout the content strands. The development of problem-solving skills is a major goal of the mathematics program at every grade level. Instruction in the process of problem-solving, which should include problems involving Catholic Social Teaching, not just textbook word problems, will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types. The student will apply the following problem solving strategies to solve real life situations (use of manipulatives is imperative):	**Chapter 1: 1-6** • 1-6 Problem Solving: The Four-Step Process—pp. 14–15 **Chapter 2: 2-8** • 2-8 Problem Solving: Use a Model—pp. 38–39 **Chapter 3: 3-6** • 3-6 Problem Solving: Write and Solve an Equation—pp. 58–59 **Chapter 4: 4-7** • 4-7 Problem Solving: Write an Equation—pp. 80–81 **Chapter 5: 5-8** • 5-8 Problem Solving: Use a Model—pp. 104–105 **Chapter 6: 6-8** • 6-8 Problem Solving: Make a Table—pp. 128–129 **Chapter 7: 7-6** • 7-6 Problem Solving: Use Drawings to Solve Problems—pp. 154–155 **Chapter 8: 8-6** • 8-6 Problem Solving: Work Backward —pp. 174–175 **Chapter 9: 9-7** • 9-7 Problem Solving: Use a Model —pp. 202–203 **Chapter 10: 10-7** • 10-7 Problem Solving: Act It Out—pp. 224–225 **Chapter 11: 11-6** • 11-6 Problem Solving: Write an Equation —pp. 244–245 **Chapter 12: 12-6** • 12-6 Problem Solving: Use a Model—pp. 264–265 **Chapter 13: 13-5** • 13-5 Problem Solving: Use Logical Reasoning—pp. 286–287 **Chapter 14: 14-5** • 14-5 Problem Solving: Make a Table—pp. 304–305 **Chapter 15: 15-6** • 15-6 Problem Solving: Guess and Test —pp. 324–325 **Chapter 16: 16-4** • 16-4 Problem Solving: More Than One Way—pp. 340–341

I. NUMBERS AND OPERATIONS

3rd Grade Content Standards	*Sadlier Math*, Grade 3
GOAL: For students to develop the conceptual understanding of multiplication and division. The students will also gain a conceptual understanding of fractions. Teachers should reinforce the process of estimation at each grade level. Students should continue to determine the reasonableness of answers.	
A. Number Sense	
The student will:	
1. Recognize, read, count, compare and write numbers up to and including 100,000 (count by number patterns including tens and hundreds)	**Chapter 1: 1-1** • 1-1 Read and Write Multi-Digit Numbers—pp. 2–3
2. Use expanded form to write numbers in numerals to 100,000	**Chapter 1: 1-1** • 1-1 Read and Write Multi-Digit Numbers—pp. 2–3
3. Identify place value to 100,000	**Chapter 1: 1-1** • 1-1 Read and Write Multi-Digit Numbers—pp. 2–3
4. Round numbers to 1,000	**Chapter 1: 1-5 & 1-5** • 1-4 Round Numbers to the Nearest Ten—pp. 10–11 • 1-5 Round Numbers to the Nearest Hundred—pp. 12–13
5. Write word names for numbers with six digit numerals	**Chapter 1: 1-1 through 1-6** • 1-1 Read and Write Multi-Digit Numbers—pp. 2–3
6. Identify Roman Numerals to 1,000 (using I,V,X, L, C, D and M)	**Chapter 3: Enrichment** • Roman Numerals—online
B. Addition and Subtraction	
The student will:	
1. Subtract across zeros with at least six digit numbers	**Chapter 3: 3-4 & 3-5** • 3-4 Subtract Three-Digit Numbers—pp. 54–55 • 3-5 Subtract Across Zeros—pp. 56–57

I. NUMBERS AND OPERATIONS

3rd Grade Content Standards	*Sadlier Math*, Grade 3
2. Add six digit numbers with and without regrouping	**Chapter 2: 2-5 through 2-7** • 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
C. Multiplication and Division	
The student will:	
1. Use repeated addition to model multiplication	**Chapter 4: 4-1** • 4-1 Represent Multiplication as Repeated Addition—pp. 66–67
2. Use arrays, number lines, equal groups and area models to illustrate multiplication and division concepts and facts	**Chapter 4: 4-2 through 4-6** • 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
3. Demonstrate automaticity and fluency with multiplication and division facts 0-12	**Chapter 5: 5-1 through 5-7** • 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 • 5-6 Find Patterns in the Multiplication Table—pp. 100–101 **Chapter 6: 6-2 through 6-7, 6-9 through 6-11** • 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 • 6-10 Find More Multiplication Patterns—pp. 132–133 • 6-11 Multiply by Multiples of 10—pp. 134–135 **Chapter 7: 7-2 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 • 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 *continued*

I. NUMBERS AND OPERATIONS

3rd Grade Content Standards	*Sadlier Math*, Grade 3
	Chapter 16: 16-6 • 16-6 Same Area, Different Perimeters—pp. 344–345 (multiplication facts for 12)
4. Multiply multiplicands of up to six digits by a single digit	See Grade 4 **Chapter 4: 4-3** • 4-3 Multiply Tens, Hundreds, and Thousands—pp. 74–75 **Chapter 5: 5-1 through 5-4** • 5-1 Multiply with Regrouping—pp. 88–89 • 5-2 Use Properties to Multiply by One-Digit Numbers—pp. 90–91 • 5-3 Use Area Models to Multiply by One-Digit Numbers—pp. 92–93 • 5-4 Multiply Three- and Four-Digit Numbers—pp. 96–97
5. Relate multiplication and division as inverse operations using a variety of strategies	**Chapter 7: 7-1** • 7-1 Relate Multiplication and Division—pp. 142–143
D. Properties	
The student will:	
1. Use the property of one in multiplication and division	**Chapter 5: 5-4** • 5-4 Multiply by 1 and 0—pp. 96–97 **Chapter 8: 8-5** • 8-5 One and Zero in Division—pp. 172–173
2. Use the property of zero in multiplication	**Chapter 5: 5-4** • 5-4 Multiply by 1 and 0—pp. 96–97
3. Use the associative and commutative properties of multiplication	**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
E. Fractions/Decimals/Percents	
The student will:	
1. Demonstrate that fractions are parts of unit wholes, parts of collections, and have locations on number lines	**Chapter 9: 9-1 through 9-5** • 9-1 Understand Equal Parts—pp. 188–189 • 9-2 Name Unit Fractions of a Whole—pp. 190–191 • 9-3 Find Unit Fractions on a Number Line—pp. 192–193 • 9-4 Name Fractions of a Whole—pp. 196–197 • 9-5 Find Fractions on a Number Line—pp. 198–199

I. NUMBERS AND OPERATIONS

3rd Grade Content Standards	*Sadlier Math*, Grade 3
2. Identify and write mixed numbers without simplification	See Grade 4 **Chapter 10: 10-9** • 10-9 Mixed Numbers—pp. 210–211
3. Identify and write proper and improper fractions without simplification	See Grade 4 **Chapter 10: 10-9** • 10-9 Mixed Numbers—pp. 210–211
4. Use models and number lines to identify equivalent fractions	**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
5. Compare and order simple fractions with common numerators, uncommon denominators, and benchmark fractions using models	**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 See also Grade 4 **Chapter 10: 10-6** • 10-6 Compare Fractions: Use Benchmarks—pp. 204–205

II. MEASUREMENT

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Students should be able to estimate and measure in both customary and metric measurements of length, weight, capacity, temperature, time and money. As their ability to measure increases, they should be able to determine the reasonableness of their answers. Students should use appropriate labels for answers.	
A. Linear Measurement	
The student will:	
1. Measure length to the nearest half unit	**Chapter 11: 11-1** • 11-1 Measure Length—pp. 232–233
B. Weight	
No objectives.	

II. MEASUREMENT

3rd Grade Content Standards	*Sadlier Math*, Grade 3
C. Temperature	
No objectives.	
D. Time/Money	
The student will:	
1. Count up to ten dollars	See Grade 2 **Chapter 12: 12-1 & 12-4** • 12-7 One Dollar—pp. 521–524 • 12-8 Paper Money—pp. 525–528
2. Make change to one dollar by counting up	See Grade 2 **Chapter 12: 12-5** • 12-5 Make Change—pp. 513–516
3. Round amounts to the nearest dollar; the nearest ten dollars	See Grade 5 **Chapter 2: 2-4** • 2-4 Round Decimals—pp. 32–33
4. Recognize that dollars and cents are decimals, and that money may be represented as fractions of dollars (i.e., ¼ of a dollar is a quarter)	See Grade 5 **Chapter 10: 10-7** • 10-7 Addition with Money—pp. 234–235 **Chapter 11: 11-5** • 11-5 Subtraction with Money—pp. 252–253 **Chapter 12: 12-5** • 12-5 Multiplication with Money—pp. 270–271 **Chapter 13: 13-4 & 13-7** • 13-4 Estimate with Money—pp. 294–295 • 13-7 Division with Money—pp. 302–303 See Grade 6 **Chapter 8: 8-9** • 8-9 Fractions with Money—pp. 182–183
5. Write money appropriately as decimals OR with a cent sign, not both	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 $) • 12-8 Paper Money—pp. 525–528 ($)

II. MEASUREMENT

3rd Grade Content Standards	*Sadlier Math*, Grade 3
6. Calculate elapsed time using hours and minutes (i.e., from 2:15 until 3:15 is one hour)	**Chapter 13: 13-2** • 13-2 Measure Elapsed Time—pp. 278–279
7. Convert smaller measures of time into larger (i.e., 63 minutes = 1 hour and 3 minutes; 17 days = two weeks and three days)	**Chapter 13: 13-4** • 13-4 Operations with Time—pp. 284–285
8. Recognize expressions of time before and after the hour as being the same (10:45 is the same as a quarter to eleven)	**Chapter 13: 13-1** • 13-1 Tell Time to the Minute—pp. 276–277
9. Create and use a calendar to determine a date some time (i.e., two weeks) in the future or in the past	See Kindergarten **Chapter 17: 17-2** • 17-2 Calendar—pp. 623–626
E. Capacity	
The student will:	
1. Measure capacity using cups, pints, quarts and gallons	See Grade 4 **Chapter 14: 14-3** • 14-3 Customary Units of Capacity—pp. 300–301
2. Describe the relationship of standard measurement to metric measurement (i.e., quarts are similar to liters)	See Grade 6 **Chapter 12: 12-3** • 12-3 Convert Between Customary and Metric Units—pp. 288–289

III. GEOMETRY

3rd Grade Content Standards	*Sadlier Math*, Grade 3
The student will:	
1. Describe characteristics of two-dimensional shapes (rhombus, irregular figures) and three-dimensional shapes	**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 See also 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 *continued*

III. GEOMETRY

3rd Grade Content Standards	*Sadlier Math*, Grade 3
	See also Grade 5 **Chapter 16: 16-1** • 16-1 Solid Figures—pp. 360–361
2. Compare and contrast the properties of two-dimensional (parallelograms) and three-dimensional geometric figures to include the rectangular prism and triangular pyramid	**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 See also 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 See also Grade 5 **Chapter 16: 16-1** • 16-1 Solid Figures—pp. 360–361
3. Use tiles to measure perimeter and area of various rectangles	**Chapter 15: 15-1 through 15-3** • 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 **Chapter 16: 16-1 & 16-2, 16-4 through 16-6** • 16-1 Understand Perimeter—pp. 332–333 • 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
4. Identify parallel, perpendicular, and intersecting lines and rays. Define horizontal and vertical.	See Grade 4 **Chapter 16: 16-5** • 16-5 Parallel and Perpendicular Lines—pp. 360–361
5. Identify acute, obtuse, right and straight angles	See Grade 4 **Chapter 16: 16-2** • 16-2 Angle Measure—pp. 352–353

IV. STATISTICS, PROBABILITY AND DATA ANALYSIS

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Students continue to use skills and tools from Grade 3. The student will:	
1. Construct and analyze frequency tables, bar graphs, picture graphs and line plots and use them to solve problems	**Chapter 12: 12-1 through 12-4, 12-7 & 12-8** • 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 • 12-7 Read Line Plots—pp. 266–267 • 12-8 Make Line Plots—pp. 268–269
2. Use spinners, coins and dice to predict outcomes and describe the concept of "chance" in terms of likely, unlikely or equally likely	See Grade 6 **Chapter 18: 18-3** • 18-3 Probability and Likelihood—online

V. ALGEBRA

3rd Grade Content Standards	*Sadlier Math*, Grade 3
The student will:	
1. Predict the next number in a pattern	**Chapter 2: 2-2** • 2-2 Explore Addition Patterns—pp. 24–25 **Chapter 5: 5-6** • 5-6 Find Patterns in the Multiplication Table—pp. 100–101 **Chapter 6: 6-10** • 6-10 Find More Multiplication Patterns—pp. 132–133
2. Name the previous number in a pattern	**Chapter 2: 2-2** • 2-2 Explore Addition Patterns—pp. 24–25 **Chapter 5: 5-6** • 5-6 Find Patterns in the Multiplication Table—pp. 100–101 **Chapter 6: 6-10** • 6-10 Find More Multiplication Patterns—pp. 132–133