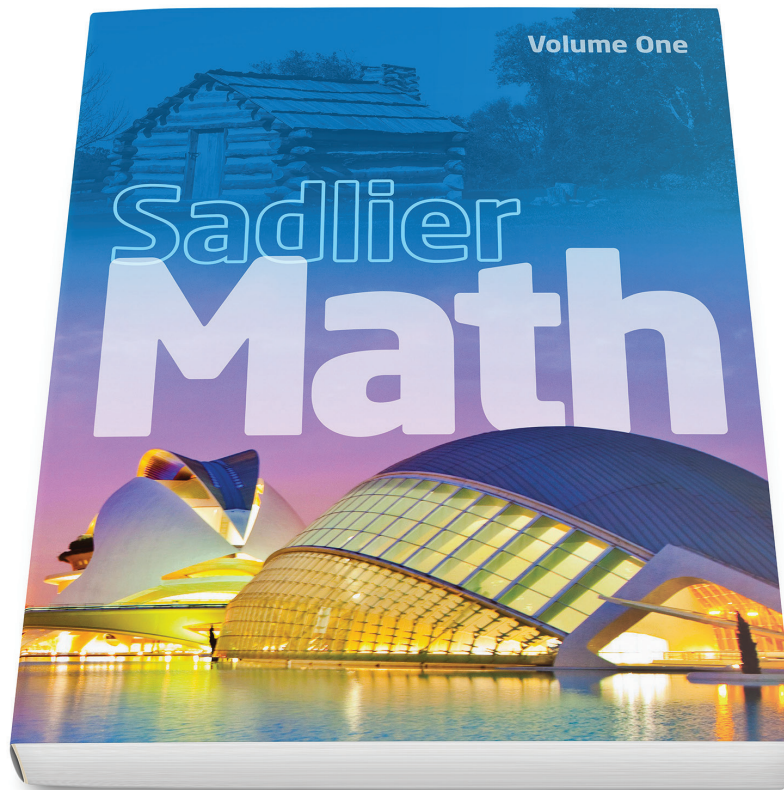


Sadlier Math[™]

Correlation to the Diocese of Richmond Mathematics Curriculum

Grade 2



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Problem Solving (Strategies)

2nd Grade Content Standards

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, includes problems involving Catholic Social Teaching, not just textbook word problems, and is integrated early and continuously into each student's mathematics education. Students are 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):

Sadlier Math, Grade 2

Chapter 1: 1-8

- 1-8 Problem Solving: The Four-Step Process—pp. 33-38

Chapter 2: 2-12

- 2-12 Problem Solving: Work Backward—pp. 99-104

Chapter 3: 3-6

- 3-6 Problem Solving: Use Logical Reasoning —pp. 133-138

Chapter 4: 4-10

- 4-10 Problem Solving: Find Needed Information—pp. 183-188

Chapter 5: 5-9

- 5-9 Problem Solving: Write and Solve an Equation —pp. 229-234

Chapter 6: 6-10

- 6-10 Problem Solving: More Than One Way—pp. 279-284

Chapter 7: 7-8

- 7-8 Problem Solving: Use a Table —pp. 329-334

Chapter 8: 8-7

- 8-7 Problem Solving: Make an Organized List —pp. 367-372

Chapter 9: 9-8

- 9-8 Problem Solving: More Than One Way—pp. 413-418

Chapter 10: 10-5

- 10-5 Problem Solving: Draw a Picture —pp. 447-452

Chapter 11: 11-7

- 11-7 Problem Solving: Choose a Model—pp. 485-490

Chapter 12: 12-12

- 12-12 Problem Solving: Work Backward—pp. 543-548

Chapter 13: 13-5

- 13-5 Problem Solving: Use Logical Reasoning —pp. 573-578

Chapter 14: 14-5

- 14-5 Problem Solving: Use a Model—pp. 603-608

I. NUMBERS AND OPERATIONS

2 nd Grade Content Standards	<i>Sadlier Math, Grade 2</i>
<p>GOAL: For students to have fluency with multi-digit addition and subtraction as well as develop an understanding of the base-ten numeration system and place value concepts. Students should be exposed to and be able to use the appropriate vocabulary of the math concepts. Teachers should reinforce the process of estimation at each grade level. The use of a “Guessing Jar” containing an unknown number of objects is one way to do this.</p>	
<p>A. Number Sense</p>	
<p>The student will:</p>	
<p>1. Count in units and multiples of hundreds, tens and ones (skip counting)</p>	<p>Chapter 3: 3-5</p> <ul style="list-style-type: none"> • 3-5 Counting Patterns by 2s, 5s, and 10s—pp. 129-132 <p>Chapter 7: 7-5</p> <ul style="list-style-type: none"> • 7-5 Skip Count Within 1000—pp. 317-320 <p>Chapter 8: 8-1</p> <ul style="list-style-type: none"> • 8-1 Mental Math: Add 1, 10, or 100—pp. 341-344 <p>Chapter 9: 9-1</p> <ul style="list-style-type: none"> • 9-1 Mental Math: Subtract 1, 10, or 100—pp. 383-386
<p>2. Demonstrate understanding of place value up to and including the thousands place using expanded form</p>	<p>Chapter 7: 7-1 through 7-4</p> <ul style="list-style-type: none"> • 7-1 Hundreds—pp. 299-302 • 7-2 Hundreds, Tens and Ones—pp. 303-306 • 7-3 Place Value in Three-Digit Numbers—pp. 307-310 • 7-4 Expanded Form with Hundreds, Tens and Ones—pp. 311-314
<p>3. Create equivalent representations of given numbers (such as 35 represented by 35 ones, 3 tens and 5 ones or 2 tens and 15 ones)</p>	<p>Chapter 4: 4-1</p> <ul style="list-style-type: none"> • 4-1 Use Models: Add Tens and Ones—pp. 145-148 <p>Chapter 7: 7-4</p> <ul style="list-style-type: none"> • 7-4 Expanded Form with Hundreds, Tens and Ones—pp. 311-314 <p>Chapter 9: 9-4</p> <ul style="list-style-type: none"> • 9-4 Regroup Hundreds as Tens Using Models—pp. 395-398
<p>4. Count, read and write numbers to 1,000</p>	<p>Chapter 10: 10-1 through 7-5</p> <ul style="list-style-type: none"> • 7-1 Hundreds—pp. 299-302 • 7-2 Hundreds, Tens and Ones—pp. 303-306 • 7-3 Place Value in Three-Digit Numbers—pp. 307-310 • 7-4 Expanded Form with Hundreds, Tens and Ones—pp. 311-314 • 7-5 Skip Count Within 1000—pp. 317-320

I. NUMBERS AND OPERATIONS	
2 nd Grade Content Standards	<i>Sadlier Math, Grade 2</i>
5. Use a number line to round numbers to the nearest tens and hundreds	See related content Chapter 6: 6-11 • 6-11 Represent Whole Numbers on a Line Diagram—pp. 285-288 See also Grade 3 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
6. Identify numbers as odd or even	Chapter 10: 10-1 & 10-2 • 10-1 Odd and Even Numbers—pp. 429-432 • 10-2 Represent Even Numbers—pp. 433-436
7. Compare and order numbers up to one thousand	Chapter 3: 3-3 & 3-4 • 3-3 Compare Numbers—pp. 119-122 • 3-4 Order Numbers Within 100—pp. 125-128 Chapter 7: 7-6 & 7-7 • 7-6 Compare Numbers Within 1000—pp. 321-324 • 7-7 Order Numbers Within 1000—pp. 325-328
B. Addition and Subtraction	
The student will:	
1. Demonstrate addition and subtraction facts with fluency and automaticity (sums up to 20)	Chapter 1: 1-1 through 1-6 • 1-1 Addition Concepts—pp. 3-6 • 1-2 Put Together—pp. 7-10 • 1-3 Related Addition Facts—pp. 11-14 • 1-4 Count On to Add—pp. 15-18 • 1-5 Doubles and Near Doubles—pp. 19-22 • 1-6 Make 10 to Add—pp. 23-26 Chapter 2: 2-1 through 2-9 • 2-1 Subtraction Concepts—pp. 53-56 • 2-2 Take Apart—pp. 57-60 • 2-3 Subtract to Compare—pp. 61-64 • 2-4 Count on to Subtract—pp. 65-68 • 2-5 Related Subtraction Facts—pp. 69-72 • 2-6 Relate Addition and Subtraction—pp. 73-76 • 2-7 Fact Families—pp. 77-80 • 2-8 Think Addition to Subtract—pp. 83-86 • 2-9 Use Addition to Check—pp. 87-90

I. NUMBERS AND OPERATIONS

2 nd Grade Content Standards	Sadlier Math, Grade 2
<p>2. Add and subtract whole numbers of at least four digits without renaming and regrouping</p>	<p>Chapter 4: 4-1 & 4-2</p> <ul style="list-style-type: none"> 4-1 Use Models: Add Tens and Ones—pp. 145-148 4-2 Add Tens and Ones—pp. 149-152 <p>Chapter 5: 5-1 & 5-2</p> <ul style="list-style-type: none"> 5-1 Use Models: Subtract Tens and Ones—pp. 195-198 5-2 Subtract Tens and Ones—pp. 199-202 8-2 Add Hundreds, Tens and Ones—pp. 345-348 <p>Chapter 9: 9-2</p> <ul style="list-style-type: none"> 9-2 Subtract Hundreds, Tens and Ones—pp. 387-390
<p>3. Select and apply appropriate methods to estimate sums and differences or calculate them mentally depending on the context and number involved</p>	<p>Chapter 8: 8-1</p> <ul style="list-style-type: none"> 8-1 Mental Math: Add 1, 10, or 100—pp. 341-344 <p>Chapter 9: 9-1</p> <ul style="list-style-type: none"> 9-1 Mental Math: Subtract 1, 10, or 100—pp. 383-386 <p>See also Grade 3</p> <p>Chapter 2: 2-3</p> <ul style="list-style-type: none"> 2-3 Estimate Sums—pp. 26-27 <p>Chapter 3: 3-1</p> <ul style="list-style-type: none"> 3-1 Estimate Differences—pp. 46-47
<p>4. Add and subtract whole numbers of at least four digits, demonstrating fluency with standard algorithms (renaming and regrouping)</p>	<p>Chapter 4: 4-1 through 4-7</p> <ul style="list-style-type: none"> 4-1 Use Models: Add Tens and Ones—pp. 145-148 4-2 Add Tens and Ones—pp. 149-152 4-3 Regroup Ones as Tens—pp. 155-158 4-4 Use Models: Two-Digit Addition with Regrouping—pp. 159-162 4-5 Two-Digit Addition with Regrouping—pp. 163-166 4-6 Rewrite Two-Digit Addition—pp. 167-170 4-7 Break Apart to Add—pp. 171-174 <p>Chapter 5: 5-1 through 5-7</p> <ul style="list-style-type: none"> 5-1 Use Models: Subtract Tens and Ones—pp. 195-198 5-2 Subtract Tens and Ones—pp. 199-202 5-3 Regroup Tens as Ones—pp. 205-208 5-4 Use Models: Two-Digit Subtraction with Regrouping—pp. 209-212 5-5 Two-Digit Subtraction with Regrouping—pp. 213-216 5-6 Rewrite Two-Digit Subtraction—pp. 217-220 5-7 Break Apart to Subtract—pp. 221-224 5-8 Add to Check—pp. 225-228 <p>Chapter 8: 8-1 through 8-6, 8-8</p> <ul style="list-style-type: none"> 8-1 Mental Math: Add 1, 10, or 100—pp. 341-344 8-2 Add Hundreds, Tens, and Ones—pp. 345-348 8-3 Add: Regroup Ones as Tens—pp. 349-352 8-4 Regroup Tens as Hundreds Using Models—pp. 353-356 8-5 Add: Regroup Tens as Hundreds—pp. 357-360 8-6 Add: Regroup Twice—pp. 363-366 8-8 Use Properties to Add—pp. 373-376 <p style="text-align: right;"><i>continued</i></p>

I. NUMBERS AND OPERATIONS	
2nd Grade Content Standards	Sadlier Math, Grade 2
	<p>Chapter 9: 9-1 through 9-6, 9-8</p> <ul style="list-style-type: none"> • 9-1 Mental Math: Subtract 1, 10, or 100—pp. 383-386 • 9-2 Subtract Hundreds, Tens, and Ones—pp. 387-390 • 9-3 Subtract: Regroup Tens as Ones—pp. 391-394 • 9-4 Regroup Hundreds as Tens Using Models—pp. 395-398 • 9-5 Subtract: Regroup Hundreds as Tens—pp. 399-402 • 9-6 Subtract: Regroup Twice—pp. 405-408 • 9-7 Subtract: Regroup with Zeros—pp. 409-412 • 9-9 Use Addition to Check Subtraction: Three-Digit Numbers—pp. 419-422
5. Add more than two single and multi-digit numbers (numbers in a column)	<p>Chapter 1: 1-7</p> <ul style="list-style-type: none"> • 1-7 Three Addends—pp. 29-32 <p>Chapter 4: 4-8 & 4-9</p> <ul style="list-style-type: none"> • 4-8 Three Addends—pp. 175-178 • 4-9 Four Addends—pp. 179-182
6. Explain why place value allows renaming and regrouping	<p>Chapter 4: 4-3 & 4-4</p> <ul style="list-style-type: none"> • 4-3 Regroup Ones as Tens—pp. 155-158 • 4-4 Use Models: Two-Digit Addition with Regrouping—pp. 159-162 <p>Chapter 5: 5-3 & 5-4</p> <ul style="list-style-type: none"> • 5-3 Regroup Tens as Ones—pp. 205-208 • 5-4 Use Models: Two-Digit Subtraction with Regrouping—pp. 209-212
7. Add numbers with regrouping to the tens place (The focus is on the visualizing of making another group of ten, not on the algorithm procedure of lining up the numbers in place value spaces.)	<p>Chapter 4: 4-5 & 4-6</p> <ul style="list-style-type: none"> • 4-5 Two-Digit Addition with Regrouping—pp. 163-166 • 4-6 Rewrite Two-Digit Addition—pp. 167-170 <p>Chapter 8: 8-3</p> <ul style="list-style-type: none"> • 8-3 Add: Regroup Ones as Tens—pp. 349-352
C. Multiplication and Division	
No objectives.	
D. Properties	
The student will:	
1. Use the commutative and associative properties to add multiple-digit whole numbers (i.e., $12 + 15 = 15 + 12$; $25 + (50 + 19) = (25 + 50) + 19$)	<p>Chapter 8: 8-8</p> <ul style="list-style-type: none"> • 8-8 Use Properties to Add—pp. 373-376

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II. MEASUREMENT	
2nd Grade Content Standards	Sadlier Math, Grade 2
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. Use rulers and other measurement tools	Chapter 6: 6-1, 6-2, 6-4 & 6-5 <ul style="list-style-type: none"> • 6-1 Inches—pp. 241-244 • 6-2 Feet and Yards—pp. 245-248 • 6-4 Centimeters—pp. 253-256 • 6-5 Meters—pp. 257-260
2. Select an appropriate tool for measuring length (i.e., a ruler, yard stick, meter stick)	Chapter 6: 6-3 & 6-6 <ul style="list-style-type: none"> • 6-3 Customary: Choose Tools and Units of Measure—pp. 249-252 • 6-6 Metric: Choose Tools and Units of Measure—pp. 261-264
3. Estimate, measure, add and subtract lengths using inches, feet and yards, centimeters and meters	Chapter 6: 6-1, 6-2, 6-4, 6-5 & 6-9 <ul style="list-style-type: none"> • 6-1 Inches—pp. 241-244 • 6-2 Feet and Yards—pp. 245-248 • 6-4 Centimeters—pp. 253-256 • 6-5 Meters—pp. 257-260 • 6-9 Add and Subtract Lengths—pp. 275-278
4. Partition lengths into equal-sized segments	See related content Chapter 6: 6-1, 6-2, 6-4 & 6-5 <ul style="list-style-type: none"> • 6-1 Inches—pp. 241-244 • 6-2 Feet and Yards—pp. 245-248 • 6-4 Centimeters—pp. 253-256 • 6-5 Meters—pp. 257-260
B. Weight	
The student will:	
1. Measure weight using customary and metric units (ounces, pounds, grams)	See Grade 3 Chapter 11: 11-4 <ul style="list-style-type: none"> • 11-4 Estimate and Measure Mass—pp. 240-241 See Grade 4 Chapter 14: 14-4 <ul style="list-style-type: none"> • 14-4 Customary Units of Weight—pp. 302-303

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II. MEASUREMENT

2nd Grade Content Standards

Sadlier Math, Grade 2

C. Temperature

1. Read a Fahrenheit and Celsius thermometer	See Grade 4 Chapter 15: 15-4 • 15-4 Temperature—pp. 330-331
2. Measure and record temperature using customary and metric thermometers (Fahrenheit and Celsius)	See Grade 4 Chapter 15: 15-4 • 15-4 Temperature—pp. 330-331

D. Time/Money

The student will:

1. Identify the relationship between units of time (i.e., 24 hours/day; 7 days/week; 60 minutes/hour; 60 seconds/minute)	Chapter 12: 12-9 • 12-9 Hour and Half Hour—pp. 531-534
2. Tell time and write it to the quarter hour and minute	Chapter 12: 12-9, 12-10 & 12-12 • 12-9 Hour and Half Hour—pp. 531-534 • 12-10 Five Minutes—pp. 535-538 • 12-12 Problem Solving: Work Backward—pp. 543-548
3. Describe time as A.M. or P.M., noon or midnight	Chapter 12: 12-11 • 12-11 A.M. and P.M.—pp. 539-542
4. Add similar units of time (i.e., add 3 hours + 2 hours, etc.)	See related content Chapter 12: 12-12 • 12-12 Problem Solving: Work Backward—pp. 543-548 (subtract units of time)
5. Add total value of mixed coins; pennies, nickels, dimes, quarters, half-dollars (sums less than \$1), dollar coins and dollar bills	Chapter 12: 12-6 • 12-6 Add and Subtract Money—pp. 517-520

E. Capacity

The student will:

1. Identify and compare measure of capacity using cups, pints, quarts and gallons	See Grade 4 Chapter 14: 14-3 • 14-3 Customary Units of Capacity
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III. GEOMETRY

2 nd Grade Content Standards	<i>Sadlier Math, Grade 2</i>
The student will:	
1. Describe characteristics of three-dimensional geometric solids to include rectangles, prisms, pyramids, spheres, cylinders and cones	<p>Chapter 13: 13-3 & 13-4</p> <ul style="list-style-type: none"> • 13-3 Identify Three-Dimensional Shapes—pp. 565-568 • 13-4 Faces, Edges and Vertices—pp. 569-572
2. Compare and contrast the properties of two-dimensional figures (circle, triangle, rectangle, square) and three-dimensional solids (sphere, square pyramid, cone, cylinder and cube)	<p>Chapter 13: 13-7</p> <ul style="list-style-type: none"> • 13-7 Compare Two-Dimensional and Three-Dimensional Shapes—pp. 509-512
3. Investigate the concept of perimeter and area	<p>See Grade 4</p> <p>Chapter 15: 15-1</p> <ul style="list-style-type: none"> • 15-1 Understand Area—pp. 312-313 <p>Chapter 16: 16-1</p> <ul style="list-style-type: none"> • 16-1 Understand Perimeter—pp. 332-333
4. Compute the perimeter of both regular and irregular figures	<p>See Grade 4</p> <p>Chapter 16: 16-2</p> <ul style="list-style-type: none"> • 16-2 Find Perimeter—pp. 334-335
5. Identify the line of symmetry for various shapes (e.g., letters of the alphabet) along a line identify congruent shapes (mirror images)	<p>See Grade 4</p> <p>Chapter 17: 17-4</p> <ul style="list-style-type: none"> • 17-4 Symmetry—pp. 376-377

IV. STATISTICS, PROBABILITY AND DATA ANALYSIS

2 nd Grade Content Standards	<i>Sadlier Math, Grade 2</i>
No objectives in this grade but students should continue use graphic skills learned in previous grades.	

V. ALGEBRA	
2nd Grade Content Standards	Sadlier Math, Grade 2
The student will:	
1. Create and recognize patterns using numbers	<p>Chapter 1: 1-10</p> <ul style="list-style-type: none"> • 1-10 Patterns in Addition—pp. 43-46 <p>Chapter 3: 3-5</p> <ul style="list-style-type: none"> • 3-5 Counting Patterns by 2s, 5s, and 10s—pp. 129-132 <p>Chapter 7: 7-5</p> <ul style="list-style-type: none"> • 7-5 Skip Count Within 1000—pp. 317-320
2. Solve problems using patterns	<p>Chapter 10: 10-1 & 10-2</p> <ul style="list-style-type: none"> • 10-1 Read Tally Charts—pp. 377-380 • 10-2 Make Tally Charts—pp. 381-384
3. Find the missing number in an addition or subtraction problem	<p>Chapter 1: 1-2, 1-3, 1-5 & 1-9</p> <ul style="list-style-type: none"> • 1-2 Put Together—pp. 7-10 • 1-3 Related Addition Facts—pp. 11-14 • 1-5 Doubles and Near Doubles—pp. 19-22 • 1-9 Solve for Unknown Addends—pp. 39-42 <p>Chapter 2: 2-4, 2-8 & 2-10</p> <ul style="list-style-type: none"> • 2-4 Count on to Subtract—pp. 65-68 • 2-8 Think Addition to Subtract—pp. 83-86 • 2-10 Solve for Unknowns—pp. 91-94 <p>Chapter 4: 4-7</p> <ul style="list-style-type: none"> • 4-7 Break Apart to Add—pp. 171-174 <p>Chapter 5: 5-1, 5-8 & 5-9</p> <ul style="list-style-type: none"> • 5-1 Use Models: Subtract Tens and Ones—pp. 195-198 • 5-8 Add to Check—pp. 225-228 • 5-9 Problem Solving: Write and Solve an Equation—pp. 229-234

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