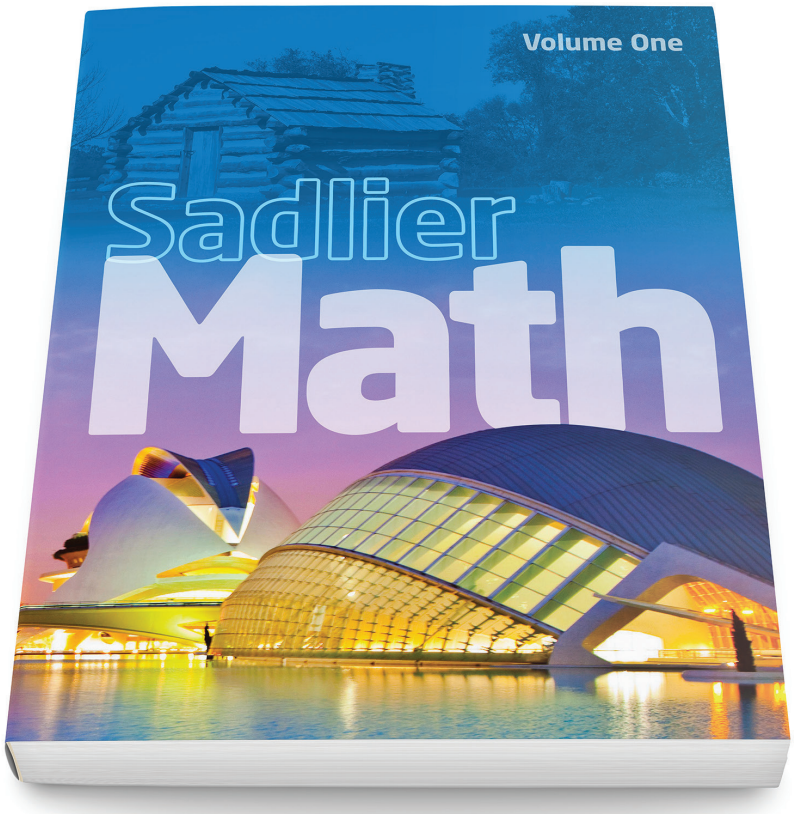
Sadlier Math™

Correlation to the Archdiocese of Washington Catholic Schools Academic Standards: Mathematics

Grade 2



Learn more at www.SadlierSchool.com/SadlierMath

STANDARD 1 – NUMBER SENSE

2nd Grade Content Standards	*Sadlier Math*, Grade 2
Students understand the relationships among numbers, quantities, and place value in whole numbers* up to 100. They understand that fractions may refer to parts of a set* and parts of a whole.	
MA.2.1.1 Count by ones, twos, fives, and tens to 100. Example: Count 74 pencils by groups of tens and twos.	**Chapter 3: 3-5** • 3-5 Counting Patterns by 2s, 5s, and 10s—pp. 129–132 (TE Develop Concepts: Using Patterns to Count) **Chapter 6: 6-11** • 6-11 Represent Whole Numbers on a Number Line Diagram—pp. 285–288 (Find and represent whole numbers on a number line; count by ones) **Chapter 7: 7-5** • 7-5 Skip Count Within 1000—pp. 317–320 (Skip count by 5s, 10s, and 100s within 1000; TE Develop Concepts: Patterns in Skip Counting) **Chapter 8: 8-1** • 8-1 Mental Math: Add 1, 10, or 100—pp. 341–344 (Use mental math to add 1, 10, or 100; TE Develop Concepts: Skip Counting by 10s and 100s) **Chapter 9: 9-1** • 9-1 Mental Math: Subtract 1, 10, or 100—pp. 383–386 (Use mental math to subtract 1, 10, or 100; TE Develop Concepts: Modeling 1, 10, and 100 Less) **Chapter 11: 11-3** • 11-3 Read Picture Graphs—pp. 467–470 (TE Mental Math: count by 2s, 5s and 10s) **Chapter 12: 12-1** • 12-1 Pennies, Nickels, and Dimes—pp. 497–500 (TE Mental Math: extend the counting pattern by counting by 1s, 5s and 10s)
MA.2.1.2 Identify the pattern of numbers in each group of ten, from tens through nineties. Example: What pattern do you see on a hundreds chart for the numbers 12, 22, 32, etc.?	**Chapter 6: 6-11** • 6-11 Represent Whole Numbers on a Number Line Diagram—pp. 285–288 (TE Develop Concepts: Exploring a Number Line Diagram; display hundreds chart and discuss patterns) **Chapter 7: 7-1 & 7-5** • 7-1 Hundreds—pp. 299–302 (Recognize 10 tens as 1 hundred; Recognize place value of numbers to 900; TE Develop Concepts: Ones, Tens, and Hundreds) • 7-5 Skip Count Within 1000—pp. 317–320 (Skip count by 5s, 10s, and 100s within 1000; TE Develop Concepts: Patterns in Skip Counting)
MA.2.1.3 Identify numbers up to 999 in various combinations of hundreds, tens, and ones. Example: 432 = 4 hundreds + 3 tens + 2 ones	**Chapter 3: 3-1 & 3-2** • 3-1 Tens and Ones—pp. 111–114 (Use tens and ones to show numbers to 100; TE Develop Concepts: How Many Tens and Ones?) • 3-2 Expanded Form—pp. 115–118 (Write numbers to 100 using expanded form; TE Develop Concepts: Expanded Notation) **Chapter 7: 7-1 through 7-4** • 7-1 Hundreds—pp. 299–302 (Recognize 10 tens as 1 hundred; Recognize place value of numbers to 900; TE Develop Concepts: Ones, Tens, and Hundreds) *continued*

STANDARD 1 – NUMBER SENSE

2nd Grade Content Standards	*Sadlier Math*, Grade 2
	• 7-2 Hundreds, Tens, and Ones—pp. 303–306 (Use numerals and number names to read and write numbers to 1000; TE Develop Concepts: Hundreds, Tens, and Ones) • 7-3 Place Value in Three-Digit Numbers—pp. 307–310 (Identify the place value of digits in numbers to 999; TE Develop Concepts: Place Value) • 7-4 Expanded Form with Hundreds, Tens, and Ones—pp. 311–314 (Write three-digit numbers in expanded form; TE Develop Concepts: Reviewing Expanded Form)
MA.2.1.4 Name the number that is ten more or ten less than any number 10 through 90. Example: Name the number ten more than 54.	**Chapter 8: 8-1** • 8-1 Mental Math: Add 1, 10, or 100—pp. 341–344 (Use mental math to add 1, 10, or 100; TE Develop Concepts: Skip Counting by 10s and 100s) **Chapter 9: 9-1** • 9-1 Mental Math: Subtract 1, 10, or 100—pp. 383–386 (Use mental math to subtract 1, 10, or 100; TE Develop Concepts: Modeling 1, 10, and 100 Less) See also Grade 1 **Chapter 11: 11-1** • 11-1 Mental Math: Find 10 More—pp. 407–410 (Use place value to find 10 more than a two-digit number; TE Develop Concepts: 10 More) **Chapter 12: 12-1** • 12-1 Mental Math: Find 10 Less—pp. 453–456 (Use mental math to find 10 less; TE Develop Concepts: Taking Away Tens)
MA.2.1.5 Compare whole numbers up to 100 and arrange them in numerical order. Example: Put the numbers in order of size: 95, 28, 42, 31.	**Chapter 3: 3-3 & 3-4** • 3-3 Compare Numbers—pp. 119–122 (Compare two numbers that are less than 100; TE Develop Concepts: Comparing Numbers) • 3-4 Order Numbers Within 100—pp. 125–128 (Order numbers within 100; TE Develop Concepts: What Is Counting Order?) **Chapter 7: 7-6 & 7-7** • 7-6 Compare Numbers Within 1000—pp. 321–324 (Compare numbers within 1000; TE Develop Concepts: Comparing Numbers) • 7-7 Order Numbers Within 1000—pp. 325–328 (Order numbers within 1000; TE Develop Concepts: Ordering Numbers)
MA.2.1.6 Match the number names (*first, second, third*, etc.) with an ordered set of up to 100 items. Example: Identify the seventeenth letter of the alphabet.	See Kindergarten **Chapter 3: 3-7** • 3-7 Ordinals: First to Fifth—pp. 101–104 **Chapter 5: 5-7** • 5-7 Ordinals: First to Tenth—pp. 173–176 See also Grade 1 **Chapter 5: 5-1** • 5-1 Order by Length—pp. 163–166 (Ordinal positions)

STANDARD 1 – NUMBER SENSE

2nd Grade Content Standards	*Sadlier Math*, Grade 2
MA.2.1.7 Identify odd and even numbers up to 100. Example: Find the odd numbers in this set: 44, 31, 100, 57, 28.	**Chapter 10: 10-1 & 10-2** • 10-1 Odd and Even Numbers—pp. 429–432 (Count objects by 2s, or pair objects, to decide if a number is odd or even; TE Develop Concepts: Making Pairs (count by twos)) • 10-2 Represent Even Numbers—pp. 433–436 (Write an even number as the sum of two equal addends; TE Develop Concepts: Even Numbers)
MA.2.1.8 Recognize fractions as parts of a whole or parts of a group (up to 12 parts). Example: Divide a cardboard rectangle into 8 equal pieces. Shade 5 pieces and write the fraction for the shaded part.	See Grade 3 **Chapter 9: 9-2** • 9-2 Name Unit Fractions of a Whole—pp. 190–191 (Understand a unit fraction as the quantity formed by 1 part when a whole is partitioned into equal parts; TE Develop Concepts: How Many Equal Parts?)
MA.2.1.9 Recognize, name, and compare the unit fractions: 1/2, 1/3, 1/4, 1/5, 1/6, 1/8, 1/10, and 1/12. Example: Which is larger, 1/3 or 1/6? Explain your answer.	See Grade 3 **Chapter 9: 9-2 & 9-3** • 9-2 Name Unit Fractions of a Whole—pp. 190–191 (Understand a unit fraction as the quantity formed by 1 part when a whole is partitioned into equal parts; TE Develop Concepts: How Many Equal Parts?) • 9-3 Find Unit Fractions on a Number Line—pp. 192–193 (Find unit fractions on a number line; TE Develop Concepts: Numbers on a Number Line)
MA.2.1.10 Know that, when all fractional parts are included, the result is equal to the whole and to one. Example: What is another way of saying six sixths? Explain your answer.	See Grade 3 **Chapter 9: 9-6** • 9-6 Use a Fraction to Find the Whole—pp. 200–201 (Given a fractional part, find the whole; TE Develop Concepts: Follow-up on Fractions)
MA.2.1.11 Collect and record numerical data in systematic ways. Example: Measure the hand span in whole centimeters of each student in your class. Keep a record of the answers they give you.	**Chapter 11: 11-1 & 11-2** • 11-1 Read Line Plots—pp. 459–462 (TE Develop Concepts: Collecting and Displaying Data) • 11-4 Make Picture Graphs—pp. 471–474 (Make, read, and interpret picture graphs; TE Develop Concepts: Collecting and Displaying Data)
MA.2.1.12 Represent, compare, and interpret data using tables, tally charts, and bar graphs. Example: Make a tally of your classmates' favorite colors and draw a bar graph. Name the color that is most popular and the color that is the favorite of the fewest people.	**Chapter 11: 11-1 through 11-7** • 11-1 Read Line Plots—pp. 459–462 (Read and interpret line plots; TE Develop Concepts: Collecting and Displaying Data) • 11-2 Make Line Plots—pp. 463–466 (Make, read, and interpret line plots; TE Develop Concepts: Exploring Line Plots) • 11-3 Read Picture Graphs—pp. 467–470 (Read and interpret picture graphs; TE Develop Concepts: Displaying Data) • 11-4 Make Picture Graphs—pp. 471–474 (Make, read, and interpret picture graphs; TE Develop Concepts: Collecting and Displaying Data) *continued*

STANDARD 1 – NUMBER SENSE

2nd Grade Content Standards	*Sadlier Math*, Grade 2
	• 11-5 Read Bar Graphs—pp. 477–480 (Read and interpret bar graphs; TE Develop Concepts: Exploring Bar Graphs) • 11-6 Make Bar Graphs—pp. 481–484 (Make, read, and interpret bar graphs; TE Develop Concepts: Explore Creating Bar Graphs) • 11-7 Problem Solving: Choose a Model—pp. 485–490 (Choose a model to organize data for a given problem-solving situation; TE Develop Concepts: Comparing Models)
MA.2.1.13 Read, write, and represent whole numbers using models, symbols, and words to 999. Example: Read and write 654 as six hundred and fifty-four.	**Chapter 3: 3-1 & 3-2** • 3-1 Tens and Ones—pp. 111–114 (Use tens and ones to show numbers to 100; TE Develop Concepts: How Many Tens and Ones?) • 3-2 Expanded Form—pp. 115–118 (Write numbers to 100 using expanded form; TE Develop Concepts: Expanded Notation) **Chapter 7: 7-1 through 7-4** • 7-1 Hundreds—pp. 299–302 (Recognize 10 tens as 1 hundred; Recognize place value of numbers to 900; TE Develop Concepts: Ones, Tens, and Hundreds) • 7-2 Hundreds, Tens, and Ones—pp. 303–306 (Use numerals and number names to read and write numbers to 1000; TE Develop Concepts: Hundreds, Tens, and Ones) • 7-3 Place Value in Three-Digit Numbers—pp. 307–310 (Identify the place value of digits in numbers to 999; TE Develop Concepts: Place Value) • 7-4 Expanded Form with Hundreds, Tens, and Ones—pp. 311–314 (Write three-digit numbers in expanded form; TE Develop Concepts: Reviewing Expanded Form)
MA.2.1.14 Identify whether certain everyday events are likely or unlikely. Example: If it is sunny outside, is it likely that you will get wet when you go outside.	N/A
MA.2.1.15 Use experimental methods to determine probabilities about events whose outcomes involve random variation. Example: Students identify the number of possible outcomes in the roll of a dice.	N/A

STANDARD 2 – COMPUTATION

2nd Grade Content Standards	*Sadlier Math*, Grade 2
Students solve simple problems involving addition and subtraction of numbers up to 100.	
MA.2.2.1 Model addition of numbers less than 100 with objects and pictures. Example: Use blocks to find the sum of 26 and 15.	**Chapter 4: 4-1** • 4-1 Use Models: Add Tens and Ones—pp. 145–148 (Use models of tens and ones to add without regrouping; TE Develop Concepts: Using Models to Add)
MA.2.2.2 Add two whole numbers less than 100 with and without regrouping. Example: 36 + 45 = ?.	**Chapter 1: 1-1 through 1-10** • 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 • 1-7 Three Addends—pp. 29–32 • 1-8 Problem Solving: Make and Use a Plan—pp. 33–38 • 1-9 Solve for Unknown Addends—pp. 39–42 • 1-10 Patterns in Addition—pp. 43–46 **Chapter 4: 4-1 through 4-10** • 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 • 4-8 Three Addends—pp. 175–178 • 4-9 Four Addends—pp. 179–182 • 4-10 Problem Solving: Read and Understand—pp. 183–188
MA.2.2.3 Subtract two whole numbers less than 100 with and without regrouping. Example: 86 – 55 = ?.	**Chapter 5: 5-1 through 5-9** • 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 • 5-9 Problem Solving: Write and Solve an Equation—pp. 229–234
MA.2.2.4 Understand and use the inverse relationship between addition and subtraction. Example: Understand that 89 – 17 = 72 means that 72 + 17 = 89.	**Chapter 2: 2-6 through 2-9** • 2-6 Relate Addition and Subtraction—pp. 73–76 (Write related addition and subtraction facts; TE Develop Concepts: Relating Addition and Subtraction) • 2-7 Fact Families—pp. 77–80 (Use mental strategies to add and subtract; Find fact families; TE Develop Concepts: Fact Families)

continued

STANDARD 2 – COMPUTATION

2nd Grade Content Standards	*Sadlier Math*, Grade 2
	• 2-8 Think Addition to Subtract—pp. 83–86 (Use addition facts to subtract; TE Develop Concepts: Using Related Addition Facts to Help Subtract) • 2-9 Use Addition to Check—pp. 87–90 (Use mental strategies to add and subtract; Use addition to check subtraction; TE Develop Concepts: Checking Subtraction)
MA.2.2.5 Use estimation to decide whether answers are reasonable in addition problems. Example: Your friend says that 13 + 24 = 57. Without solving, explain why you think the answer is wrong.	See Grade 3 **Chapter 2: 2-3** • 2-3 Estimate Sums—pp. 26–27 (Estimate sums to 1000 using rounding and front-end estimation; TE Develop Concepts: Compare Estimation Methods) **Chapter 3: 3-1** • 3-1 Estimate Differences—pp. 46–47 (Estimate differences by rounding and using front-end estimation; estimated answers should be to original numbers to be reasonable.)
MA.2.2.6 Use mental arithmetic to add or subtract 0, 1, 2, 3, 4, 5, or 10 with numbers less than 100. Example: In a game, Mia and Noah are making addition problems. They make two two-digit numbers out of the four given numbers 1, 2, 3, and 4. Each number is used exactly once. The winner is the one who makes two numbers whose sum is the largest. Mia had 24 and 31; Noah had 21 and 43. Who won the game? How do you know? Show a way to beat both of them.	Located in the TE, **Mental Math** is the first activity for each lesson. For example: **Chapter 1: 1-7** • 1-7 Three Addends—pp. 29–32 (Use mental strategies to add three numbers; TE Mental Math: Find the sum: 5 + 5, 3 + 3, 8 + 8, etc.) **Chapter 2: 2-4** • 2-4 Count On to Subtract—pp. 65–68 (TE Mental Math: Find the missing addend: 6 + ? = 9, 2 + ? = 10, etc.) See also the following lessons **Chapter 8: 8-1** • 8-1 Mental Math: Add 1, 10, or 100—pp. 341–344 (Use mental math to add 1, 10, or 100; TE Develop Concepts: Skip Counting by 10s and 100s) • **Chapter 9: 9-1** • 9-1 Mental Math: Subtract 1, 10, or 100—pp. 383–386 (Use mental math to subtract 1, 10, or 100; TE Develop Concepts: Modeling 1, 10, and 100 Less)

STANDARD 3 – ALGEBRA AND FUNCTIONS

Grade 2 Content Standards	*Sadlier Math*, Grade 2
Students model, represent, and interpret number relationships to create and solve problems involving addition and subtraction.	
MA.2.3.1 Relate problem situations to number sentences involving addition and subtraction. Example: You have 13 pencils and your friend has 12 pencils. You want to know how many pencils you have altogether. Write a number sentence for this problem and use it to find the total number of pencils.	**Problem Solving Strategies** • Write and Solve an Equation—p. xxviii **Chapter 1: 1-9** • 1-9 Solve for Unknown Addends—pp. 39–42 (Use drawings and equations to find an unknown addend; TE Develop Concepts: Explore Using a Bar Model) **Chapter 2: 2-1 & 2-10** • 2-1 Subtraction Concepts—pp. 53–56 (Use subtraction to take away or to find the missing part; TE Develop Concepts: What Is Subtraction?) • 2-10 Solve for Unknowns—pp. 91–94 (Use drawings and equations to find the unknown; TE Develop Concepts: Bar Models) **Chapter 5: 5-9** • 5-9 Problem Solving: Write and Solve an Equation—pp. 229–234 (Write and solve an equation for a given problem-solving situation; TE Develop Concepts: Writing Equations to Represent Unknowns)
MA.2.3.2 Use the commutative* and associative* properties for addition to simplify mental calculations and to check results. Example: Add the numbers 5, 17, and 13 in this order. Now add them in the order 17, 13, and 5. Which was easier? Why?	**Chapter 1: 1-3** • 1-3 Related Addition Facts—pp. 11–14 (Add two numbers in any order; TE Develop Concepts: Related Facts) **Chapter 4: 4-7** • 4-7 Break Apart to Add—pp. 171–174 (Break apart numbers to add; associative and commutative properties TE Develop Concepts: Breaking Apart Tens and Ones) **Chapter 8: 8-8** • 8-8 Use Properties to Add—pp. 373–376 (Use strategies based on properties of operations to add three-digit numbers; TE Develop Concepts: Expanded Form)
MA.2.3.3 Recognize and extend a linear pattern by its rules. Example: One horse has 4 legs, two horses have 8 legs, and so on. Continue the pattern to find how many legs five horses have.	**Chapter 1: 1-10** • 1-10 Patterns in Addition—pp. 43–46 (Complete and explain patterns found in addition sentences; TE Develop Concepts: Look for Patterns) **Chapter 3: 3-5** • 3-5 Counting Patterns by 2s, 5s, and 10s—pp. 129–132 (Count by 2s, 5s, and 10s; TE Develop Concepts: Using Patterns to Count) **Chapter 6: 6-11** • 6-11 Represent Whole Numbers on a Number Line Diagram—pp. 285–288 (Find and represent whole numbers on a number line; TE Develop Concepts: Exploring a Number Line Diagram, Ask them to create a pattern with the number in which some numbers are missing, such as __, 16, __, 18, __, 20.) **Chapter 7: 7-5** • 7-5 Skip Count Within 1000—pp. 317–320 (Skip count by 5s, 10s, and 100s within 1000; TE Develop Concepts: Patterns in Skip Counting)

STANDARD 3 – ALGEBRA AND FUNCTIONS

Grade 2 Content Standards	*Sadlier Math*, Grade 2
MA.2.3.4 Create, describe, and extend number patterns using addition and subtraction. Example: What is the next number: 23, 21, 19, 17, ...? How did you find your answer?	**Chapter 1: 1-10** • 1-10 Patterns in Addition—pp. 43–46 (Complete and explain patterns found in addition sentences; TE Develop Concepts: Look for Patterns) **Chapter 3: 3-5** • 3-5 Counting Patterns by 2s, 5s, and 10s—pp. 129–132 (Count by 2s, 5s, and 10s; TE Develop Concepts: Using Patterns to Count) **Chapter 6: 6-11** • 6-11 Represent Whole Numbers on a Number Line Diagram—pp. 285–288 (Find and represent whole numbers on a number line; TE Develop Concepts: Exploring a Number Line Diagram, Ask them to create a pattern with the number in which some numbers are missing, such as __, 16, __, 18, __, 20.) **Chapter 7: 7-5** • 7-5 Skip Count Within 1000—pp. 317–320 (Skip count by 5s, 10s, and 100s within 1000; TE Develop Concepts: Patterns in Skip Counting)

STANDARD 4 – GEOMETRY

2nd Grade Content Standards	*Sadlier Math*, Grade 2
Students identify and describe the attributes of common shapes in the plane and of common objects in space.	
MA.2.4.1 Construct squares, rectangles, triangles, cubes, and rectangular prisms* with appropriate materials. Example: Use blocks to make a rectangular prism.	**Chapter 13: 13-2 & 13-4** • 13-2 Draw Two-Dimensional Shapes—pp. 559–562 (Draw triangles, quadrilaterals, pentagons, and hexagons; TE Develop Concepts: Creating Polygons) • 13-4 Faces, Edges, Vertices—pp. 569–572 (Draw a cube) See also Grade 1 **Chapter 13: 13-3 through 13-5, 13-9** • 13-3 Compose Two-Dimensional Shapes—pp. 491–494 (Compose two-dimensional shapes using triangles, trapezoids, rhombuses, and hexagons; TE Develop Concepts: Composing Shapes) • 13-4 Compose More Two-Dimensional Shapes—pp. 495–498 (Compose two-dimensional shapes using rectangles, squares, circles, and parts of circles; TE Develop Concepts: Rectangles, Squares, and Circles) • 13-5 Three-Dimensional Shapes—pp. 501–504 (TE Develop Concepts: Building with Solid Shapes) • 13-9 Compose Three-Dimensional Shapes—pp. 517–520 (Compose three-dimensional shapes using cubes, cones, cylinders, and rectangular prisms; TE Develop Concepts: Exploring New Three-Dimensional Shapes)

STANDARD 4 – GEOMETRY

2nd Grade Content Standards	*Sadlier Math*, Grade 2
MA.2.4.2 Describe, classify, and sort plane and solid geometric shapes (triangle, square, rectangle, cube, rectangular prism) according to the number and shape of faces* and the number of sides, edges and/or vertices*. Example: How many vertices does a cube have?	**Chapter 13: 13-1, 13-3 & 13-4** • 13-1 Identify Two-Dimensional Shapes—pp. 555–558 (Identify triangles, quadrilaterals, pentagons, and hexagons; TE Develop Concepts: Exploring Polygons) • 13-3 Identify Three-Dimensional Shapes—pp. 565–568 (Identify cones, cubes, cylinders, pyramids, rectangular prisms, and spheres; TE Develop Concepts: Three-Dimensional Figures) • 13-4 Faces, Edges, Vertices—pp. 569–572 (Identify the faces, edges, and vertices of three-dimensional figures; Draw a cube; TE Develop Concepts: Faces, Edges, and Vertices)
MA.2.4.3 Investigate and predict the result of putting together and taking apart two-dimensional and three-dimensional shapes. Example: Use objects or a drawing program to find other shapes that can be made from a rectangle and a triangle. Use sketches or a drawing program to show several ways that a rectangle can be divided into three triangles.	See Grade 1 **Chapter 13: 13-3, 13-4 & 13-9** • 13-3 Compose Two-Dimensional Shapes—pp. 491–494 (Compose two-dimensional shapes using triangles, trapezoids, rhombuses, and hexagons; TE Develop Concepts: Composing Shapes) • 13-4 Compose More Two-Dimensional Shapes—pp. 495–498 (Compose two-dimensional shapes using rectangles, squares, circles, and parts of circles; TE Develop Concepts: Rectangles, Squares, and Circles) • 13-9 Compose Three-Dimensional Shapes—pp. 517–520 (Compose three-dimensional shapes using cubes, cones, cylinders, and rectangular prisms; TE Develop Concepts: Exploring New Three-Dimensional Shapes) See also Grade 3 **Chapter 14: 14-4** • 14-4 Compose and Decompose Shapes—pp. 302–303 (Compose and decompose shapes; TE Develop Concepts: Tetrominoes)
MA.2.4.4 Identify congruent* two-dimensional shapes in any position. Example: In a collection of rectangles, pick out those that are the same shape and size.	See Grade 4 related content **Chapter 17: 17-2** • 17-2 Quadrilaterals—pp. 372–373 (Equal sides) See also Grade 5 **Chapter 15: 15-1** • 15-1 Polygons—pp. 342–343 (TE Guided Practice: definition of rhombus: parallelogram with 4 congruent sides)
MA.2.4.5 Recognize geometric shapes and structures in the environment and specify their locations. Example: Look for combinations of shapes in the buildings around you.	**Chapter 13: 13-3 & 13-5** • 13-3 Identify Three-Dimensional Shapes—pp. 565–568 (Identify cones, cubes, cylinders, pyramids, rectangular prisms, and spheres; TE Develop Concepts: Three-Dimensional Figures: What real-life objects have these shapes? (Examples: ball, blocks, ice-cream cone, shoe box, number cubes)) • 13-5 Problem Solving: Use Logical Reasoning—pp. 573–578 (Solve problems by using logical reasoning; Use a variety of strategies to solve problems; TE Develop Concepts: Use Logical Reasoning)

STANDARD 4 – GEOMETRY

2nd Grade Content Standards	*Sadlier Math*, Grade 2
MA.2.4.6 Recognize that basic shapes have lines of symmetry*. Example: Draw a line of symmetry in a square to divide the square in half from one corner to another. Discuss how else we could divide the shape into mirror images.	Related content **Chapter 14: 14-2** • 14-2 Halves—pp. 589–592 (Partition rectangles and circles into two equal shares; TE Develop Concepts: Partitioning Figures into Parts) See also Grade 4 **Chapter 17: 17-4** • 17-4 Symmetry—pp. 376–377 (Identify line symmetry in figures and draw lines of symmetry; TE Develop Concepts: Symmetry as Reflections)

STANDARD 5 – MEASUREMENT

2nd Grade Content Standards	*Sadlier Math*, Grade 2
Students understand how to measure length, temperature, capacity, weight, and time in standard units.	
MA.2.5.1 Measure and estimate length to the nearest inch, foot, yard, centimeter, and meter. Example: Measure the length of your classroom to the nearest foot.	**Chapter 6: 6-1 through 6-7** • 6-1 Inches—pp. 241–244 (Estimate and measure length to the nearest inch; TE Develop Concepts: Estimate and Measure Objects) • 6-2 Feet and Yards—pp. 245–248 (Estimate length using feet and yards; Measure length to the nearest foot or yard; TE Develop Concepts: Exploring Feet and Yards) • 6-3 Customary: Choose Tools and Units of Measure—pp. 249–252 (Choose the best tool to measure length; Choose the best customary unit to measure length; TE Develop Concepts: Choosing Tools and Units) • 6-4 Centimeters—pp. 253–256 (Estimate and measure length to the nearest centimeter; TE Develop Concepts: Exploring Centimeters) • 6-5 Meters—pp. 257–260 (Estimate and measure length to the nearest meter; TE Develop Concepts: Using Meters) • 6-6 Metric: Choose Tools and Units of Measure—pp. 261–264 (Choose the best tool to measure length; Choose the best metric unit to measure length; TE Develop Concepts: Choosing Measuring Tools) • 6-7 Measure Using Different Units—pp. 267–270 (Measure length using different units; TE Develop Concepts: Using Different Units)
MA.2.5.2 Describe the relationships among inch, foot, and yard. Describe the relationship between centimeter and meter. Example: How many inches are in a yard?	**Chapter 6: 6-1 through 6-5** • 6-1 Inches—pp. 241–244 (Estimate and measure length to the nearest inch; TE Develop Concepts: Estimate and Measure Objects) • 6-2 Feet and Yards—pp. 245–248 (Estimate length using feet and yards; Measure length to the nearest foot or yard; TE Develop Concepts: Exploring Feet and Yards) • 6-3 Customary: Choose Tools and Units of Measure—pp. 249–252 (Choose the best tool to measure length; Choose the best customary unit to measure length; TE Develop Concepts: Choosing Tools and Units) *continued*

STANDARD 5 – MEASUREMENT

2nd Grade Content Standards	*Sadlier Math*, Grade 2
	• 6-4 Centimeters—pp. 253–256 (Estimate and measure length to the nearest centimeter; TE Develop Concepts: Exploring Centimeters) • 6-5 Meters—pp. 257–260 (Estimate and measure length to the nearest meter; TE Develop Concepts: Using Meters)
MA.2.5.3 Decide which unit of length is most appropriate in a given situation. Example: Would you use yards or inches to measure the length of your school books? Explain your answer.	**Chapter 6: 6-3 & 6-6** • 6-3 Customary: Choose Tools and Units of Measure—pp. 249–252 (Choose the best tool to measure length; Choose the best customary unit to measure length; TE Develop Concepts: Choosing Tools and Units) • 6-6 Metric: Choose Tools and Units of Measure—pp. 261–264 (Choose the best tool to measure length; Choose the best metric unit to measure length; TE Develop Concepts: Choosing Measuring Tools)
MA.2.5.4 Estimate area and use a given object to measure the area of other objects. Example: Make a class estimate of the number of sheets of notebook paper that would be needed to cover the classroom door. Then use measurements to compute the area of the door.	See Grade 3 **Chapter 15: 15-1 through 15-3** • 15-1 Understand Area—pp. 312–313 (Estimates of area) • 15-2 Find Area Using Standard Units—pp. 314–315 (Measure area by counting unit squares; TE Develop Concepts: Names for Unit Squares) • 15-3 Find the Area of a Rectangle and a Square—pp. 316–317 (Find the area of a rectangle and a square; TE Develop Concepts: Review Arrays)
MA.2.5.5 Estimate and measure capacity using cups and pints. Example: Make a reasonable estimate of the number of pints a juice pitcher holds.	See Grade 3 **Chapter 11: 11-2 & 11-3** • 11-2 Estimate and Measure Liquid Volume—pp. 234–235 (Estimate liquid volumes in the metric system; TE Develop Concepts: Use Measures of Length to Describe Objects) • 11-3 Operations with Liquid Volume—pp. 236–237 (Solve one-step problems involving liquid volumes that are given in the same units; TE Develop Concepts: Uses of Tables)
MA.2.5.6 Estimate weight and use a given object to measure the weight of other objects. Example: About how many jellybeans will you need to put on one side of a balance scale to balance with a box of chalk? Count out the number of jellybeans that you guessed would be needed and see whether your estimate was close. Explain the results of your estimation and weighing.	See Grade 3 **Chapter 11: 11-4** • 11-4 Estimate and Measure Mass—pp. 240–241 (Estimate and measure masses using the metric system; TE Develop Concepts: Use Measures of Mass) See also Grade 4 **Chapter 14: 14-4** • 14-4 Customary Units of Weight—pp. 302–303 (Solve weight problems using customary units of measure; TE Develop Concepts: Converting Units of Weight)

STANDARD 5 – MEASUREMENT

2nd Grade Content Standards	*Sadlier Math*, Grade 2
MA.2.5.7 Recognize the need for a fixed unit of weight. Example: Estimate the number of paperclips needed to balance with a box of chalk. Will it be the same as the number of jellybeans? Explain your answer.	See Grade 3 **Chapter 11: 11-4** • 11-4 Estimate and Measure Mass—pp. 240–241 (Estimate and measure masses using the metric system; TE Develop Concepts: Use Measures of Mass) See also Grade 4 **Chapter 14: 14-4** • 14-4 Customary Units of Weight—pp. 302–303 (Solve weight problems using customary units of measure; TE Develop Concepts: Converting Units of Weight)
MA.2.5.8 Estimate temperature. Read a thermometer in Celsius and Fahrenheit. Example: What do you think the temperature is today? Look at the thermometer to check.	See Grade 4 **Chapter 15: 15-4** • 15-4 Temperature—pp. 330–331 (Solve problems involving temperature; two different scales, Fahrenheit and Celsius. TE Develop Concepts: Scales as Measurement)
MA.2.5.9 Tell time to the nearest quarter hour, be able to tell five-minute intervals, and know the difference between a.m. and p.m. Example: When does your favorite TV program start?	**Chapter 12: 12-9 & 12-10** • 12-9 Hour and Half Hour—pp. 531–534 (Tell and write time to the hour and half hour; TE Develop Concepts: Exploring Hours and Half Hours) • 12-10 Five Minutes—pp. 535–538 (Tell and write time to the nearest five minutes; TE Develop Concepts: Explore Telling Time) See also Grade 3 **Chapter 13: 13-1** • 13-1 Tell Time to the Minute—pp. 276–277 (Quarter hour)
MA.2.5.10 Know relationships of time: seconds in a minute; minutes in an hour; hours in a day; days in a week; and days, weeks, and months in a year. Example: How many days are in a year?	**Chapter 12: 12-9** • 12-9 Hour and Half Hour—pp. 531–534 (60 minutes in 1 hour; 1 half hour = 30 minutes) See also Kindergarten **Chapter 17: 17-2** • 17-2 Calendar—pp. 623–626 (days, weeks, months) See also Grade 4 **Chapter 15: 15-3** • 15-3 Elapsed Time—pp. 328–329 (60 seconds in 1 hour)
MA.2.5.11 Find the duration of intervals of time in hours. Example: Your trip began at 9:00 a.m. and ended at 3:00 p.m. How long were you traveling?	**Chapter 12: 12-9** • 12-9 Hour and Half Hour—pp. 531–534 See also Grade 3 **Chapter 13: 13-2** • 13-2 Measure Elapsed Time—pp. 278–279 (Measure time intervals in hours and minutes; TE Develop Concepts: Explore 1 Minute)

STANDARD 5 – MEASUREMENT

2nd Grade Content Standards	*Sadlier Math*, Grade 2
MA.2.5.12 Find the value of a collection of pennies, nickels, dimes, quarters, half-dollars, and dollars. Example: You have 3 pennies, 4 nickels, and 2 dimes. How much money do you have? Explain your answer.	**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 • 12-8 Paper Money—pp. 525–528

STANDARD 6 - PROBLEM SOLVING

2nd Grade Content Standards	*Sadlier Math*, Grade 2
Students make decisions about how to set up a problem.	
MA.2.6.1 Choose the approach, materials, and strategies to use in solving problems. Example: Solve the problem: "Count the number of squares on the surface of a cube. Put two cubes together and count the number of visible squares. Repeat this step with 3, 4, 5, ..., cubes in a line. Find a rule for the number of squares." Use blocks to set up the problem.	For each lesson, the new skill or skills are presented in the context of a real-world situation or problem. Students study step-by-step solutions then apply what they've learned in the Problem Solving section of the lesson. In addition, each chapter includes a full Problem Solving lesson that combines application of newly learned skills with a focus on problem solving strategies. See the following problem solving resources: **Problem Solving Math Practices** • Four Steps: Read, Plan, Solve, Check—p. xix • Make Sense of Problems/Use Reasoning—p. xx • Explain Your Reasoning/Model with Mathematics—p. xxi • Use the Right Tools/Be Precise—p. xxii • Look for a Pattern—p. xxiii **Problem Solving Strategies** • Make and Use a Plan—p. xxiv • Work Backward—p. xxv • Use Logical Reasoning—p. xxvi • Read and Understand—p. xxvii • Write and Solve an Equation—p. xxviii • Use a Table—p. xxix • Make an Organized List—p. xxx • Represent the Situation—p. xxxi • Draw a Picture—p. xxxii **Chapter 1: 1-8** • 1-8 Problem Solving: Make and Use a Plan—pp. 33–38 *continued*

STANDARD 6 - PROBLEM SOLVING

2nd Grade Content Standards	*Sadlier Math*, Grade 2
	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: Read and Understand—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: Choose a Strategy—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: Represent the Situation—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: Compare Models—pp. 603–608
MA.2.6.2 Use tools such as objects or drawings to model problems. Example: In the first example, place blocks together. Each time you add a block, count the number of squares and record it.	**Problem Solving Math Practices** • Model with Mathematics—p. xxi • Use the Right Tools—p. xxii **Problem Solving Strategies** • Use a Table—p. xxix • Make an Organized List—p. xxx • Draw a Picture—p. xxxii **Chapter 6: 6-3 through 6-8** • 6-1 Inches—pp. 241–244 (Estimate and measure length to the nearest inch; TE Develop Concepts: Estimate and Measure Objects) • 6-2 Feet and Yards—pp. 245–248 (Estimate length using feet and yards; Measure length to the nearest foot or yard) • 6-3 Customary: Choose Tools and Units of Measure—pp. 249–252 (Choose the best tool to measure length; Choose the best customary unit to measure length; TE Develop Concepts: Choosing Tools and Units) • 6-4 Centimeters—pp. 253–256 (Estimate and measure length to the nearest centimeter) • 6-5 Meters—pp. 257–260 (Estimate and measure length to the nearest meter) *continued*

STANDARD 6 - PROBLEM SOLVING

2nd Grade Content Standards	*Sadlier Math*, Grade 2
Students solve problems and justify their reasoning.	• 6-6 Metric: Choose Tools and Units of Measure—pp. 261–264 (Choose the best tool to measure length; TE Develop Concepts: Choosing Measuring Tools) • 6-7 Measure Using Different Units—pp. 267–270 (Measure length using different units) • 6-8 Compare Lengths—pp. 271–274 (Measure to find how much longer one object is than another) **Chapter 8: 8-4** • 8-4 Regroup Tens as Hundreds Using Models—pp. 353–356 (Regroup tens to make a new hundred; TE Develop Concepts: Tens and Hundreds) **Chapter 9: 9-4** • 9-4 Regroup Hundreds as Tens Using Models—pp. 395–398 (Use models to regroup hundreds as tens; TE Develop Concepts: Regrouping) **Chapter 10: 10-5** • 10-5 Problem Solving: Draw a Picture—pp. 447–452 (Solve problems by drawing a picture; TE Develop Concepts: Using Different Strategies) **Chapter 11: 11-7** • 11-7 Problem Solving: Choose a Model—pp. 485–490 (Choose a model to organize data for a given problem-solving situation; TE Develop Concepts: Comparing Models) **Chapter 14: 14-5** • 14-5 Problem Solving: Compare Models—pp. 603–608 (Solve problems by comparing models Use a variety of strategies to solve problems; TE Develop Concepts: Using a Model)
MA.2.6.3 Explain the reasoning used and justify the procedures selected in solving a problem. Example: In the first example, notice that the number goes up by 4 each time a block is added. Observe that, as you add each cube, you gain 6 squares but lose 2 where the blocks are joined.	In addition to representative instructional activities cited below, students express solutions clearly and logically with appropriate mathematical terms and notation in every lesson. Students support solutions with evidence in the **Write About It** exercises at the conclusion of every lesson. Consider the following representative lessons: **Problem Solving Math Practices** • Make Sense of Problems/Use Reasoning—p. xx • Explain Your Reasoning—p. xxi **Problem Solving Strategies** • Use Logical Reasoning—p. xxvi **Chapter 1: 1-2** • 1-2 Put Together—pp. 7–10 (Write About It: Julia has 13 fish in her fish tank. She has 6 goldfish and the rest are clown fish. How many clown fish does she have? Explain how you found your answer.) *continued*

STANDARD 6 - PROBLEM SOLVING

2nd Grade Content Standards	*Sadlier Math*, Grade 2
MA.2.6.3 Explain the reasoning used and justify the procedures selected in solving a problem. Example: In the first example, notice that the number goes up by 4 each time a block is added. Observe that, as you add each cube, you gain 6 squares but lose 2 where the blocks are joined.	**Chapter 3: 3-6** • 3-6 Problem Solving: Use Logical Reasoning—pp. 133–138 (Solve problems using logical reasoning; TE Develop Concepts: Use Logical Reasoning) **Chapter 13: 13-5** • 13-5 Problem Solving: Use Logical Reasoning—pp. 573–578 (Solve problems by using logical reasoning; Use a variety of strategies to solve problems; TE Develop Concepts: Use Logical Reasoning)
MA.2.6.4 Make precise calculations and check the validity of the results in the context of the problem. Example: In the first example, check your results by setting out 10 blocks and counting the number of squares on each long side and then the two at the ends. See how this fits with your rule of adding 4 each time.	Throughout the program, students are reminded to check the results of their computation. In addition, several exercises help students focus on error analysis. For example: **Problem Solving Math Practices** • Four Steps: Read, Plan, Solve, Check—p. xix • Be Precise—p. xxii **Chapter 2: 2-6, 2-9 & 2-10** • 2-6 Relate Addition and Subtraction—pp. 73–76 (Write About It: Tyler subtracts 16 – 9 and gets 8. How would Tyler know if he is correct? Use a related addition fact to explain how Tyler could check his answer.) • 2-9 Use Addition to Check—pp. 87–90 (TE Use the Student Pages: Emphasize that understanding how addition and subtraction are related can help students check their answers; TE Develop Concepts: Checking Subtraction) • 2-10 Solve for Unknowns—pp. 91–94 (TE Early Finishers: Have students trade the word problem and model back to the owner, so he or she can check and see if the word problem is accurate.) **Chapter 4: 4-5** • 4-5 Two-Digit Addition with Regrouping—pp. 163–166 (Write About It: Lauren solved this problem. There are 24 raisins and 46 nuts in a snack mix packet. How many raisins and nuts are there? : 24 + 46 = 60. What error did Lauren make?) **Chapter 9: 9-9** • 9-9 Use Addition to Check Subtraction: Three-Digit Numbers—pp. 419–422 (Use addition to check three-digit subtraction; TE Develop Concepts: Relating Addition and Subtraction) **Chapter 12: 12-12** • 12-12 Problem Solving: Work Backward—pp. 543–548 (TE Use the Student Pages: Explain that students can check their answer by working through the problem from the starting time.)
MA.2.6.5 Understand and use connections between two problems. Example: Use the method of the problem you have just solved to find what happens when the cubes are not all in a line.	**Chapter 1: 1-9** • 1-9 Solve for Unknown Addends—pp. 39–42 (TE Use the Student Pages: Encourage students to look at the similarities between the equations and the relationships between the numbers.) **Chapter 4: 4-8** • 4-8 Three Addends—pp. 175–178 (TE Write About It: If students are unsure how to answer this question, talk about how adding 13 + 21 is *continued*

STANDARD 6 - PROBLEM SOLVING

2nd Grade Content Standards	*Sadlier Math*, Grade 2
	similar to adding 13 + 21 + 16. This may help students see that similar steps are used for both additions.) **Chapter 8: 8-2** • 8-2 Add Hundreds, Tens, and Ones—pp. 345–348 (TE Use the Student Pages: Discuss the importance of adding in the order shown here: ones, tens, and then hundreds. Ask: How is it similar to adding two-digit numbers?) **Chapter 11: 11-1 & 11-4** • 11-1 Read Line Plots—pp. 459–462 (TE Use the Student Pages: How is a line plot similar to a number line?) • 11-4 Make Picture Graphs—pp. 471–474 (TE English Language Learners: Help students identify similarities and differences between the two types of charts.)