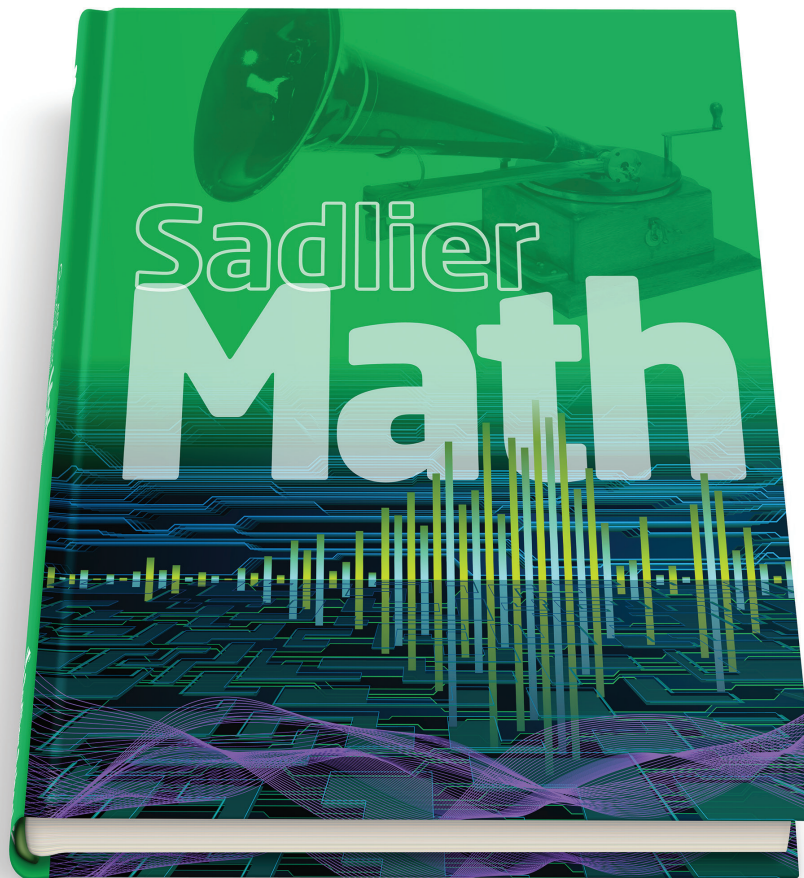# Sadlier Math™

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

Grade 3

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STANDARD 1 – NUMBER SENSE

3rd Grade Content Standards	Sadlier Math, Grade 3
Students understand the relationships among numbers, quantities, and place value in whole numbers* up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	
MA.3.1.1 Count, read, and write whole numbers up to 1,000. Example: Write 349 for the number "three hundred forty-nine."	**Chapter 1: 1-1** • 1-1 Read and Write Multi-Digit Numbers—pp. 2–3 (Write numbers to 1000 using base-ten numerals, number names, and expanded form; TE Develop Concepts: Model 3-Digit Numbers with Base Ten Models)
MA.3.1.2 Identify and interpret place value in whole numbers up to 1,000. Example: Understand that the 7 in 479 represents 7 tens or 70.	**Chapter 1: 1-1** • 1-1 Read and Write Multi-Digit Numbers—pp. 2–3 (Write numbers to 1000 using base-ten numerals, number names, and expanded form; TE Develop Concepts: Model 3-Digit Numbers with Base Ten Models)
MA.3.1.3 Use words, models, and expanded form to represent numbers up to 1,000. Example: Recognize that 492 = 400 + 90 + 2.	**Chapter 1: 1-1 & 1-2** • 1-1 Read and Write Multi-Digit Numbers—pp. 2–3 (Write numbers to 1000 using base-ten numerals, number names, and expanded form; TE Develop Concepts: Model 3-Digit Numbers with Base Ten Models) • 1-2 Understand the Number Line—pp. 4–5 (Understand how to use a number line; TE Develop Concepts: Number Lines)
MA.3.1.4 Identify any number up to 1,000 in various combinations of hundreds, tens, and ones. Example: 325 can be written as 3 hundreds, 2 tens, and 5 ones, or as 2 hundreds, 12 tens, and 5 ones, etc.	**Chapter 1: 1-1** • 1-1 Read and Write Multi-Digit Numbers—pp. 2–3 (Write numbers to 1000 using base-ten numerals, number names, and expanded form; TE Develop Concepts: Model 3-Digit Numbers with Base Ten Models)
MA.3.1.5 Compare whole numbers up to 1,000 and arrange them in numerical order. Example: What is the smallest whole number you can make using the digits 4, 9, and 1? Use each digit exactly once.	**Chapter 1: 1-3** • 1-3 Compare and Order Numbers—pp. 6–7 (Compare and order 3-digit numbers using a number line and place value; TE Develop Concepts: Comparing and Ordering)
MA.3.1.6 Round numbers less than 1,000 to the nearest ten and the nearest hundred. Example: Round 548 to the nearest ten.	**Chapter 1: 1-4 & 1-5** • 1-4 Round Numbers to the Nearest Ten—pp. 10–11 (Round numbers to the nearest ten using number lines or place-value concepts; TE Develop Concepts: Which Tens Number is Closer?) • 1-5 Round Numbers to the Nearest Hundred—pp. 12–13 (Round numbers to the nearest 100 using number lines or place-value concepts; TE Develop Concepts: Which Hundred is Closer?)

Sadlier School

STANDARD 1 – NUMBER SENSE

3ʳᵈ Grade Content Standards	*Sadlier Math*, Grade 3
MA.3.1.7 Identify odd and even numbers up to 1,000 and describe their characteristics. Example: Find the even number: 47, 106, 357, 629.	**Chapter 2: 2-2** • 2-2 Explore Addition Patterns—pp. 24–25 (Odd numbers, even numbers) See also Grade 2 **Chapter 10: 10-1** • 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))
MA.3.1.8 Show equivalent fractions* using equal parts. Example: Draw pictures to show that 3/5, 6/10, and 9/15 are equivalent fractions.	**Chapter 10: 10-1 through 10-3** • 10-1 Whole Numbers and Fractions—pp. 210–211 (Write whole numbers as fractions and recognize fractions that are equivalent to whole numbers; TE Develop Concepts: Dividing a Whole into Parts) • 10-2 Find Equivalent Fractions—pp. 212–213 (Identify equivalent fractions; TE Develop Concepts: Fractions—using two-color counters) • 10-3 Find Equivalent Fractions on a Number Line—pp. 214–215 (Find equivalent fractions on a number line; TE Develop Concepts: Dividing a Number Line)
MA.3.1.9 Identify and use correct names for numerators and denominators. Example: In the fraction 3/5, name the numerator and denominator.	**Chapter 9: 9-1** • 9-1 Understand Equal Parts—pp. 188–189 (Determine if a shape is divided into equal parts and name the number of equal parts; TE Develop Concepts: Equal Shares)
MA.3.1.10 Given a pair of fractions, decide which is larger or smaller by using objects or pictures. Example: Is 3/4 of a medium pizza larger or smaller than 1/2 of a medium pizza? Explain your answer.	**Chapter 10: 10-4 & 10-5** • 10-4 Compare Fractions with the Same Denominator—pp. 218–219 (Compare fractions with the same denominator; TE Develop Concepts: Comparing Whole Numbers on Number Lines) • 10-5 Compare Fractions with the Same Numerator—pp. 220–221 (Compare fractions with the same numerator; TE Develop Concepts: Compare Unit Fractions)
MA.3.1.11 Given a set* of objects or a picture, name and write a decimal to represent tenths and hundredths. Example: You have a pile of 100 beans and 72 of them are lima beans. Write the decimal that represents lima beans as a part of the whole pile of beans.	See Grade 4 **Chapter 13: 13-1 & 13-3** • 13-1 Equivalent Fractions: Rename Tenths as Hundredths—pp. 272–273 (Express a fraction with a denominator of 10 as an equivalent fraction with a denominator of 100; TE Develop Concepts: Equivalent Fractions) • 13-3 Tenths and Hundredths as Fractions and Decimals—pp. 276–277 (Use decimal notation for fractions with denominators 10 and 100; TE Develop Concepts: Place Value)

STANDARD 1 – NUMBER SENSE

3rd Grade Content Standards	*Sadlier Math*, Grade 3
MA.3.1.12 Given a decimal for tenths, show it as a fraction using a place-value model. Example: Shade the part of a square that represents 0.7 and write the number 7/10.	See Grade 4 **Chapter 13: 13-1 & 13-3** • 13-1 Equivalent Fractions: Rename Tenths as Hundredths—pp. 272–273 (Express a fraction with a denominator of 10 as an equivalent fraction with a denominator of 100; TE Develop Concepts: Equivalent Fractions) • 13-3 Tenths and Hundredths as Fractions and Decimals—pp. 276–277 (Use decimal notation for fractions with denominators 10 and 100; TE Develop Concepts: Place Value)
MA.3.1.13 Interpret data displayed in a circle graph and answer questions about the situation. Example: Have the students in your class choose the pizza they like best from these choices: cheese, sausage, or pepperoni. Use a spreadsheet to enter the number of students who chose each kind and make a circle graph of the data. Determine the most popular and the least popular kind of pizza, and explain what the circle and each pie slice represent.	See Grade 6 **Chapter 17: 17-5** • 17-5 Interpret Circle Graphs—pp. 388–389 (Interpret circle graphs; TE Develop Concepts: Fraction Circles)
MA.3.1.14 Identify whether everyday events are certain, likely, unlikely, or impossible. Example: It is raining in your neighborhood. Is it certain, likely, unlikely, or impossible that the tree in your front yard will get wet?	N/A
MA.3.1.15 Record the possible outcomes for a simple probability experiment. Example: Have a partner toss a coin while you keep a tally of the outcomes. Exchange places with your partner and repeat the experiment. Explain your results to the class.	N/A

STANDARD 2 – COMPUTATION

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Students solve problems involving addition and subtraction of whole numbers. They model and solve simple problems involving multiplication and division.	
MA.3.2.1 Add and subtract whole numbers up to 1,000 with or without regrouping, using relevant properties of the number system. Example: 854 – 427 = ?. Explain your method.	**Chapter 2: 2-1, 2-3 through 2-7** • 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—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 **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
MA.3.2.2 Represent the concept of multiplication as repeated addition. Example: Lynn made 3 baskets each week for 4 weeks. Draw a picture to show how many baskets she made.	**Chapter 4: 4-1** • 4-1 Represent Multiplication as Repeated Addition—pp. 66–67
MA.3.2.3 Represent the concept of division as repeated subtraction, equal sharing, and forming equal groups. Example: Bob shared 10 cookies among 5 friends. Draw a picture to show how many cookies each friend got.	**Chapter 4: 4-5 & 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** • 7-1 Relate Multiplication and Division—pp. 142–143 (Use related multiplication and division facts to solve problems; TE Develop Concepts: Grouping in Division) **Chapter 8: 8-5** • 8-5 One and Zero in Division—pp. 172–173 (Use 1 and 0 in division; TE Develop Concepts: One and Zero Properties of Division)
MA.3.2.4 Know and use the inverse relationship between multiplication and division facts, such as $6 \times 7 = 42$, $42 \div 7 = 6$, $7 \times 6 = 42$, $42 \infty \div 6 = 7$. Example: Find other facts related to $8 \times 3 = 24$.	**Chapter 7: 7-1** • 7-1 Relate Multiplication and Division—pp. 142–143 (Use related multiplication and division facts to solve problems; TE Develop Concepts: Grouping in Division)

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STANDARD 2 – COMPUTATION

3rd Grade Content Standards	*Sadlier Math*, Grade 3
MA.3.2.5 Show mastery of multiplication facts for 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10. Example: Know the answer to 6 × 5.	**Chapter 5: 5-4** • 5-4 Multiply by 1 and 0—pp. 96–97 **Chapter 6: 6-1 through 6-9, 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 • 6-11 Multiply by Multiples of 10—pp. 134–135
MA.3.2.6 Add and subtract simple fractions with the same denominator. Example: Add 3/8 and 1/8 . Explain your answer.	See Grade 4 **Chapter 11: 11-1, 11-2, 11-4 & 11-5** • 11-1 Use Models to Add Fractions—pp. 224–225 (Add fractions using models; TE Develop Concepts: The Meaning of Sums) • 11-2 Add Fractions: Like Denominators—pp. 226–227 (Add fractions with the same denominators; TE Develop Concepts: Modeling Addition with Fractions) • 11-4 Use Models to Subtract Fractions—pp. 230–231 (Subtract fractions using fraction strips and number lines; TE Develop Concepts: Difference of Fractions) • 11-5 Subtract Fractions: Like Denominators—pp. 232–233 (Subtract fractions with like denominators; TE Develop Concepts: Modeling Subtraction with Fractions)
MA.3.2.7 Use estimation to decide whether answers are reasonable in addition and subtraction problems. Example: Your friend says that 79 – 22 = 27. Without solving, explain why you think the answer is wrong.	**Problem Solving Strategies** • Make and Use a Plan—p. xxvi (Estimate to check the reasonableness of the answer) **Chapter 1: 1-6** • 1-6 Problem Solving: Use a Four-Step Process—pp. 14–15 (Homework Look Back: Decide if your answer is reasonable) **Chapter 2: 2-3, 2-5 & 2-6** • 2-3 Estimate Sums—pp. 26–27 (Estimate sums to 1000 using rounding and front-end estimation; TE Develop Concepts: Compare Estimation Methods) • 2-5 Use Place Value to Add: Regroup Once—pp. 32–33 (Estimate to check the reasonableness of the answer) • 2-6 Use Place Value to Add: Regroup Twice—pp. 34–35 (Check answer with estimate) **Chapter 3: 3-1, 3-4 & 3-5** • 3-1 Estimate Differences—pp. 46–47 (Estimate differences by rounding and using front-end estimation; TE Develop Concepts: Compare Estimation Methods for Subtraction) • 3-4 Subtract Three-Digit Numbers—pp. 54–55 (Estimate by rounding. Then subtract and check.) • 3-5 Subtract Across Zeros—pp. 56–57 (Estimate to check the reasonableness of the answer)

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STANDARD 2 – COMPUTATION

3rd Grade Content Standards	*Sadlier Math*, Grade 3
MA.3.2.8 Use mental arithmetic to add or subtract with numbers less than 100. Example: Subtract 35 from 86 without using pencil and paper.	Located in the TE, **Mental Math** is the first activity for each lesson. For example: **Chapter 2: 2-1** • 2-1 Use Addition Properties—TE p. 22(TE Mental Math: Find each sum. 2 + 1, 4 + 5, 6 + 7, etc.) **Chapter 3: 3-1** • 3-1 Estimate Differences—TE p. 46 (TE Mental Math: Find each difference. 8 – 3, 20 – 10, 9 – 5, etc.) **Chapter 4: 4-6** • 4-6 Represent Division by Repeated Subtraction—TE p. 78 (TE Mental Math: Solve. 28 – 4, 24 – 4, 16 – 4, etc.)

STANDARD 3 – ALGEBRA AND FUNCTIONS

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number and functional relationships.	
MA.3.3.1 Represent relationships of quantities in the form of a numeric expression or equation. Example: Bill's mother gave him money to buy three drinks that cost 45 cents each at the concession stand. When he returned to the bleachers, he gave 25 cents change to his mother. Write an equation to find the amount of money Bill's mother originally gave him.	**Problem Solving Math Practices** • Four Steps: Read and Understand, Represent the Situation/Use an Equation, Make and Use a Plan, Look Back—p. xxi **Problem Solving Strategies** • Write and Solve an Equation—p. xxx **Chapter 4: 4-7** • 4-7 Problem Solving: Write an Equation—pp. 80–81 (Write equations to solve problems involving multiplication and division; TE Develop Concepts: Explore Equations) **Chapter 5: 5-7** • 5-7 Solve for Unknowns—pp. 102–103 (Find the unknown in a multiplication equation; TE Develop Concepts: Strategies for Fluency) **Chapter 11: 11-6** • 11-6 Problem Solving: Write an Equation—pp. 244–245 (Write one-step equations to solve problems; TE Develop Concepts: Use a Bar Model to Represent a Situation)
MA.3.3.2 Solve problems involving numeric equations. Example: Use your equation from the last example to find the amount of money that Bill's mother gave him, and justify your answer.	**Problem Solving Math Practices** • Four Steps: Read and Understand, Represent the Situation/Use an Equation, Make and Use a Plan, Look Back—p. xxi **Problem Solving Strategies** • Write and Solve an Equation—p. xxx **Chapter 4: 4-7** • 4-7 Problem Solving: Write an Equation—pp. 80–81 (Write equations *continued*

STANDARD 3 – ALGEBRA AND FUNCTIONS

3rd Grade Content Standards	*Sadlier Math*, Grade 3
	to solve problems involving multiplication and division; TE Develop Concepts: Explore Equations) **Chapter 5: 5-7** • 5-7 Solve for Unknowns—pp. 102–103 (Find the unknown in a multiplication equation; TE Develop Concepts: Strategies for Fluency) **Chapter 11: 11-6** • 11-6 Problem Solving: Write an Equation—pp. 244–245 (Write one-step equations to solve problems; TE Develop Concepts: Use a Bar Model to Represent a Situation)
MA.3.3.3 Choose appropriate symbols for operations and relations to make a number sentence true. Example: What symbol is needed to make the number sentence 4 _ 3 = 12 true?	**Chapter 1: 1-3** • 1-3 Compare and Order Numbers—pp. 6–7 (<, =, >) **Chapter 3: 3-6** • 3-6 Problem Solving: Read and Understand—pp. 58–59 (What operations will you use to solve the problem?) **Chapter 4: 4-1 & 4-5** • 4-1 Represent Multiplication as Repeated Addition—pp. 66–67 (Multiplication symbol) • 4-5 Represent Division by Sharing—pp. 76–77 (Division symbol)
MA.3.3.4 Understand and use the commutative* and associative* properties of multiplication. Example: Multiply the numbers 7, 2, and 5 in this order. Now multiply them in the order 2, 5, and 7. Which was easier? Why?	**Chapter 2: 2-1** • 2-1 Use Addition Properties—pp. 22–23 (Identify and understand the properties of addition; TE Develop Concepts: Properties of Addition) **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 (Use the Associative Property of Multiplication to multiply; TE Develop Concepts: Use the Associative Property to Add) **Chapter 8: 8-5** • 8-5 One and Zero in Division—pp. 172–173 (Use 1 and 0 in division; TE Develop Concepts: One and Zero Properties of Division)
MA.3.3.5 Create, describe, and extend number patterns using multiplication. Example: What is the next number: 3, 6, 12, 24, …? How did you find your answer?	**Chapter 2: 2-2** • 2-2 Explore Addition Patterns—pp. 24–25 **Chapter 5: 5-5 & 5-6** • 5-5 Multiply by 10—pp. 98–99 • 5-6 Find Patterns in the Multiplication Table—pp. 100–101 **Chapter 6: 6-10** • 6-10 Find More Multiplication Patterns—pp. 132–133

STANDARD 3 – ALGEBRA AND FUNCTIONS

3rd Grade Content Standards	*Sadlier Math*, Grade 3
MA.3.3.6 Solve simple problems involving a functional relationship between two quantities. Example: Ice cream sandwiches cost 20 cents each. Find the costs of 1, 2, 3, 4, … ice cream sandwiches. What pattern do you notice? Continue the pattern to find the cost of enough ice cream sandwiches for the class.	**Chapter 5: 5-6** • 5-6 Find Patterns in the Multiplication Table—pp. 100–101 (Find and use patterns in the multiplication table; TE Develop Concepts: Using a Multiplication Table)

STANDARD 4 – GEOMETRY

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Students describe and compare the attributes of plane and solid geometric shapes and use their understanding to show relationships and solve problems.	
MA.3.4.1 Identify quadrilaterals* as four-sided shapes. Example: Which of these are quadrilaterals: square, triangle, or rectangle?	**Chapter 14: 14-2** • 14-2 Classify Quadrilaterals—pp. 296–297 (Classify quadrilaterals by their attributes; TE Develop Concepts: More than One Name)
MA.3.4.2 Identify right angles in shapes and objects and decide whether other angles are greater or less than a right angle. Example: Identify right angles in your classroom. Open the classroom door until it makes a right angle with one wall and explain what you are doing.	**Chapter 14: 14-2 & 14-3** • 14-2 Classify Quadrilaterals—pp. 296–297 (Right angles) • 14-3 Draw Quadrilaterals—pp. 298–299 (TE Develop Concepts: Draw Parallel Lines and Right Angles) See also Grade 4 **Chapter 16: 16-2** • 16-2 Angle Measure—pp. 352–353 (Right, acute, obtuse, and straight angles)
MA.3.4.3 Identify, describe, and classify: cube, sphere*, prism*, pyramid, cone, and cylinder. Example: Describe the faces of a pyramid and identify its characteristics.	See Grade 2 **Chapter 13: 13-3** • 13-3 Identify Three-Dimensional Shapes—pp. 565–568 (Identify cones, cubes, cylinders, pyramids, rectangular prisms, and spheres; TE Develop Concepts: Three-Dimensional Figures)

STANDARD 4 – GEOMETRY

3ʳᵈ Grade Content Standards	*Sadlier Math*, Grade 3
MA.3.4.4 Identify common solid objects that are the parts needed to make a more complex solid object. Example: Describe and draw a house made from a prism and a pyramid.	See Grade 5 **Chapter 16: 16-1** • 16-1 Solid Figures—pp. 360–361 (Identify solid figures and their attributes; Relate plane and solid figures to identify nets for solid figures; TE Develop Concepts: Two-Dimensional Objects)
MA.3.4.5 Draw a shape that is congruent* to another shape. Example: Draw a triangle that is congruent to a given triangle. You may use a ruler and pencil or the drawing program on a computer.	See Grade 4 **Chapter 17: 17-2** • 17-2 Quadrilaterals—pp. 372–373 (Identify and classify quadrilaterals, equal sides; TE Develop Concepts: Constructing Quadrilaterals) 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.3.4.6 Use the terms point, line, and line segment in describing two-dimensional shapes. Example: Describe the way a triangle is made of points and line segments and how you know it is a triangle.	See Grade 4 **Chapter 16: 16-1** • 16-1 Points, Lines, Line Segments, Rays, and Angles—pp. 350–351 (Identify and draw points, lines, line segments, rays, and angles; TE Develop Concepts: Basic Geometric Figures)
MA.3.4.7 Draw line segments and lines. Example: Draw a line segment three inches long.	**Chapter 11: 11-1** • 11-1 Measure Length—pp. 232–233 (Draw lines with the length shown)
MA.3.4.8 Identify and draw lines of symmetry in geometric shapes (by hand or using technology). Example: Use pencil and paper or a drawing program to draw lines of symmetry in a square. Discuss your findings.	See 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)
MA.3.4.9 Sketch the mirror image reflections of shapes. Example: Hold up a cardboard letter F to a mirror. Draw the letter and the shape you see in the mirror.	N/A

STANDARD 4 – GEOMETRY

3rd Grade Content Standards	*Sadlier Math*, Grade 3
MA.3.4.10 Recognize geometric shapes and their properties in the environment and specify their locations. Example: Write the letters of the alphabet and draw all the lines of symmetry that you see.	**Chapter 14: 14-1 & 14-2** • 14-1 Classify Polygons—pp. 294–295 (Classify polygons by their attributes; TE Develop Concepts: Describe Geometric Figures) • 14-2 Classify Quadrilaterals—pp. 296–297 (Classify quadrilaterals by their attributes; TE Develop Concepts: More than One Name)

STANDARD 5 – MEASUREMENT

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.	
MA.3.5.1 Measure line segments to the nearest half-inch. Example: Measure the length of a side of a triangle.	**Chapter 11: 11-1** • 11-1 Measure Length—pp. 232–233 (Measure lengths to the nearest quarter and half inch; TE Develop Concepts: Use Measuring Tools for Length)
MA.3.5.2 Determine equivalent measures of length. Give your answer in yards, feet and inches. Example: Measure a length of string that is 36" and report the measurement as 1 yard or 3 feet.	See Grade 4 **Chapter 14: 14-2** • 14-2 Customary Units of Length—pp. 298–299 (Solve length problems using customary units of measure; TE Develop Concepts: Converting Units with Tables)
MA.3.5.3 Find the perimeter of a polygon*. Example: Find the perimeter of a table in centimeters. Explain your method.	**Chapter 16: 16-1 through 16-6** • 16-1 Understand Perimeter—pp. 332–333 • 16-2 Find Perimeter—pp. 334–335 • 16-3 Find Unknown Side Lengths—pp. 336–337 • 16-4 Problem Solving: Compare Strategies—pp. 340–341 (Solve perimeter problems in two ways by using different strategies and comparing them) • 16-5 Same Perimeter, Different Areas—pp. 342–343 • 16-6 Same Area, Different Perimeters—pp. 344–345
MA.3.5.4 Estimate or find the area of shapes by covering them with squares. Example: How many square tiles do we need to cover this desk?	**Chapter 15: 15-1 through 15-3** • 15-1 Understand Area—pp. 312–313 (Count the number of unit squares) • 15-2 Find Area Using Standard Units—pp. 314–315 (Count the number of unit squares) • 15-3 Find the Area of a Rectangle and a Square—pp. 316–317 (Count the number of unit squares)

STANDARD 5 – MEASUREMENT

3rd Grade Content Standards	*Sadlier Math*, Grade 3
MA.3.5.5 Estimate or find the volumes of objects by counting the number of cubes that would fill them. Example: How many of these cubes will fill the box?	See Grade 5 **Chapter 16: 16-2 16-3** • 16-2 Cubic Measure—pp. 362–363 (Packing solid figure with unit cubes) • 16-3 Volume of Rectangular Prisms—pp. 364–365 (Find volume by packing with unit cubes)
MA.3.5.6 Estimate and measure capacity using quarts, gallons, and liters. Example: This bottle holds one liter. Estimate how many liters the sink holds.	**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) See also Grade 4 **Chapter 14: 14-3 & 14-5** • 14-3 Customary Units of Capacity—pp. 300–301 • 14-5 Operations with Customary Units—pp. 304–305
MA.3.5.7 Estimate and measure weight using pounds and kilograms. Example: Estimate the weight of your book bag in pounds.	**Chapter 11: 11-4 & 11-5** • 11-4 Estimate and Measure Mass—pp. 240–241 (Estimate and measure masses using the metric system; TE Develop Concepts: Use Measures of Mass) • 11-5 Operations with Mass—pp. 242–243 (Solve one-step problems involving masses that are given in the same units; TE Develop Concepts: Choosing an Operation to Use) See also Grade 4 **Chapter 14: 14-4 & 14-5** • 14-4 Customary Units of Weight—pp. 302–303 • 14-5 Operations with Customary Units—pp. 304–305
MA.3.5.8 Compare temperatures in Celsius and Fahrenheit. Example: Measure the room temperature using a thermometer that has both Celsius and Fahrenheit units. If the temperature in the room measures 70ºF, will the Celsius measurement be higher or lower?	See Grade 4 **Chapter 15: 15-4** • 15-4 Temperature—pp. 330–331 (Solve problems involving temperature; TE Develop Concepts: Scales as Measurement)
MA.3.5.9 Tell time to the nearest minute. Example: Using an analog clock, determine times such as 3:12 and 9:43.	**Chapter 13: 13-1** • 13-1 Tell Time to the Minute—pp. 276–277 (Read and write time to the minute; TE Develop Concepts: Recall Telling Time)

STANDARD 5 – MEASUREMENT

3rd Grade Content Standards	*Sadlier Math*, Grade 3
MA.3.5.10 Find the value of any collection of coins and bills. Write amounts less than a dollar using the ¢ symbol and write larger amounts in decimal notation using the $ symbol. Example: You have 5 quarters and 2 dollar bills. How much money is that? Write the amount.	See Grade 2 **Chapter 12-1 through 12-7** • 12-1 Pennies, Nickels, and Dimes—pp. 497–500 (Find the value of a group of coins consisting of pennies, nickels, and dimes; TE Develop Concepts: Exploring Coins) • 12-2 Quarters—pp. 501–504 (Find the value of a group of coins consisting of pennies, nickels, dimes, and quarters; TE Develop Concepts: Exploring Quarters) • 12-3 Equal Amounts—pp. 505–508 (Show amounts of money in more than one way using pennies, nickels, dimes, and quarters; TE Develop Concepts: Counting Coins) • 12-4 Compare Money—pp. 509–512 (Compare an amount of money to the cost of an item; TE Develop Concepts: Explore Comparing Money) • 12-5 Make Change—pp. 513–516 (Find the amount of change needed, given the price and amount paid; TE Develop Concepts: Finding the Difference in Amounts) • 12-6 Add and Subtract Money—pp. 517–520 (Add and subtract amounts of money; TE Develop Concepts: Reviewing Addition and Subtraction) • 12-7 One Dollar—pp. 521–524 (Count and find amounts of coins equal to a dollar; TE Develop Concepts: Exploring Dollars)
MA.3.5.11 Use play or real money to decide whether there is enough money to make a purchase. Example: You have $5. Can you buy two books that cost $2.15 each? What about three books that cost $1.70 each? Explain how you know.	See Grade 2 **Chapter 12-1 through 12-7** • 12-1 Pennies, Nickels, and Dimes—pp. 497–500 (Find the value of a group of coins consisting of pennies, nickels, and dimes; TE Develop Concepts: Exploring Coins) • 12-2 Quarters—pp. 501–504 (Find the value of a group of coins consisting of pennies, nickels, dimes, and quarters; TE Develop Concepts: Exploring Quarters) • 12-3 Equal Amounts—pp. 505–508 (Show amounts of money in more than one way using pennies, nickels, dimes, and quarters; TE Develop Concepts: Counting Coins) • 12-4 Compare Money—pp. 509–512 (Compare an amount of money to the cost of an item; TE Develop Concepts: Explore Comparing Money) • 12-5 Make Change—pp. 513–516 (Find the amount of change needed, given the price and amount paid; TE Develop Concepts: Finding the Difference in Amounts) • 12-6 Add and Subtract Money—pp. 517–520 (Add and subtract amounts of money; TE Develop Concepts: Reviewing Addition and Subtraction) • 12-7 One Dollar—pp. 521–524 (Count and find amounts of coins equal to a dollar; TE Develop Concepts: Exploring Dollars)

STANDARD 5 – MEASUREMENT

3rd Grade Content Standards	*Sadlier Math*, Grade 3
MA.3.5.12 Carry out simple unit conversions within a measurement system (e.g., centimeters to meters, hours to minutes). Example: How many minutes are in 3 hours?	**Chapter 11: 11-3 through 11-5** • 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) • 11-4 Estimate and Measure Mass—pp. 240–241 (Estimate and measure masses using the metric system; TE Develop Concepts: Use Measures of Mass) • 11-5 Operations with Mass—pp. 242–243 (Solve one-step problems involving masses that are given in the same units; TE Develop Concepts: Choosing an Operation to Use) **Chapter 13: 13-4** • 13-4 Operations with Time—pp. 284–285 (Solve word problems involving addition and subtraction of time intervals in minutes; TE Develop Concepts: Decide What to Find and Do for Time Problems)

STANDARD 6 - PROBLEM SOLVING

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Students make decisions about how to approach problems and communicate their ideas.	
MA.3.6.1 Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns. Example: Solve the problem: "Start with any number. If it is even, halve it. If it is odd, add 1. Do the same with the result and keep doing that. Find what happens by trying different numbers. "Try two or three numbers and look for patterns."	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 and Understand, Represent the Situation/Use an Equation, Make and Use a Plan, Look Back—p. xxi • Make Sense of Problems/Use Reasoning—p. xxii • Explain Your Reasoning/Model with Mathematics—p. xxiii • Use the Right Tools/Be Precise—p. xxvi • Look for a Pattern—p. xxv **Problem Solving Strategies** • Make and Use a Plan—p. xxvi • Work Backward—p. xxvii • Use Logical Reasoning—p. xxviii • Read and Understand—p. xxix • Write and Solve an Equation—p. xxx • Make an Organized List—p. xxxi *continued*

STANDARD 6 - PROBLEM SOLVING

3ʳᵈ Grade Content Standards	*Sadlier Math*, Grade 3
	Chapter 1: 1-6 • 1-6 Problem Solving: Use a 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: Read and Understand—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: Compare Models—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: Compare Models—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: Choose a Strategy—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: Compare Strategies—pp. 340–341
MA.3.6.2 Decide when and how to break a problem into simpler parts. Example: In the first example, find what happens to all the numbers up to 10.	**Chapter 14: 14-4** • 14-4 Compose and Decompose Shapes—pp. 302–303 (Compose and decompose shapes; TE Develop Concepts: Tetrominoes) **Chapter 15: 15-5** • 15-5 Find Area of Composite Shapes—pp. 322–323 (Find the area of a composite shape by decomposition into non-overlapping rectangles; TE Develop Concepts: Decompose Shapes into Rectangles and Squares)

STANDARD 6 - PROBLEM SOLVING

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Students use strategies, skills, and concepts in finding and communicating solutions to problems.	
MA.3.6.3 Apply strategies and results from simpler problems to solve more complex problems. Example: In the first example, use your results for the numbers up to 10 to find what happens to all the numbers up to 20.	**Chapter 3: 3-2** • 3-2 Relate Addition and Subtraction—pp. 48–49 (TE Problem Solving: If necessary, show a simpler problem, such as 7 – 9, and use a number line to show that it cannot equal 2.) **Chapter 5: 5-5** • 5-5 Multiply by 10—pp. 98–99 (TE Write About It: Students may need to be reminded of the relationship between addition and multiplication. Provide a simpler problem if needed to get students on track.) **Chapter 7: 7-6** • 7-6 Problem Solving: Use Drawings to Solve Problems—pp. 154–155 (TE Guided Practice: After students draw the new model that shows the change in the situation, discuss how using a simple model makes it easier when a model has to change because a situation changes.)
MA.3.6.4 Express solutions clearly and logically by using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work. Example: In the first example, explain what happens to all the numbers that you tried.	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** • Use Reasoning—p. xxii • Explain Your Reasoning/Model with Mathematics—p. xxiii **Problem Solving Strategies** • Use Logical Reasoning—p. xxviii • Make an Organized List—p. xxxi **Chapter 4: 4-6** • 4-6 Represent Division by Repeated Subtraction—pp. 78–79 (Write About It: Mr. David has 21 rulers. He wants to give 3 to each group. Are there enough rulers for 8 groups? Explain why or why not.) **Chapter 13: 13-5** • 13-5 Problem Solving: Use Logical Reasoning—pp. 286–287 (Solve problems, including those involving time, using logical reasoning; TE Develop Concepts: Analyze Problem Situations) **Chapter 16: 16-4** • 6-4 Problem Solving: Compare Strategies—pp. 340–341 (TE Practice: Make sure that students justify their reasoning.)

STANDARD 6 - PROBLEM SOLVING

3rd Grade Content Standards	*Sadlier Math*, Grade 3
MA.3.6.5 Recognize the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy. Example: Measure the length and width of a room to the nearest meter to find how many student desks will fit in it. Would this be an accurate enough method if you were carpeting the room?	**Chapter 2: 2-3** • 2-3 Estimate Sums—pp. 26–27 (TE Use the Student Pages: Why might you want to use an estimate instead of an actual sum? Elicit that often an exact amount is not needed, for example, knowing about how far it is between two places, knowing about how long it will take to rake some leaves, or knowing exactly how much two items priced at $7.95 each cost when you have a $20 bill to pay for them.) **Chapter 3: 3-1** • 3-1 Estimate Differences—pp. 46–47 (TE Summarize: What are some reasons for estimating differences? (an exact difference not being needed; checking a subtraction problem; seeing about how many places are in a difference)
MA.3.6.6 Know and use strategies for estimating results of whole-number addition and subtraction. Example: You buy 2 bags of candy for $1.05 each. The cashier tells you that will be $1.70. Does that surprise you? Why or why not?	**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.3.6.7 Make precise calculations and check the validity of the results in the context of the problem. Example: In the first example, notice that the result of adding 1 to an odd number is always even. Use this to check your calculations.	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** • Be Precise—p. xxvi **Chapter 1: 1-6** • 1-6 Problem Solving: Use a Four-Step Process—pp. 14–15 ((Look Back: Check whether the answer makes sense) **Chapter 3: 3-2 & 3-5** • 3-2 Relate Addition and Subtraction—pp. 48–49 (TE Use the Student Pages: What equation needs to be solved to answer the question? (535 s 104 t ?) How can you check that the difference is correct? (Add the difference, 431, to 104 and see if the sum is 535.) • 3-5 Subtract Across Zeros—pp. 56–57 (Write About It: Morgan subtracted 567 from 700. She found a difference of 233. Is Morgan correct? Explain your answer.) **Chapter 5: 5-1** • 5-1 Multiply by 2—pp. 88–89 (Write About It: Jacob is trying to find 7 x 2 by using repeated addition. He writes 2 + 2 + 2 + 2 + 2 + 2 + 2 = 16. Explain and correct Jacob's error.) **Chapter 6: 6-7** • 6-7 Use a Bar Model to Multiply—pp. 126–127 (Write About It: Morgan says the bar model shows the number sentence 3 + 3 + 3 + 3 + 3 + 3 = 18. Gina says that it shows 6 x 3 = 18. Who is correct? Explain.)

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STANDARD 6 - PROBLEM SOLVING

3rd Grade Content Standards	*Sadlier Math*, Grade 3
Students determine when a solution is complete and reasonable and move beyond a particular problem by generalizing to other situations.	
MA.3.6.8 Decide whether a solution is reasonable in the context of the original situation. Example: In the example about fitting desks into a room, would an answer of 1,000 surprise you?	**Chapter 1: 1-6** • 1-6 Problem Solving: Use a Four-Step Process—pp. 14–15 (Solve problems by using a four-step process; reasonableness.) **Chapter 2: 2-5** • 2-5 Use Place Value to Add: Regroup Once—pp. 32–33 (Add two 3-digit numbers by regrouping ones or tens; reasonableness.) **Chapter 3: 3-1, 3-4 through 3-6** • 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.) • 3-4 Subtract Three-Digit Numbers—pp. 54–55 (Subtract 3-digit numbers using regrouping; reasonable answers.) • 3-5 Subtract Across Zeros—pp. 56–57 (Subtract 3-digit numbers when the minuend has zeros; reasonable answers.) • 3-6 Problem Solving: Read and Understand—pp. 58–59 (Use the relationship between addition and subtraction to solve problems; reasonable answers.)
MA.3.6.9 Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems. Example: Change the first example so that you multiply odd numbers by 2 or 3 or 4 or 5, before adding 1. Describe the pattern you see.	Students extend their understanding of how to solve one type of problem to solving similar problems in many lessons. For example: **Chapter 2: 2-6** • 2-6 Use Place Value to Add: Regroup Twice—pp. 34–35 (TE Use the Student Pages: Explain that this lesson is similar to the last lesson but that students will regroup in both the ones and tens places.) **Chapter 11: 11-5** • 11-5 Operations with Mass—pp. 242–243 (TE Develop Concepts: Choosing an Operation to Use: Ask students to compare this problem with the first problem. Discuss how they are similar.) **Chapter 15: 15-3** • 15-3 Find the Area of a Rectangle and a Square—pp. 316–317 (TE Develop Concepts: Review Arrays: How is this diagram like the other diagrams? (The squares are the same size.) How is this diagram different from the other diagrams?)