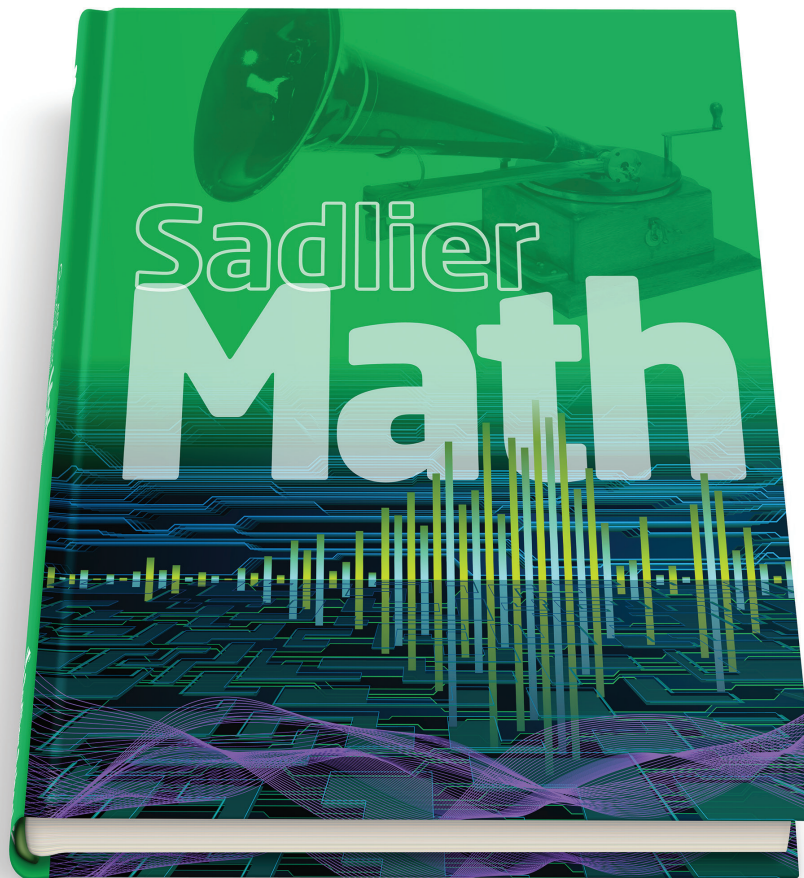# Sadlier Math™

Correlation to the Archdiocese of Cincinnati
Graded Course of Study for Mathematics 2012

Grade 3

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STANDARD 1 – NUMBER SENSE

Grade 3 Content Standards	*Sadlier Math*, Grade 3
M.3.1.1 Represent, compute, estimate and solve problems using numbers through hundred-thousands.	**Chapter 2: 2-1 through 2-8** **Chapter 3: 3-1 through 3-6** **Chapter 4: 4-1 through 4-7** **Chapter 5: 5-1 through 5-8** **Chapter 6: 6-1 through 6-11** **Chapter 7: 7-1 through 7-6** **Chapter 8: 8-1 through 8-8**
M.3.1.2 Round numbers less than 1,000 to the nearest ten and the nearest hundred.	**Chapter 1: 1-4 & 1-5**
M.3.1.3 Identify any numbers up to 1,000 in various combinations of hundreds, tens and ones.	**Chapter 1: 1-1**
M.3.1.4 Identify and use correctly the names for numerators and denominators.	**Chapter 9: 9-2 & 9-4**
M.3.1.5 Show equivalent fractions using equal parts (i.e., 3/5, 6/10, 9/15) as equivalent fractions.	**Chapter 10: 10-2 & 10-6**
M.3.1.6 Describe how the size of the fractional part is related to the number of equal-sized pieces in the whole.	**Chapter 9: 9-1 & 9-7** **Chapter 10: 10-7**
M.3.1.7 Compare and order fractions, including fractions greater than one, using models and strategies.	**Chapter 10: 10-4 through 10-6**
M.3.1.8 Using models, charts and graphs to represent equivalent fractions greater than one and identify representation of equivalence.	**Chapter 10: 10-2 & 10-3**
M.3.1.9 Given a set of objects or a picture, name and write a decimal to represent tenths and hundredths.	**See Grade 4** **Chapter 13: 13-1**

STANDARD 1 – NUMBER SENSE

Grade 3 Content Standards	*Sadlier Math*, Grade 3
M.3.1.10 Given a decimal for tenths, show it as a fraction using a place-value model (i.e., color the part of a circle that represents 0.4 and write the fraction 4/10.).	**See Grade 4** **Chapter 13: 13-1**

STANDARD 2 – COMPUTATION AND BASIC FACTS

Grade 3 Content Standards	*Sadlier Math*, Grade 3
M.3.2.1 Add and subtract whole numbers up to 1,000 with or without regrouping, using relevant properties of the number system (i.e., 637 + 133 = 800 - 30 = ?, explain your method).	**Chapter 2: 2-1 through 2-8** **Chapter 3: 3-1 through 3-6**
M.3.2.2 Model the concept of multiplication as repeated addition.	**Chapter 4: 4-1**
M.3.2.3 Show mastery of multiplication facts from memory all products of two one-digit numbers.	**Chapter 5: 5-1 through 5-6** **Chapter 6: 6-1 through 6-11**
M.3.2.4 Model the concept of division as repeated subtraction, equal sharing and forming equal groups and understand division as an unknown factor problem.	**Chapter 4: 4-5 & 4-6**
M.3.2.5 Solve multiplication and division within 100, including problems presented in context: repeated addition, multiplicative comparison, how many combinations, measurement and partitioning.	**Chapter 4: 4-1 through 4-6** **Chapter 5: 5-1 through 5-8** **Chapter 6: 6-1 through 6-11** **Chapter 7: 7-1 through 7-6** **Chapter 8: 8-1 through 8-8**
M.3.2.6 Solve multiplication and division fact problems and multiply one-digit whole numbers by multiples of 10 in the range 10-90 by using strategies that result from applying number properties.	**Chapter 5: 5-1 through 5-8** **Chapter 6: 6-1 through 6-11** **Chapter 7: 7-1 through 7-6** **Chapter 8: 8-1 through 8-8**
M.3.2.7 Identify, describe and apply division and multiplication as inverse operations (i.e., 5 x 2 = 10, 10 ÷ 5 = 2, 2 x 5 = 10, 10 ÷ 2 = 5).	**Chapter 7: 7-1**

STANDARD 2 – COMPUTATION AND BASIC FACTS

Grade 3 Content Standards	*Sadlier Math*, Grade 3
M.3.2.8 Add and subtract simple fractions with the same denominator.	**See Grade 4** **Chapter 11: 11-1 through 11-8**
M.3.2.9 Use estimation to decide whether answers are reasonable in addition and subtraction problems.	**Chapter 2: 2-3** **Chapter 3: 3-1**
M.3.2.10 Use mental math fluently to add or subtract with numbers less than 100.	**Chapter 2: 2-1 through 2-7** (mental math activity for each lesson in TE) **Chapter 3: 3-1 through 3-6** (mental math activity for each lesson in TE)
M.3.2.9 Solve routine and non-routine problems by acting them out, using manipulatives and drawing diagrams.	**Chapter 1: 1-6** (four-step process) **Chapter 2: 2-8** (use a model) **Chapter 3: 3-6** (read and understand) **Chapter 4: 4-7** (write and solve equation) **Chapter 5: 5-8** (compare models) **Chapter 6: 6-8** (make a table) **Chapter 7: 7-6** (use drawings) **Chapter 8: 8-6** (work backward) **Chapter 9: 9-7** (use a model) **Chapter 10: 10-7** (act it out) **Chapter 11: 11-6** (write and solve equation) **Chapter 12: 12-9** (compare models) **Chapter 13: 13-5** (use logical reasoning) **Chapter 14: 14-5** (choose a strategy) **Chapter 15: 15-6** (guess and test) **Chapter 16: 16-6** (compare strategies)
M.3.2.10 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	**Chapter 4: 4-3, 4-4 & 4-7**

STANDARD 3 – ALGEBRA AND FUNCTIONS, DATA ANALYSIS

Grade 3 Content Standards	*Sadlier Math*, Grade 3
M.3.3.1 Construct and analyze frequency tables scaled bar graphs, pictographs and line plots from a data set with several categories.	**Chapter 12: 12-1 through 12-8**
M.3.3.2 Solve non-routine problems by making tables, charts or graphs.	**Chapter 6: 6-8** **Chapter 12: 12-6**
M.3.3.3 Choose appropriate symbols for operations to make a number sentence true.	**Chapter 1: 1-3** **Chapter 2: 2-1** **Chapter 4: 4-7**
M.3.3.4 Solve simple word problems involving a functional relationship between two quantities (i.e., if a candy bar costs 75¢, find the costs of 1, 2, 3 or 4 bars).	**Chapter 5: 5-5 & 5-7** **Related content** **Chapter 5: 5-1 through 5-4, 5-6**
M.3.3.5 Create, describe and extend number patterns, using multiplication (i.e., 3, 9, 27 …).	**Chapter 2: 2-2** **Chapter 5: 5-1 through 5-6** **Chapter 6: 6-2 through 6-6, 6-10 & 6-11**

STANDARD 4 – GEOMETRY

Grade 3 Content Standards	*Sadlier Math*, Grade 3
M.3.4.1 Identify, describe and classify: cube, sphere, prism, pyramid, cone and cylinder.	**See Grade 2** **Chapter 13: 13-3** (identify three-dimensional shapes)

M.3.4.2 Describe analyze: compare and classify two-dimensional shapes using sides and angles, including acute, obtuse and right angles and connect these ideas to the definition of shapes.	**Chapter 14: 14-1** (classify polygons using sides and angles) **& 14-2** (classify quadrilaterals using sides and angles)
	See also Grade 4
	    Chapter 16: 16-2 (acute, obtuse, right, straight angles)
	    Chapter 17: 17-1 (classify polygons), **17-2** (classify quadrilaterals) & **17-3** (classify triangles)

STANDARD 4 – GEOMETRY

Grade 3 Content Standards	*Sadlier Math*, Grade 3
M.3.4.3 Build, draw and analyze two-dimensional shapes from several orientations in order to examine and understand congruency and symmetry.	**Chapter 14: 14-3** **See Grade 4 related content** **Chapter 17: 17-4** (symmetry)
M.3.4.4 Compose, decompose and transform polygons to make other polygons, including concave and convex polygons wit three, four, five, six, eight or ten sides.	**Chapter 14: 14-4**
M.3.4.5 Create, analyze and represent patterns and relationships using words (point, line, line segment, symmetry, angles, right angles, area perimeter).	**See Grade 4** **Chapter 16: 16-1 through 16-4**
M.3.4.6 Solve non-routine problems by making a table, chart or list and searching for patterns.	**Chapter 1: 1-6** (four-step process) **Chapter 2: 2-8** (use a model) **Chapter 3: 3-6** (read and understand) **Chapter 4: 4-7** (write and solve equation) **Chapter 5: 5-8** (compare models) **Chapter 6: 6-8** (make a table) **Chapter 7: 7-6** (use drawings) **Chapter 8: 8-6** (work backward) **Chapter 9: 9-7** (use a model) **Chapter 10: 10-7** (act it out) **Chapter 11: 11-6** (write and solve equation) **Chapter 12: 12-9** (compare models) **Chapter 13: 13-5** (use logical reasoning) **Chapter 14: 14-5** (choose a strategy) **Chapter 15: 15-6** (guess and test) **Chapter 16: 16-6** (compare strategies)
M.3.4.7 Describe and determine area as the number of same-sized units that over a region in a plane, recognizing that unit square is the standard wait for measuring area.	**Chapter 15: 15-2**
M.3.4.8 Justify the formula for the area of the rectangle, "area = base x height".	**Chapter 15: 15-3 & 15-4**

STANDARD 5 – MEASUREMENT

Grade 3 Content Standards	*Sadlier Math*, Grade 3
M.3.5.1 Measure objects using fractional parts of linear units, such as 1/2, 1/4, and 1/10.	**Chapter 11: 11-1**
M.3.5.2 Estimate or find the area of geometric shapes by using a "unit square" and relate area to the operations of multiplication and addition. (i.e., polygons, pyramid, square).	**Chapter 15: 15-2 & 15-3**
M.3.5.3 Select appropriate units, strategies and tools to solve problems involving perimeter.	**Chapter 16: 16-1 through 16-6**
M.3.5.4 Tell time to the nearest minute and to the nearest quarter hour and determine the amount of time elapsed.	**Chapter 13: 13-1 through 13-4** *no telling time to nearest quarter hour
M.3.5.5 Estimate and measure capacity using quarts, gallons and liters and measure weights using pounds and kilograms.	**Chapter 11: 11-2** (milliliter, liter) **& 11-4** (gram, kilogram) **See Grade 4** **Chapter 14: 14-3** (cup, quart, pint, gallon), **14-4** (ounce, pound)**, 14-7** (milliliter, liter) **& 14-8** (gram, kilogram)
M.3.5.6 Tell and compare temperatures in Celsius and Fahrenheit.	**See Grade 4** **Chapter 15: 15-4**
M.3.5.7 Find the value of any collection of coins and bills. Use symbols for cents (¢) and dollar ($) for problem-solving.	**See Grade 2** **Chapter 12: 12-1 through 12-8**

STANDARD 6 – PROBLEM SOLVING

Grade 3 Content Standards	*Sadlier Math*, Grade 3
M.3.6.1 Solve two-step word problems using the four operations, using equations with a letter standing for the unknown quantity.	**Chapter 4: 4-7** **Chapter 5: 5-7** **Chapter 11: 11-6**

STANDARD 6 – PROBLEM SOLVING

Grade 3 Content Standards	*Sadlier Math*, Grade 3
M.3.6.2 Identify mathematical patterns for addition and multiplication tables and explain them, using properties of operations (i.e., 2 times a number is always even, zero times a number is always zero.).	**Chapter 2: 2-2** **Chapter 5: 5-1 through 5-6** **Chapter 6: 6-10**
M.3.6.3 Solve problems involving measurement and estimation in terms of time, liquid volumes and masses of objects.	**Chapter 11: 11-2 through 11-6** **Chapter 13: 13-1 through 13-5**
M.3.6.4 Solve and demonstrate knowledge of various models for multiplication in problem-solving situations and demonstrate recall of basic multiplication and related division facts with ease.	**Chapter 5: 5-1 through 5-8** **Chapter 6: 6-1 through 6-11** **Chapter 7: 7-1 through 7-6** **Chapter 8: 8-1 through 8-8**