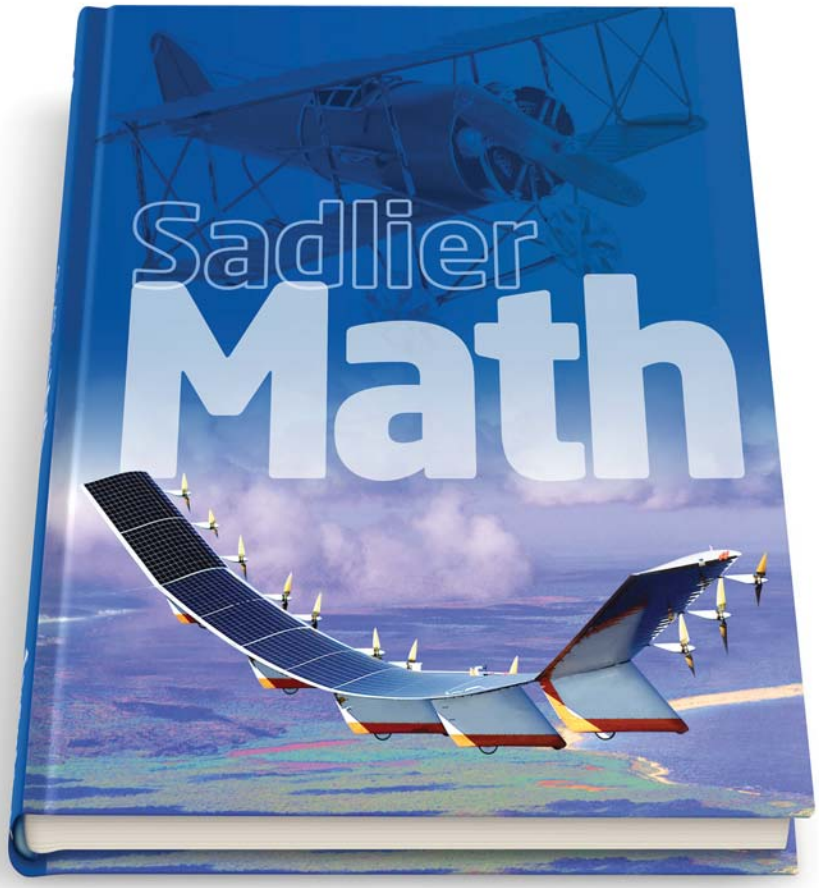
Sadlier Math™

Correlation to the Archdiocese of Newark Catholic Schools Curriculum Map for Mathematics

Grade 5



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FIRST TRIMESTER: SEPTEMBER - NOVEMBER

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Place Value from Billions to Thousandths Place	
5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	**Chapter 1: 1-1, 1-2 & 1-4**
5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	**Chapter 1: 1-3 & 1-4** **Chapter 12: 12-1** **Chapter 13: 13-1**
5.NBT.3 Read, write, and compare decimals to thousandths.	
a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000).	**Chapter 2: 2-1**
b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	**Chapter 2: 2-3** **Chapter 13: 13-3 through 13-5**
5.NBT.4 Use place value understanding to round decimals to any place.	**Chapter 2: 2-4 through 2-6** **Chapter 10: 10-3** **Chapter 11: 11-2**
Addition, Subtraction, Multiplication and Division of Whole Numbers and Decimals	
5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm.	**Chapter 3: 3-4 through 3-8**

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FIRST TRIMESTER: SEPTEMBER - NOVEMBER

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**Chapter 4: 4-1 through 4-9**
5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	**Chapter 10: 10-1 through 10-7** **Chapter 11: 11-1 through 11-6** **Chapter 12: 12-2 through 12-9** **Chapter 13: 13-1, 13-2, 13-5 through 13-10**
Properties of Operations	
5.OA.S2 Select and apply the properties of operations, such as commutative, associative, distributive, and identity, to simplify and evaluate numerical expressions.	**Chapter 1: 1-5** **Chapter 3: 3-1** **Chapter 8: 8-5** **Chapter 10: 10-7** **Chapter 16: 16-5**
Exponents	
5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	**Chapter 1: 1-3 & 1-4** **Chapter 12: 12-1** **Chapter 13: 13-1**

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FIRST TRIMESTER: SEPTEMBER - NOVEMBER

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.NBT.3 Read, write, and compare decimals to thousandths.	
a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000).	**Chapter 2: 2-1**
Order of Operations	
5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	**Chapter 2: 2-2** **Chapter 3: 3-1** **Chapter 4: 4-10 & 4-11** **Chapter 7: 7-2** **Chapter 12: 12-7 & 12-8**
5.OA.S1 Apply the order of operations for expressions involving addition, subtraction, multiplication, and division with grouping symbols (+, –, x, ÷).	**Chapter 4: 4-10**
Divisibility	
5.OA.S6 Apply the divisibility rules for 2, 3, 4, 5, 6, 9, and 10 to the solution of problems.	**Chapter 4: 4-5**
Fractions	
5.NF.3 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	**Chapter 5: 5-8** **Chapter 8: 8-6 & 8-7**

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FIRST TRIMESTER: SEPTEMBER - NOVEMBER

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Problem Solving	
5.NBT.S1 Select and use appropriate operations (addition, subtraction, multiplication, division) to solve problems, including those involving money.	**Chapter 10: 10-7** **Chapter 12: 12-5** **Chapter 13: 13-4 & 13-7**

SECOND TRIMESTER: DECEMBER - FEBRUARY

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Factors and Multiples	
5.OA.S4 Determine if a number is prime or composite.	**Chapter 5: 5-1**
5.OA.S5 Identify factors and multiples of a number.	**Chapter 5: 5-2 & 5-4**
Equivalent Fractions	
5.NF.S1 Demonstrate an understanding of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection, and as locations on the number line.	See Grade 3 **Chapter 9: 9-1 through 9-6** See Grade 4 **Chapter 10: 10-1 & 10-2** See Grade 6 **Chapter 10: 10-1**
Relationships among Fractions, Decimals and Percents	
5.NF.S2 Identify and determine common equivalent fractions, mixed numbers, decimals, and percents.	**Chapter 5: 5-3** **Chapter 6: 6-3** **Chapter 7: 7-1** See also Grade 6 **Chapter 7: 7-2 through 7-4** **Chapter 11: 11-1 through 11-4**

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SECOND TRIMESTER: DECEMBER - FEBRUARY

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Addition and Subtraction of Fractions	
5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.	**Chapter 6: 6-1 through 6-6** **Chapter 7: 7-1, 7-2, 7-4, 7-6 through 7-8**
Understanding Volume	
5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.	
a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.	**Chapter 16: 16-1 through 16-3**
b. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.	**Chapter 16: 16-2 & 16-3**
Finding Volume	
5.MD.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.	**Chapter 16: 16-2 & 16-3**
5.MD.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.	
a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number	**Chapter 16: 16-3 & 16-6**

continued

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SECOND TRIMESTER: DECEMBER - FEBRUARY

Grade 5 Content Standards	*Sadlier Math*, Grade 5
products as volumes, e.g., to represent the associative property of multiplication.	
b. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.	**Chapter 16: 16-4**
Problem Solving	
5.NBT.S1 Select and use appropriate operations (addition, subtraction, multiplication, division) to solve problems, including those involving money.	**Chapter 10: 10-7** **Chapter 12: 12-5** **Chapter 13: 13-4 & 13-7**
5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.	**Chapter 6: 6-1 through 6-6** **Chapter 7: 7-1 through 7-3, 7-5, 7-7 through 7-9** **Chapter 8: 8-11** **Chapter 9: 9-6**

THIRD TRIMESTER: MARCH - JUNE

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Multiplication and Division of Fractions	
5.NF.5 Interpret multiplication as scaling (resizing), by:	
a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	**Chapter 8: 8-4**

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THIRD TRIMESTER: MARCH - JUNE

Grade 5 Content Standards	*Sadlier Math*, Grade 5
b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.	**Chapter 8: 8-4**
5.NF.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.	
a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.	**Chapter 9: 9-4 & 9-5**
b. Interpret division of a whole number by a unit fraction, and compute such quotients.	**Chapter 9: 9-1 through 9-3**
Ratios and Proportions	
5.OA.S11 Solve problems involving proportional relationships, including unit pricing and map interpretation (e.g., one inch represents five miles, so two inches represent ten mile).	See Grade 6 **Chapter 10: 10-1 through 10-10**
5.NF.5 Interpret multiplication as scaling (resizing), by:	
a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	**Chapter 8: 8-4**

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THIRD TRIMESTER: MARCH - JUNE

Grade 5 Content Standards	*Sadlier Math*, Grade 5
b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.	**Chapter 8: 8-4**
Data, Tables and Graphs	
5.MD.S4 Describe and compare data sets using the concepts of median, mean, mode, maximum and minimum, and range.	See Grade 6 **Chapter 16: 16-2 through 16-5**
5.OA.S10 Use pictures, models, tables, charts, graphs, words, number sentences, and mathematical notations to interpret mathematical relationships.	* Pictures, models, tables, charts, graphs, words, number sentences, and mathematical notations are used throughout the program to explain and communicate mathematical relationships. See the following examples: **Chapter 4: 4-6, 4-10 & 4-11** **Chapter 5: 5-3** **Chapter 6: 6-1 & 6-5** **Chapter 7: 7-1, 7-4 & 7-9** **Chapter 8: 8-1** **Chapter 10: 10-1** **Chapter 11: 11-1 & 11-6** **Chapter 15: 15-1** **Chapter 17: 17-1 through 17-7**
5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots.	**Chapter 17: 17-1 & 17-2**

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THIRD TRIMESTER: MARCH - JUNE

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.MD.S5 Propose and justify conclusions and predictions that are based on data.	**Chapter 17: 17-5 through 17-7** See also Grade 4 **Chapter 15: 5**
Measurement: Customary and Metric Systems	
5.MD.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	**Chapter 14: 14-1 through 14-9**
5.MD.S1 Select and apply appropriate standard units and tools to measure length, area, volume, weight, time, temperature, and the size of angles.	**Chapter 14: 14-1 through 14-9**
Geometry: Polygons, Angles and Circles	
5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*	**Chapter 15: 15-1 through 15-5**
5.G.4 Classify two-dimensional figures in a hierarchy based on properties.	**Chapter 15: 15-2, 15-4 & 15-5**
5.G.S1 Identify and classify the different kinds of triangles.	**Chapter 15: 15-2**
5.G.S2 Predict, describe, and perform transformations on two-dimensional shapes, e.g., rotations(turns); reflections (flips), and translations (slides).	N/A

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THIRD TRIMESTER: MARCH - JUNE

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Expressions and Equations	
5.OA.S7 Use symbol and letter variables (e.g., ☐, *x*) to represent unknowns or quantities that vary in expressions and in equations or inequalities (mathematical sentences that use =, <, >).	**Chapter 1: 1-4** **Chapter 3: 3-1** **Chapter 4: 4-11** **Chapter 7: 7-9** **Chapter 16: 16-4**
5.OA.S8 Determine the values of variables in simple equations.	
5.OA.S9 Replace variables with given values and evaluate/simplify (e.g., 2(*b*) + 3 when *b* = 4).	
Probability	
5.MD.S6 Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a die) and test the predictions. Use appropriate ratios between 0 and 1 to represent the probability of the outcome and associate the probability with the likelihood of the event: certain, likely, unlikely, or impossible.	N/A
Problem Solving	
5.NBT.S1 Select and use appropriate operations to solve problems, including those involving money.	**Chapter 1: 1-4** **Chapter 2: 2-5** **Chapter 7: 7-9** **Chapter 8: 8-11** **Chapter 9: 9-7** **Chapter 10: 10-7** **Chapter 12: 12-5 & 12-9** **Chapter 13: 13-4 & 13-7** **Chapter 14: 14-9**

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THIRD TRIMESTER: MARCH - JUNE

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.	**Chapter 6: 6-1 through 6-6** **Chapter 7: 7-1 through 7-3, 7-5, 7-7 through 7-9** **Chapter 8: 8-11** **Chapter 9: 9-6**
5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers, (e.g., by using visual fraction models or equations to represent the problem).	**Chapter 8: 8-2, 8-3 & 8-11** **Chapter 9: 9-6**
5.MD.S3 Solve problems involving proportional relationships and units of measurement (e.g., same system unit conversions, scale models, maps, and speed).	See Grade 6 **Chapter 12: 12-1 through 12-3**

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