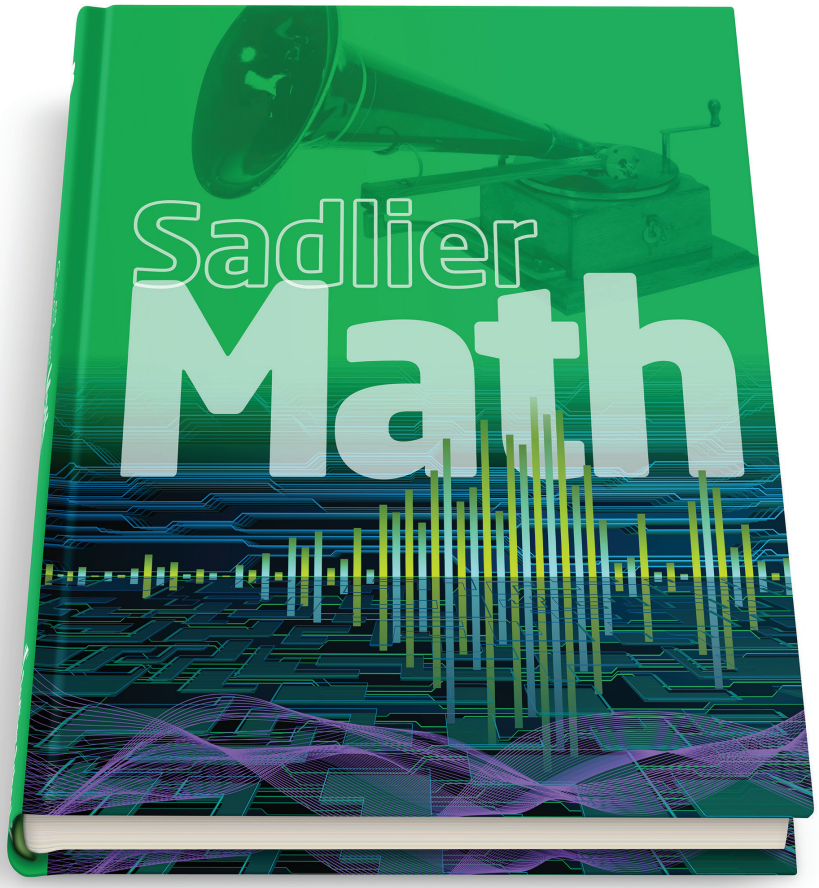
Sadlier Math™

Correlation to the Archdiocese of New York Mathematics Learning Standards

Grade 3



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OPERATIONS AND ALGEBRAIC THINKING 3.OA

Grade 3 Content Standards	*Sadlier Math*, Grade 3
Represent and solve problems involving multiplication and division.	
3.OA.1 Interpret products of whole numbers. Students must Interpret 5 x 7 as the total number of objects in groups of 7 objects.	**Chapter 4: 4-1 through 4-3, 4-7** **Chapter 5: 5-1 through 5-4** **Chapter 6: 6-2 through 6-6** **Chapter 8: 8-7 & 8-8**
3.OA.2 Interpret whole-number quotients of whole numbers. Students must interpret 56 divided by 8 as the whole number of objects in each share when 56 objects are partitioned into equal shares of 8 objects each.	**Chapter 4: 4-5 & 4-6** **Chapter 7: 7-2 through 7-5** **Chapter 8: 8-1 through 8-8**
3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities. Students must be able to multiply and divide numbers within 100.	**Chapter 4: 4-1 through 4-3 4-7** **Chapter 5: 5-1 through 5-5, 5-7 & 5-8** **Chapter 6: 6-1 through 6-9** **Chapter 7: 7-1 through 7-6** **Chapter 8: 8-1 through 8-5, 8-8**
3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. Students must be able to determine the unknown number in a multiplication or division problem that relates three whole numbers.	**Chapter 5: 5-7** **Chapter 6: 6-6 & 6-9** **Chapter 7: 7-1**
Understand properties of multiplication and the relationship between multiplication and division.	
3.OA.5 Apply properties of operations as strategies to multiply and divide. Students must know that if 6 x4 =24 then 4 x6 is also known. This is the commutative property of multiplication. 3 x 5 x 2 can be found by 3 x 5 is 15 then 15 x 2 =30 or by 5 x 2=10 then 3 x 10=30. This is the associative property. One can find that 8x7 as 8 x (5+2)=(8x5)+(8x2)=40+16=56. This is the distributive property.	**Chapter 4: 4-4** **Chapter 5: 5-4** **Chapter 6: 6-1 through 6-9**

OPERATIONS AND ALGEBRAIC THINKING 3.OA

Grade 3 Content Standards	*Sadlier Math*, Grade 3
3.OA.6 Understand division as an unknown-factor problem. Students must be able to find 32 divided by 8 by finding the number that makes 32 when multiplied by 8.	**Chapter 7: 7-1 through 7-6** **Chapter 8: 8-1 through 8-8**
Multiply and divide within 100.	
3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division. Students must know from memory all products of two one digit numbers.	**Chapter 5: 5-1 through 5-7** **Chapter 6: 6-1 through 6-11** **Chapter 7: 7-1 through 7-5** **Chapter 8: 8-1 through 8-9**
Solve problems involving the four operations, and identify and explain patterns in arithmetic	
3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. Students should use all four operations and use a letter for the unknown answer. Their answers should make sense.	**Chapter 2: 2-8** **Chapter 6: 6-8** **Chapter 8: 8-6**
3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. Students should observe that 4 times a number is always even, and explain why four times a number can be decomposed into equal addends. Addends are the number parts of an addition problem. The sum is the answer in addition.	**Chapter 2: 2-2** **Chapter 5: 5-5 & 5-6** **Chapter 6: 6-10**

NUMBER AND OPERATIONS IN BASE TEN — 3.NBT

Grade 3 Content Standards	*Sadlier Math*, Grade 3
Use place value understanding and properties of operations to perform multi-digit arithmetic.	
3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100. Students must know that a three-digit number represent amounts of hundreds, tens, and ones.	**Chapter 1: 1-4 & 1-5**
3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. Students must have practice in adding and subtracting numbers up to 1000.	**Chapter 1: 1-6** **Chapter 2: 2-1, 2-3 through 2-7** **Chapter 3: 3-1 through 3-6**
3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10–90 using strategies based on place value and properties of operations. Students must have practice in the range 10 to 90 such as 9 x 80, 5 x 60.	**Chapter 6: 6-11**

NUMBER AND OPERATIONS — FRACTIONS — 3.NF

Grade 3 Content Standards	*Sadlier Math*, Grade 3
Develop understanding of fractions as numbers.	
3.NF.1 Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a*/*b* as the quantity formed by a parts of size 1/*b*. Students must understand simple fractions such as ½, ⅓, ¼, et. al.	**Chapter 9: 9-1, 9-2 & 9-4**
3.NF.2 Represent a fraction as a number on the number line; represent fractions on a number line diagram. *continued*	**Chapter 9: 9-3 & 9-5**

NUMBER AND OPERATIONS — FRACTIONS 3.NF

Grade 3 Content Standards	*Sadlier Math*, Grade 3
Students must represent a fraction 1/*b* on a number line and define 0 to 1 as a whole, and partition it into *b* equal parts and that each part has size 1/*b*.	
3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Students should understand that two fractions are equivalent if they are the same size, or the same point on a number line. They should also be able to create equivalent fractions, express whole numbers as fractions and compare two fractions with same numerator or denominator. Results of comparisons should be shown with < (less than), > (greater than), or =.	**Chapter 9: 9-6** **Chapter 10: 10-1 through 10-6**

MEASUREMENT AND DATA 3.MD

Grade 3 Content Standards	*Sadlier Math*, Grade 3
Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	
3.MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes. Students should be able to read an analog clock and measure time to the nearest minute.	**Chapter 13: 13-1 through 13-4**
3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units as well as grams, kilograms, and liters. Students should be able to estimate and measure volume using standard and metric units of measurement.	**Chapter 11: 11-2 through 11-5**
Represent and interpret data.	
3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. *continued*	**Chapter 12: 12-1 through 12-5**

MEASUREMENT AND DATA 3.MD

Grade 3 Content Standards	*Sadlier Math*, Grade 3
Students should create and read a scaled picture graph and bar graph and a scaled line graph.	
3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Students should be able to measure whole numbers and fractions on a ruler.	**Chapter 12: 12-7 & 12-8**
Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	
3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement. Students should understand that a square with side length 1 unit is called a square unit and can be used to measure area.	**Chapter 15: 15-1**
3.MD.6 Measure areas by counting unit squares, square cm, square m, square in, square ft, and improvised units. Students should use unit squares to measure the area of various figures.	**Chapter 15: 15-1 through 15-3**
3.MD.7 Relate area to the operations of multiplication and addition. Students should find the area of a rectangle with whole number side lengths by tiling it and show that the area is the same as would be found by multiplying the side lengths.	**Chapter 15: 15-3 through 15-5**
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	
3.MD.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the sides lengths, finding an unknown sides length, and *continued*	**Chapter 16: 16-1 through 16-6**

MEASUREMENT AND DATA 3.MD

Grade 3 Content Standards	*Sadlier Math*, Grade 3
exhibiting rectangles with the same perimeter and different areas. Student should know that perimeter means the distance around a 2 dimensional shape.	

GEOMETRY 3.G

Grade 3 Content Standards	*Sadlier Math*, Grade 3
Reason with shapes and their attributes.	
3.G.1 Understand that shapes in different categories may share attributes and shared attributes can define a larger category (e.g. Quadrilaterals). Students should recognize rhombuses, rectangles and squares as quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories.	**Chapter 14: 14-1 through 14-3**
3.G.2 Partition shapes into parts with equal areas. Express the areas of each part as a unit fraction of the whole. Students should partition a shape into 4 parts with equal areas and describe the area of each part as ¼ the area of the shape.	**Chapter 9: 9-1** **Chapter 15: 15-2**