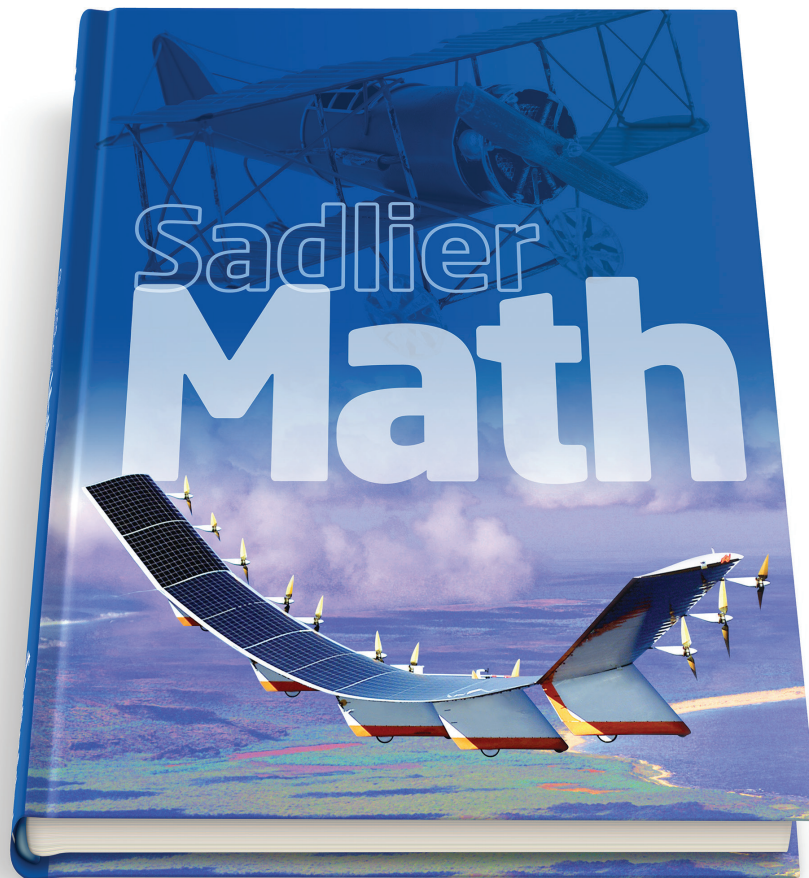# Sadlier Math™

Correlation to the Missouri Learning Standards:
Grade-Level Expectations for Mathematics

Grade 5

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NUMBER SENSE AND OPERATIONS IN BASE TEN

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Use place value system understanding to perform operations with multi-digit whole numbers to billions and decimals to thousandths.	
5.NBT.A.1 Read, write and identify numbers from billions to thousandths using number names, base ten numerals and expanded form.	**Chapter 1: 1-1 & 1-2** **Chapter 2: 2-1 & 2-2**
5.NBT.A.2 Compare two numbers from billions to thousandths using the symbols >, = or <, and justify the solution.	**Chapter 2: 2-3**
5.NBT.A.3 Understand that in a multi-digit number, a digit represents 1/10 times what it would represents in the place to its left.	**Chapter 1: 1-1, 1-2 & 1-4**
5.NBT.A.4 Evaluate the value of powers of 10 and understand the relationship to the place value system.	**Chapter 1: 1-3 & 1-4** **Chapter 12: 12-1** **Chapter 13: 13-1**
5.NBT.A.5 Round numbers from billions to thousandths place.	**Chapter 2: 2-4 through 2-6** **Chapter 10: 10-3** **Chapter 11: 11-2**
5.NBT.A.6 Add and subtract multi-digit whole numbers and decimals to the thousandths place, and justify the solution.	**Chapter 1: 1-5 through 1-7** **Chapter 10: 10-1 through 10-7** **Chapter 11: 11-1 through 11-6**
5.NBT.A.7 Multiply multi-digit whole numbers and decimals to the hundredths place, and justify the solution.	**Chapter 3: 3-4 through 3-8** **Chapter 12: 12-2 through 12-9**
5.NBT.A.8 Divide multi-digit whole numbers and decimals to the hundredths place using up to two-digit divisors and four-digit dividends, and justify the solution.	**Chapter 4: 4-3 through 4-9** **Chapter 13: 13-1, 13-2, 13-5 through 13-10**

NUMBER SENSE AND OPERATIONS IN FRACTIONS

Grade 5 Content Standards	*Sadlier Math*, Grade 5

Understand the relationship between fractions and decimals (denominators that are factors of 100).

5.NF.A.1 Understand that parts of a whole can be expressed as fractions and/or decimals.	**Chapter 2: 2-1 & 2-2**
5.NF.A.2 Convert decimals to fractions and fractions to decimals.	**Chapter 2: 2-1 & 2-2**
5.NF.A.3 Compare and order fractions and/or decimals to the thousandths place using the symbols >, = or <, and justify the solution.	**Chapter 2: 2-3** **Chapter 5: 5-7**

Perform operations and solve problems with fractions and decimals.

5.NF.B.4 Estimate results of sums, differences and products with fractions and decimals to the thousandths.	**Chapter 6: 6-3** **Chapter 7: 7-5** **Chapter 8: 8-7** **Chapter 10: 10-3** **Chapter 11: 11-2** **Chapter 12: 12-3**
5.NF.B.5 Justify the reasonableness of a product when multiplying with fractions.	
5.NF.B.5a Estimate the size of the product based on the size of the two factors.	**Chapter 8: 8-7**
5.NF.B.5b Explain why multiplying a given number by a fraction greater than 1 results in a product larger than the given number.	**Chapter 8: 8-4**
5.NF.B.5c Explain why multiplying a given number by a fraction less than 1 results in a product smaller than the given number.	**Chapter 8: 8-4**
5.NF.B.5d Explain why multiplying the numerator and denominator by the same number is equivalent to multiplying the fraction by 1.	**Chapter 8: 8-4**

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NUMBER SENSE AND OPERATIONS IN FRACTIONS

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.NF.B.6 Solve problems involving addition and subtraction of fractions and mixed numbers with unlike denominators, and justify the solution.	**Chapter 6: 6-1 through 6-6** **Chapter 7: 7-1 through 7-9**
5.NF.B.7 Extend the concept of multiplication to multiply a fraction or whole number by a fraction.	
5.NF.B.7a Recognize the relationship between multiplying fractions and finding the areas of rectangles with fractional side lengths.	**Chapter 8: 8-10**
5.NF.B.7b Calculate and interpret the product of a fraction by a whole number and a whole number by a fraction.	**Chapter 8: 8-1 & 8-3**
5.NF.B.7c Calculate and interpret the product of two fractions less than one.	**Chapter 8: 8-1 & 8-2**
5.NF.B.8 Extend the concept of division to divide unit fractions and whole numbers by using visual fraction models and equations.	
5.NF.B.8a Calculate and interpret the quotient of a unit fraction by a non-zero whole number.	**Chapter 9: 9-4 & 9-5**
5.NF.B.8b Calculate and interpret the quotient of a whole number by a unit fraction.	**Chapter 9: 9-1 through 9-3, 9-6 & 9-7**

RELATIONSHIPS AND ALGEBRAIC THINKING

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Represent and analyze patterns and relationships.	
5.RA.A.1 Investigate the relationship between two numeric patterns.	
5.RA.A.1a Generate two numeric patterns given two rules.	**Chapter 17: 17-5 through 17-7**
5.RA.A.1b Translate two numeric patterns into two sets of ordered pairs.	**Chapter 17: 17-6 & 17-7**

RELATIONSHIPS AND ALGEBRAIC THINKING

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.RA.A.1c Graph numeric patterns on the Cartesian coordinate plane.	**Chapter 17: 17-4, 17-6 & 17-7**
5.RA.A.1d Identify the relationship between two numeric patterns.	**Chapter 17: 17-5 through 17-7**
5.RA.A.2 Write a rule to describe or explain a given numeric pattern.	**Chapter 17: 17-5 & 17-6**

Write and interpret numerical expressions.

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.RA.B.3 Write, evaluate and interpret numeric expressions using the order of operations.	**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.RA.B.4 Translate written expressions into algebraic expressions.	**Chapter 1: 1-5 through 1-7** **Chapter 3: 3-2 & 3-3** **Chapter 4: 4-10 & 4-11**

Use the four operations to represent and solve problems.

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.RA.C.5 Solve and justify multi-step problems involving variables, whole numbers, fractions and decimals.	**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**

GEOMETRY AND MEASUREMENT

Grade 5 Content Standards	*Sadlier Math*, Grade 5

Classify two- and three-dimensional geometric shapes.

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.GM.A.1 Understand that attributes belonging to a category of figures also belong to all subcategories.	**Chapter 15: 15-1 through 15-5**

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GEOMETRY AND MEASUREMENT

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.GM.A.2 Classify figures in a hierarchy based on properties.	**Chapter 15: 15-2, 15-4 & 15-5**
5.GM.A.3 Analyze and describe the properties of prisms and pyramids.	**Chapter 16: 16-1**

Understand and compute volume.

5.GM.B.4 Understand the concept of volume and recognize that volume is measured in cubic units.	
5.GM.B.4a Describe a cube with edge length 1 unit as a "unit cube" and is said to have "one cubic unit" of volume and can be used to measure volume.	**Chapter 16: 16-2 & 16-3**
5.GM.B.4b Understand that the volume of a right rectangular prism can be found by stacking multiple layers of the base.	**Chapter 16: 16-3 & 16-6**
5.GM.B.5 Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for volume of right rectangular prisms with whole-number edge lengths.	**Chapter 16: 16-4 & 16-5**

Graph points on the Cartesian coordinate plane within the first quadrant to solve problems.

5.GM.C.6 Define a first quadrant Cartesian coordinate system.	
5.GM.C.6a Represent the axes as scaled perpendicular number lines that both intersect at 0, the origin.	**Chapter 17: 17-3 & 17-4**
5.GM.C.6b Identify any point on the Cartesian coordinate plane by its ordered pair coordinates.	**Chapter 17: 17-3 & 17-4**
5.GM.C.6c Define the first number in an ordered pair as the horizontal distance from the origin.	**Chapter 17: 17-3 & 17-4**
5.GM.C.6d Define the second number in an ordered pair as the vertical distance from the origin.	**Chapter 17: 17-3 & 17-4**

GEOMETRY AND MEASUREMENT

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.GM.C.7 Plot and interpret points in the first quadrant of the Cartesian coordinate plane.	**Chapter 17: 17-3**

Solve problems involving measurement and conversions within a measurement system.	
5.GM.D.8 Convert measurements of capacity, length and weight within a given measurement system.	**Chapter 14: 14-1 through 14-9**
5.GM.D.9 Solve multi-step problems that require measurement conversions.	**Chapter 14: 14-1 through 14-9**

DATA AND STATISTICS

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Represent and analyze data.	
5.DS.A.1 Create a line graph to represent a data set, and analyze the data to answer questions and solve problems.	**See Grade 4** **Chapter 15: 15-5**
5.DS.A.2 Create a line plot to represent a given or generated data set, and analyze the data to answer questions and solve problems, recognizing the outliers and generating the median.	**Chapter 17: 17-1 & 17-2**

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