SADLIER

Common Core Progress Mathematics

Aligned to the

Colorado Academic Standards in Mathematics

Second Grade

Contents

Sadlier

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1. Number Sense, Properties, and Operations

Prepared Graduates:

- Understand the structure and properties of our number system. At their most basic level numbers are abstract symbols that represent real-world quantities

Concepts and skills students master:

1. The whole number system describes place value relationships through 1,000 and forms the foundation for efficient algorithms

Second Grade Evidence Outcomes	Sadlier Common Core Progress Mathematics, Grade 2	
Students can:		
a. Use place value to read, write, count, compare, and represent numbers. (CCSS: 2.NBT)		
i. Represent the digits of a three-digit number as hundreds, tens, and ones.1 (CCSS: 2.NBT.1)	**Lesson 6**	**Place Value: Hundreds, Tens, and Ones**—pp. 56–63
ii. Count within 1000. (CCSS: 2.NBT.2)	**Lesson 7**	**Skip Count by 5s, 10s, and 100s**—pp. 64–71
iii. Skip-count by 5s, 10s, and 100s. (CCSS: 2.NBT.2)	**Lesson 7**	**Skip Count by 5s, 10s, and 100s**—pp. 64–71
iv. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. (CCSS: 2.NBT.3)	**Lesson 8**	**Read and Write Numbers to 1,000**—pp. 72–79
v. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. (CCSS: 2.NBT.4)	**Lesson 9**	**Compare Numbers**—pp. 80–87
b. Use place value understanding and properties of operations to add and subtract. (CCSS: 2.NBT)		
i. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. (CCSS: 2.NBT.5)	**Lesson 10**	**Add Two-Digit Numbers**—pp. 88–95
	Lesson 11	**Subtract Two-Digit Numbers**—pp. 96–103
ii. Add up to four two-digit numbers using strategies based on place value and properties of operations. (CCSS: 2.NBT.6)	**Lesson 12**	**Add More than Two Numbers**—pp. 104–111
iii. Add and subtract within 1000, 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.2 (CCSS: 2.NBT.7)	**Lesson 13**	**Add Three-Digit Numbers within 1,000**—pp. 112–119
	Lesson 14	**Subtract Three- Digit Numbers within 1,000**—pp. 120–127
iv. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. (CCSS: 2.NBT.8)	**Lesson 15**	**Mentally Add and Subtract 10 or 100**—pp. 128–145

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Second Grade Evidence Outcomes	Sadlier Common Core Progress Mathematics, Grade 2	
v. Explain why addition and subtraction strategies work, using place value and the properties of operations. (CCSS: 2.NBT.9)	**Lesson 10**	**Add Two-Digit Numbers**—pp. 88–95
	Lesson 11	**Subtract Two-Digit Numbers**—pp. 96–103

1. Number Sense, Properties, and Operations

Prepared Graduates:

- Are fluent with basic numerical and symbolic facts and algorithms, and are able to select and use appropriate (mental math, paper and pencil, and technology) methods based on an understanding of their efficiency, precision, and transparency

Concepts and skills students master:

2. Formulate, represent, and use strategies to add and subtract within 100 with flexibility, accuracy, and efficiency

Second Grade Evidence Outcomes	Sadlier Common Core Progress Mathematics, Grade 2	
Students can:		
a. Represent and solve problems involving addition and subtraction. (CCSS: 2.OA)		
i. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions. (CCSS: 2.OA.1)	**Lesson 1**	**Problem Solving: Addition**—pp. 10–17
	Lesson 2	**Problem Solving: Subtraction**—pp. 18–25
ii. Apply addition and subtraction concepts to financial decision-making (PFL)	**Lesson 1**	**Problem Solving: Addition**—pp. 10–17
	Lesson 2	**Problem Solving: Subtraction**—pp. 18–25
b. Fluently add and subtract within 20 using mental strategies. (CCSS: 2.OA.2)	**Lesson 3**	**Addition and Subtraction Facts to 20** (fluency)—pp. 26–33
c. Know from memory all sums of two one-digit numbers. (CCSS: 2.OA.2)	**Lesson 3**	**Addition and Subtraction Facts to 20** (fluency)—pp. 26–33
d. Use equal groups of objects to gain foundations for multiplication. (CCSS: 2.OA)		
i. Determine whether a group of objects (up to 20) has an odd or even number of members. (CCSS: 2.OA.3)	**Lesson 4**	**Odd and Even Numbers**—pp. 34–41
ii. Write an equation to express an even number as a sum of two equal addends. (CCSS: 2.OA.3)	**Lesson 4**	**Odd and Even Numbers**—pp. 34–41
iii. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns and write an equation to express the total as a sum of equal addends. (CCSS: 2.OA.4)	**Lesson 5**	**Arrays**—pp. 42–55

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2. Patterns, Functions, and Algebraic Structures

Prepared Graduates:
The prepared graduate competencies are the preschool through twelfth-grade concepts and skills that all students who complete the Colorado education system must have to ensure success in a postsecondary and workforce setting.

Expectations for this standard are integrated into the other standards at preschool through third grade.

3. Data Analysis, Statistics, and Probability

Prepared Graduates:
- Solve problems and make decisions that depend on understanding, explaining, and quantifying the variability in data

Concepts and skills students master:
1. Visual displays of data can be constructed in a variety of formats to solve problems

Second Grade Evidence Outcomes	Sadlier Common Core Progress Mathematics, Grade 2
Students can:	
a. Represent and interpret data. (CCSS: 2.MD)	
i. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units. (CCSS: 2.MD.9)	**Lesson 25** **Line Plots**—pp. 218–225
ii. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. (CCSS: 2.MD.10)	**Lesson 26** **Picture Graphs**—pp. 226–233 **Lesson 27** **Bar Graphs**—pp. 234–247
iii. Solve simple put together, take-apart, and compare problems using information presented in picture and bar graphs. (CCSS: 2.MD.10)	**Lesson 26** **Picture Graphs**—pp. 226–233 **Lesson 27** **Bar Graphs**—pp. 234–247

4. Shape, Dimension, and Geometric Relationships

Prepared Graduates:
- Apply transformation to numbers, shapes, functional representations, and data

Concepts and skills students master:
1. Shapes can be described by their attributes and used to represent part/whole relationships

Second Grade Evidence Outcomes	Sadlier Common Core Progress Mathematics, Grade 2
Students can:	
a. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. (CCSS: 2.G.1)	**Lesson 28** **Identify and Draw Shapes**—pp. 248–255

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Second Grade Evidence Outcomes	Sadlier Common Core Progress Mathematics, Grade 2
b. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. (CCSS: 2.G.1)	**Lesson 28** **Identify and Draw Shapes**—pp. 248–255
c. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. (CCSS: 2.G.2)	**Lesson 29** **Partition Rectangles into Same-Size**—pp. 256–263
d. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. (CCSS: 2.G.3)	**Lesson 30** **Equal Shares**—pp. 264–271
e. Recognize that equal shares of identical wholes need not have the same shape. (CCSS: 2.G.3)	**Lesson 30** **Equal Shares**—pp. 264–271

4. Shape, Dimension, and Geometric Relationships

Prepared Graduates:

- Understand quantity through estimation, precision, order of magnitude, and comparison. The reasonableness of answers relies on the ability to judge appropriateness, compare, estimate, and analyze error

Concepts and skills students master:

2. Some attributes of objects are measurable and can be quantified using different tools

Second Grade Evidence Outcomes	Sadlier Common Core Progress Mathematics, Grade 2
Students can:	
a. Measure and estimate lengths in standard units. (CCSS: 2.MD)	
i. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. (CCSS: 2.MD.1)	**Lesson 16** **Measure Length: Inches and Feet**—pp. 146–153 **Lesson 17** **Measure Length: Centimeters and Meters**—pp. 154–161
ii. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen. (CCSS: 2.MD.2)	**Lesson 18** **Use Different Units to Measure Length**—pp. 162–169
iii. Estimate lengths using units of inches, feet, centimeters, and meters. (CCSS: 2.MD.3)	**Lesson 19** **Estimate Length**—pp. 170–177
iv. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. (CCSS: 2.MD.4)	**Lesson 20** **Compare Lengths**—pp. 178–185

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Second Grade Evidence Outcomes	Sadlier Common Core Progress Mathematics, Grade 2
b. Relate addition and subtraction to length. (CCSS: 2.MD)	
i. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units and equations with a symbol for the unknown number to represent the problem. (CCSS: 2.MD.5)	**Lesson 21** **Add and Subtract Lengths**—pp. 186–193
ii. Represent whole numbers as lengths from 0 on a number line diagram and represent whole-number sums and differences within 100 on a number line diagram. (CCSS: 2.MD.6)	**Lesson 22** **Number Line Diagrams**—pp. 194–201
c. Solve problems time and money. (CCSS: 2.MD)	
i. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. (CCSS: 2.MD.7)	**Lesson 23** **Tell and Write Time**—pp. 202–209
ii. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. (CCSS: 2.MD.8)	**Lesson 24** **Money**—pp. 210–217

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