

Scope and Sequence: Second Grade

What Students Learn in Second Grade Mathematics

In Grade 2, instructional time will focus on five critical areas: (1) extending understanding of place value using base-ten notation; (2) building fluency with addition and subtraction; (3) addition and subtraction within 1,000; (4) solving all addition and subtraction word problem types; and (5) money. Major clusters are all addressed towards the beginning of the year so that they can spiral throughout the year. The year begins with a critical area of instruction: problem solving using addition and subtraction. Students will solve one- and two-step word problems up to 20 initially and later on to 100, involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions. They will learn to represent problems and explain solutions using number bonds, ten frames, tape diagrams, number lines, and base-ten blocks. For grade-two students, the expected fluencies are to add and subtract within 20 using mental strategies, add within 100 using place value strategies, properties and relationships between addition and subtraction, and know from memory all sums of two one-digit numbers. The next major cluster in second grade is Place Value. Place Value is crucial in building a foundation for addition and subtraction of numbers to 1,000. Students need to understand 100 can be thought of as a bundle of 10 tens and also understand three-digit whole numbers in terms of hundreds, tens, and ones. A unit on linear measurement follows work with place value, as students learn to measure lengths using standard units. The following unit focuses on adding and subtracting numbers to 1,000, using concrete models, drawings, and strategies. Also, students should know how to apply addition and subtraction to solve a variety of one- and two-step word problems (within 100). The third trimester begins with a study of shapes and fractions. Students identify, describe, and draw triangles, quadrilaterals, pentagons, hexagons, and cubes. Students partition circles and rectangles into two, three, or four equal shares to lay a foundation for fraction work in the subsequent grade. The next unit focuses on money and represents the only time students will learn the value of coins and solve problems involving coins and bills. Students then extend grade 1 work to now tell time to the nearest 5 minutes. In the final unit, students draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories and solve simple problems using information presented in a bar graph.

Unit Numbers and Titles		Grade 2 Students...
Tri 1	Fluency Strategies and Problem Solving up to 20	<p><u>Should master:</u></p> <ul style="list-style-type: none"> • Counting, reading and writing numbers within 1,000 in numerals, number names, and expanded form • Skip counting by 2s, 5s, 10s and 100s • Comparing 3-digit numbers • Addition and subtraction within 100 • Memorization of all sums of two one-digit numbers <p><u>Work towards fluency in:</u></p> <ul style="list-style-type: none"> • Addition and subtraction within 1,000 • Time concepts • Measuring lengths using standard units • Understanding 2D shapes and attributes & partition rectangles and circles into quarters, thirds and halves • Money concepts (coins and bills) <p><u>Are introduced to:</u></p> <ul style="list-style-type: none"> • Arrays and repeated addition as a foundation for multiplication • Number line • Represent and analyze data with graphs
	Place Value	
Tri 2	Linear Measurement	
	Addition and Subtraction to 1,000	
Tri 3	Shapes and Fractions	
	Money	
	Telling Time	
	Graphs and Data	

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