

GSD Parents' Guide for 2nd Grade

Utah Core State Standards for Mathematics

The Utah Core State Standards for Mathematics addresses *Standards for Mathematical Practice* and *Standards for Mathematical Content*. The standards stress not only procedural skill but also conceptual understanding, to make sure students are learning the critical information they need to succeed at higher levels.

By using the *Standards for Mathematical Practice*, students make sense of problems, persevere in solving them, and attend to precision. They look for and make use of structure and express regularity in repeated reasoning. They reason abstractly and quantitatively, and they construct viable arguments and critique the reasoning of others. Students model with mathematics and use appropriate tools strategically.

The following *Standards for Mathematical Content* define what students should understand and be able to do in their study of second grade mathematics:

Operations and Algebraic Thinking

- Use addition and subtraction within 100 to solve one-and two-step word problems. Use drawings and equations with a symbol for the unknown number to represent the problem.
- Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
- Determine whether a group of up to 20 objects has an odd or even number of members. Write an equation to express an even number as a sum of two equal addends.
- Use addition to find the total number of objects arranged in a rectangular array with up to 5 rows and 5 columns. Write an equation to express the total as a sum of equal addends.

Number and Operations in Base Ten

- Understand that the three digits of a three-digit number represent hundreds, tens, and ones. Understand that 100 can be thought of as a bundle of ten tens called a “hundred.” Understand that multiples of 100 refer to a set number of hundreds, 0 tens, and 0 ones. *For example, 200 refers to 2 hundreds, 0 tens, and 0 ones.*
- Count within 1000. Skip count by 5’s, 10’s, and 100’s.
- Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
- Compare two three-digit numbers based on means of the hundreds, tens, and ones. Use $>$, $=$, and $<$ symbols to record the results of comparisons.
- Fluently add and subtract within 100.
- Add up to four two-digit numbers.

- Add and subtract within 1000. Understand that in adding or subtracting, one adds or subtracts hundreds and hundreds, tens and tens, and ones and ones. Understand that regrouping is sometimes necessary.
- Mentally add 10 or 100 to a given number 100-900. Mentally subtract 10 or 100 from a given number 100-900.
- Explain why addition and subtraction strategies work, using place value and the properties of operations.

Measurement and Data

- Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- Measure the length of an object twice, using two different measurement units. Describe how the two measurements relate to the size of the unit chosen.
- Estimate lengths using units of inches, feet, centimeters, and meters.
- Measure to determine how much longer one object is than another. Express the difference in length in standard units.
- Use addition and subtraction within 100 to solve word problems involving lengths given in the same units.
- Represent whole numbers as lengths from 0 on a number line with equally spaced points corresponding to each number. Represent sums and differences of whole numbers within 100 on a number line.
- Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies. Use \$ and ¢ symbols appropriately.
- 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 measurement data on a line plot.
- Draw picture graphs and bar graphs, with single-unit scales, to represent data sets with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Geometry

- Recognize and draw shapes having specific attributes. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
- Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
- 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. Describe the whole as two halves, three thirds, and four fourths. Recognize that equal shares of identical wholes need not have the same shape.