North Carolina Mathematics

# Grade 2

Adopted 2018

## Standards for Mathematical Practice

1. **Make sense of problems and persevere in solving them.** MP.1
2. **Reason abstractly and quantitatively.** MP.2
3. **Construct viable arguments and critique the reasoning of others.** MP.3
4. **Model with mathematics.** MP.4
5. **Use appropriate tools strategically.** MP.5
6. **Attend to precision.** MP.6
7. **Look for and make use of structure.** MP.7
8. **Look for and express regularity in repeated reasoning.** MP.8

## Operations and Algebraic Thinking

**Represent and solve problems.**

1. Represent and solve addition and subtraction word problems, within 100, with unknowns in all positions, by using representations and equations with a symbol for the unknown number to represent the problem, when solving:<ul><li>One-Step problems:<ul><li>Add to/Take from-Start Unknown</li><li>Compare-Bigger Unknown</li><li>Compare-Smaller Unknown</li></ul></li><li>Two-Step problems involving single digits:<ul><li>Add to/Take from- Change Unknown</li><li>Add to/Take From- Result Unknown</li></ul></li></ul> NC.2.OA.1

**Add and subtract within 20.**

2. Demonstrate fluency with addition and subtraction, within 20, using mental strategies. NC.2.OA.2

**Work with equal groups.**

3. Determine whether a group of objects, within 20, has an odd or even number of members by:<ul><li>Pairing objects, then counting them by 2s.</li><li>Determining whether objects can be placed into two equal groups.</li><li>Writing an equation to express an even number as a sum of two equal addends.</li></ul> NC.2.OA.3
4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. NC.2.OA.4

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## Number and Operations in Base Ten

### Understand place value.

1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.<ul><li>Unitize by making a hundred from a collection of ten tens.</li><li>Demonstrate that the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds, with 0 tens and 0 ones.</li><li>Compose and decompose numbers using various groupings of hundreds, tens, and ones.</li></ul> NC.2.NBT.1
2. Count within 1,000; skip-count by 5s, 10s, and 100s. NC.2.NBT.2
3. Read and write numbers, within 1,000, using base-ten numerals, number names, and expanded form. NC.2.NBT.3
4. Compare two three-digit numbers based on the value of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. NC.2.NBT.4

### Use place value understanding and properties of operations.

5. Demonstrate fluency with addition and subtraction, within 100, by:<ul><li>Flexibly using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</li><li>Comparing addition and subtraction strategies, and explaining why they work.</li><li>Selecting an appropriate strategy in order to efficiently compute sums and differences.</li></ul> NC.2.NBT.5
6. Add up to three two-digit numbers using strategies based on place value and properties of operations. NC.2.NBT.6
7. Add and subtract, within 1,000, relating the strategy to a written method, using:<ul><li>Concrete models or drawings</li><li>Strategies based on place value</li><li>Properties of operations</li><li>Relationship between addition and subtraction</li></ul> NC.2.NBT.7
8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. NC.2.NBT.8

## Measurement and Data

### Represent and interpret data.

10. Organize, represent, and interpret data with up to four categories.<ul><li>Draw a picture graph and a bar graph with a single-unit scale to represent a data set.</li><li>Solve simple put-together, take-apart, and compare problems using information presented in a picture and a bar graph.</li></ul> NC.2.MD.10

### Measure and estimate lengths.

1. Measure the length of an object in standard units by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. NC.2.MD.1
2. 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. NC.2.MD.2

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Estimate lengths in using standard units of inches, feet, yards, centimeters, and meters. NC.2.MD.3

4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. NC.2.MD.4

**Relate addition and subtraction to length.**

5. Use addition and subtraction, within 100, to solve word problems involving lengths that are given in the same units, using equations with a symbol for the unknown number to represent the problem. NC.2.MD.5
6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points and represent whole-number sums and differences, within 100, on a number line. NC.2.MD.6

**Build understanding of time and money.**

7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. NC.2.MD.7
8. Solve word problems involving:<ul><li>Quarters, dimes, nickels, and pennies within 99¢, using ¢ symbols appropriately.</li><li>Whole dollar amounts, using the $ symbol appropriately.</li></ul> NC.2.MD.8