

# 2<sup>nd</sup> Grade

## Standards for Mathematical Practice

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| <ol style="list-style-type: none"> <li>1. Make sense of problems and persevere in solving them.</li> <li>2. Reason abstractly and quantitatively.</li> <li>3. Construct viable arguments and critique the reasoning of others.</li> <li>4. Model with mathematics.</li> </ol> | <ol style="list-style-type: none"> <li>5. Use appropriate tools strategically.</li> <li>6. Attend to precision.</li> <li>7. Look for and make use of structure.</li> <li>8. Look for and express regularity in repeated reasoning.</li> </ol> |
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## Operations and Algebraic Thinking

Current Standard Abbreviation	Current Standard	Proposed Standard Abbreviation	Final Draft Proposed Standard
<b>Represent and solve problems involving addition and subtraction.</b>		<b>Represent and solve problems.</b>	
<b>2.OA.1</b>	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, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. (See Glossary, Table 1.)	<b>NC.2.OA.1</b>	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 style="list-style-type: none"> <li>• One-Step problems:               <ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>○ Add to/Take from- Change Unknown</li> <li>○ Add to/Take From- Result Unknown</li> </ul> </li> </ul>
<b>Add and subtract within 20.</b>		<b>Add and subtract within 20.</b>	
<b>2.OA.2</b>	Fluently add and subtract within 20 using mental strategies. (Note: See standard 1.OA.6 for a list of mental strategies). By end of Grade 2, know from memory all sums of two one-digit numbers.	<b>NC.2.OA.2</b>	Demonstrate fluency with addition and subtraction, within 20, using mental strategies.
<b>Work with equal groups of objects to gain foundations for multiplication.</b>		<b>Work with equal groups.</b>	
<b>2.OA.3</b>	Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.	<b>NC.2.OA.3</b>	Determine whether a group of objects, within 20, has an odd or even number of members by: <ul style="list-style-type: none"> <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>
<b>2.OA.4</b>	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.	<b>NC.2.OA.4</b>	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.

## Number and Operations in Base Ten

Current Standard Abbreviation	Current Standard	Proposed Standard Abbreviation	Final Draft Proposed Standard
<b>Understand place value.</b>		<b>Understand place value.</b>	
<b>2.NBT.1</b>	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: <ol style="list-style-type: none"> <li>a. 100 can be thought of as a bundle of ten tens — called a “hundred.”</li> <li>b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).</li> </ol>	<b>NC.2.NBT.1</b>	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones. <ul style="list-style-type: none"> <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>
<b>2.NBT.2</b>	Count within 1000; skip-count by 5s, 10s, and 100s.	<b>NC.2.NBT.2</b>	Count within 1,000; skip-count by 5s, 10s, and 100s.
<b>2.NBT.3</b>	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	<b>NC.2.NBT.3</b>	Read and write numbers, within 1,000, using base-ten numerals, number names, and expanded form.
<b>2.NBT.4</b>	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$ , $=$ , and $<$ symbols to record the results of comparisons.	<b>NC.2.NBT.4</b>	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.
<b>Use place value understanding and properties of operations to add and subtract.</b>		<b>Use place value understanding and properties of operations.</b>	
<b>2.NBT.5</b>	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	<b>NC.2.NBT.5</b>	Demonstrate fluency with addition and subtraction, within 100, by: <ul style="list-style-type: none"> <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>
<b>2.NBT.6</b>	Add up to four two-digit numbers using strategies based on place value and properties of operations.	<b>NC.2.NBT.6</b>	Add up to three two-digit numbers using strategies based on place value and properties of operations.
<b>2.NBT.7</b>	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. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	<b>NC.2.NBT.7</b>	Add and subtract, within 1,000, relating the strategy to a written method, using: <ul style="list-style-type: none"> <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>
<b>2.NBT.8</b>	Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.	<b>NC.2.NBT.8</b>	Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
<b>2.NBT.9</b>	Explain why addition and subtraction strategies work, using place value and the properties of operations. (Note: Explanations may be supported by drawings or objects.)		<b>INCORPORATED INTO NC.2.NBT.5</b>

## Measurement and Data

Current Standard Abbreviation	Current Standard	Proposed Standard Abbreviation	Final Draft Proposed Standard
<b>Measure and estimate lengths in standard units.</b>		<b>Measure and estimate lengths.</b>	
<b>2.MD.1</b>	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	<b>NC.2.MD.1</b>	Measure the length of an object in standard units by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
<b>2.MD.2</b>	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.	<b>NC.2.MD.2</b>	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.
<b>2.MD.3</b>	Estimate lengths using units of inches, feet, centimeters, and meters.	<b>NC.2.MD.3</b>	Estimate lengths in using standard units of inches, feet, yards, centimeters, and meters.
<b>2.MD.4</b>	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	<b>NC.2.MD.4</b>	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
<b>Relate addition and subtraction to length.</b>		<b>Relate addition and subtraction to length.</b>	
<b>2.MD.5</b>	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	<b>NC.2.MD.5</b>	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.
<b>2.MD.6</b>	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	<b>NC.2.MD.6</b>	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 diagram.
<b>Work with time and money.</b>		<b>Build understanding of time and money.</b>	
<b>2.MD.7</b>	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	<b>NC.2.MD.7</b>	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
<b>2.MD.8</b>	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?	<b>NC.2.MD.8</b>	Solve word problems involving: <ul style="list-style-type: none"> <li>• Quarters, dimes, nickels, and pennies within 99¢, using ¢ symbols appropriately.</li> <li>• Whole dollar amounts, using the \$ symbol appropriately.</li> </ul>
<b>Represent and interpret data.</b>		<b>Represent and interpret data.</b>	
<b>2.MD.9</b>	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.		<b><i>STANDARD REMOVED</i></b>
<b>2.MD.10</b>	Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (Note: See Glossary, Table 1.)	<b>NC.2.MD.10</b>	Organize, represent, and interpret data with up to four categories. <ul style="list-style-type: none"> <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>

## Geometry

Current Standard Abbreviation	Current Standard	Proposed Standard Abbreviation	Final Draft Proposed Standard
<b>Reason with shapes and their attributes.</b>		<b>Reason with shapes and their attributes.</b>	
<b>2.G.1</b>	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. (Note: Sizes are compared directly or visually, not compared by measuring.)	<b>NC.2.G.1</b>	Recognize and draw triangles, quadrilaterals, pentagons, and hexagons, having specified attributes; recognize and describe attributes of rectangular prisms and cubes.
<b>2.G.2</b>	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.		<b><i>STANDARD REMOVED</i></b>
<b>2.G.3</b>	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. Recognize that equal shares of identical wholes need not have the same shape.	<b>NC.2.G.3</b>	Partition circles and rectangles into two, three, or four equal shares. <ul style="list-style-type: none"> <li>• Describe the shares using the words <i>halves, thirds, half of, a third of, fourths, fourth of, quarter of.</i></li> <li>• Describe the whole as two halves, three thirds, four fourths.</li> <li>• Explain that equal shares of identical wholes need not have the same shape.</li> </ul>