

Sample Scope and Sequence for Grade 1 for the Common Core State Standards for Mathematics

In Kindergarten, students learned to count in order, count to find out “how many”, and model addition and subtraction with small sets of objects. Students identified and described geometrical shapes, as well as created and composed shapes. In Grade 1, students develop strategies for adding and subtracting whole numbers based on their prior work with small numbers. They develop an understanding of the relationship between addition and subtraction and develop efficient strategies for adding, subtracting, and comparing within 100. The measurement focus at this grade level is on iterating and transitivity; the geometric focus is on composition and decomposition of shapes, and comparing their attributes.

The Grade 1 year in this scope and sequence builds on the previous year’s experience with small numbers to introduce the concept of a “ten” as a bundle of ones and to familiarize students with mathematical symbols for comparison. As the year progresses, they begin to think of whole numbers in terms of tens and ones. Students develop understanding and strategies for addition and subtraction within 20. Students generalize methods to add within 100 using concrete models or drawings. They are expected to become fluent with addition and subtraction within 10.

To further their understanding of properties of geometric shapes, students compose and decompose figures and build understanding of part-whole relationships. The three geometry units provide time throughout the year to develop vocabulary and reasoning with shapes and their attributes. Students develop understanding of linear measurement and understand that length is measured in equal-sized units. They also compare lengths indirectly.

The scope and sequence assumes 160 days for instruction, divided among 16 units.

The units are sequenced in a way that we believe best develops and connects the mathematical content described in the Common Core State Standards for Mathematics; however, the order of the standards included in any unit does not imply a sequence of content within that unit. Some standards may be revisited several times during the course; others may be only partially addressed in different units, depending on the mathematical focus of the unit.

Throughout Grade 1, students should continue to develop proficiency with the Common Core's eight Standards for Mathematical Practice:

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

These practices should become the natural way in which students come to understand and to do mathematics. While, depending on the content to be understood or on the problem to be solved, any practice might be brought to bear, some practices may prove more useful than others. Opportunities for highlighting certain practices are indicated in different units of study in this sample scope and sequence, but this highlighting should not be interpreted to mean that other practices should be neglected in those units.

This scope and sequence reflects our current thinking related to the intent of the CCSS for Mathematics, but it is an evolving document. We

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Unit	Standards for Mathematical Content	Standards for Mathematical Practice	Days	Comments
Understanding and composing numbers to 12	<p>1.NBT.1 (Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.) [Comment]</p> <p>1.NBT.2 (Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:</p> <p>a. 10 can be thought of as a bundle of ten ones — called a “ten.” [Comment]</p> <p>b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. [Comment]</p> <p>c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).)</p>	<p>1. Make sense of problems and persevere in solving them.</p> <p>2. Reason abstractly and quantitatively.</p> <p>3. Construct viable arguments and critique the reasoning of others.</p> <p>4. Model with mathematics.</p> <p>5. <u>Use appropriate tools strategically.</u></p> <p>6. Attend to precision.</p> <p>7. <u>Look for and make use of structure.</u></p> <p>8. Look for and express regularity in repeated reasoning.</p>	12	<p>1.NBT.1 Students will count , read and write numbers to 12.</p> <p>1.NBT.2a, 1.NBT.2b Students learn that ten ones can be bundled to make a "ten". Students explore ways to compose numbers to 12.</p>

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Comparing and ordering numbers to 20	<p>1.NBT.1 [Comment]</p> <p>1.NBT.2.a.b.c [Comment]</p> <p>1.NBT.3 (Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.) [Comment]</p>	<p>1. Make sense of problems and persevere in solving them.</p> <p>2. Reason abstractly and quantitatively.</p> <p>3. Construct viable arguments and critique the reasoning of others.</p> <p>4. Model with mathematics.</p> <p>5. Use appropriate tools strategically.</p> <p>6. Attend to precision.</p> <p>7. Look for and make use of structure.</p> <p>8. Look for and express regularity in repeated reasoning.</p>	9	<p>1. NBT. 1, 1.NBT.2, 1.NBT. 3 In this unit students work with numbers to 20.</p>
Understanding addition	<p>1.OA.1 (Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.²) ²See Glossary, Table 1. [Comment]</p> <p>1.OA.3 (Apply properties of operations as strategies to add and subtract.³ <i>Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)</i>) [Comment] ³Students need not use formal terms for these properties.</p> <p>1.OA.7 (Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <i>For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.)</i>) [Comment]</p>	<p>1. Make sense of problems and persevere in solving them.</p> <p>2. Reason abstractly and quantitatively.</p> <p>3. Construct viable arguments and critique the reasoning of others.</p> <p>4. Model with mathematics.</p> <p>5. Use appropriate tools strategically.</p> <p>6. Attend to precision.</p> <p>7. Look for and make use of structure.</p> <p>8. Look for and express regularity in repeated reasoning.</p>	10	<p>1.OA.1, 1.OA. 3, 1.OA.7 The focus of this unit is on addition only.</p>

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Understanding subtraction	<p>1.OA.1 [Comment]</p> <p>1.OA.4 (Understand subtraction as an unknown-addend problem. <i>For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.</i>)</p> <p>1.OA.6 (Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$.) [Comment]</p> <p>1.OA.7</p> <p>1.OA.8 (Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = ? - 3$, $6 + 6 = ?$.) [Comment]</p>	<p>1. Make sense of problems and persevere in solving them.</p> <p>2. Reason abstractly and quantitatively.</p> <p>3. Construct viable arguments and critique the reasoning of others.</p> <p>4. Model with mathematics.</p> <p>5. Use appropriate tools strategically.</p> <p>6. Attend to precision.</p> <p>7. Look for and make use of structure.</p> <p>8. Look for and express regularity in repeated reasoning.</p>	10	
Developing addition and subtraction strategies	<p>1.OA.3</p> <p>1.OA.4</p> <p>1.OA.5 (Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).)</p> <p>1.OA.6 [Comment]</p> <p>1.OA.7</p> <p>1.OA.8</p>	<p>1. Make sense of problems and persevere in solving them.</p> <p>2. Reason abstractly and quantitatively.</p> <p>3. Construct viable arguments and critique the reasoning of others.</p> <p>4. Model with mathematics.</p> <p>5. Use appropriate tools strategically.</p> <p>6. Attend to precision.</p> <p>7. Look for and make use of structure.</p> <p>8. Look for and express regularity in repeated reasoning.</p>	12	<p>1.OA.6 Students demonstrate fluency for addition and subtraction within 10. They are not expected to demonstrate fluency within 20 at this time.</p>

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Unit	Standards for Mathematical Content	Standards for Mathematical Practice	Days	Comments
Identifying and composing 2-D shapes	<p>1.G.1 (Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.)</p> <p>1.G.2 (Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.⁴) [Comment] ⁴Students do not need to learn formal names such as “right rectangular prism.”</p>	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. 	8	<p>1.G.2 This unit focuses on attributes of and composing 2-D shapes.</p>
Using number patterns to 120	<p>1.NBT.1</p> <p>1.OA.5</p>	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. 	12	

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Using place value for two-digit numbers	1.NBT.1 1.NBT.2.a.b.c	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. <u>Use appropriate tools strategically.</u> 6. <u>Attend to precision.</u> 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. 	8	
Telling time to the half-hour	1.MD.3 (Tell and write time in hours and half-hours using analog and digital clocks.) [Comment]	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. <u>Model with mathematics.</u> 5. <u>Use appropriate tools strategically.</u> 6. <u>Attend to precision.</u> 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. 	7	1.MD. 3 This standard should be mastered at grade 1.

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Unit	Standards for Mathematical Content	Standards for Mathematical Practice	Days	Comments
Building with 3-D shapes	1.G.1 1.G.2	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. 	8	
Using addition and subtraction strategies	1.OA.1 1.OA.2 (Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.) 1.OA.3 1.OA.4 1.OA.6 1.OA.8	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. 	14	

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Using and interpreting data	<p>1.MD.4 (Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.)</p>	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. 	10	
Using fractions to describe equal parts	<p>1.G.3 (Partition circles and rectangles into two and four equal shares, describe the shares using the words <i>halves</i>, <i>fourths</i>, and <i>quarters</i>, and use the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.)</p>	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. 	5	

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Measuring and comparing length	<p>1.MD.1 (Order three objects by length; compare the lengths of two objects indirectly by using a third object.)</p> <p>1.MD.2 (Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i>)</p>	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. <u>Reason abstractly and quantitatively.</u> 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. <u>Use appropriate tools strategically.</u> 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. 	10	
Adding and subtracting tens and ones	<p>1.NBT.4</p> <p>1.NBT.5</p> <p>1.NBT.6 (Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), 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 and explain the reasoning used.)</p>	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. <u>Attend to precision.</u> 7. <u>Look for and make use of structure.</u> 8. Look for and express regularity in repeated reasoning. 	15	