

1st Grade

Mathematics Alignment—Common Core State Standards and CT Frameworks

NOTE: CCSS standards shown in blue do not have equivalent CT standards.

CCSS Standards	CT Framework Grade Level Expectations
1.OA – Operations and Algebraic Thinking :	
<i>Represent and solve problems involving addition and subtraction:</i>	
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.	CT.1.1.2.5: Model real-life situations that represent the result of counting, combining and separation of sets of objects (addition and subtraction of whole numbers) with objects, pictures, symbols and open sentences.
	CT.1.2.2.13: Create problems and write one- and two-digit number sentences that reflect contextual situations and real world experiences. Solve the problems using a variety of methods, including models, pictures, pencil and paper, estimation and mental computation, and describe the reasoning and strategies used.
	CT.1.2.2.14: Solve contextual problems using all addition sums to [20] and subtraction differences from [20] with flexibility and fluency.
1.OA.2: Solve word problems that call for addition by 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.	--Solve word problems that call for addition by 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.
<i>Understand and apply properties of operations and the relationship between addition and subtraction:</i>	
1.OA.3: Apply properties of operations as strategies to add and subtract. 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). Students need not use formal terms for these properties.	--Apply properties of operations as strategies to add and subtract. 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). Students need not use formal terms for these properties.
1.OA.4: Understand subtraction as an unknown-addend problem, e.g., subtract $10 - 8$ by finding the number that makes 10 when added to 8.	--Understand subtraction as an unknown-addend problem, e.g., subtract $10 - 8$ by finding the number that makes 10 when added to 8.
<i>Add and subtract within 20:</i>	

1.OA.5: Relate counting to addition and subtraction, e.g., by counting on 2 to add 2.	CT.1.2.2.10: Count on from a given amount, orally and with models, and count back from 10. --Relate counting to addition and subtraction, e.g., by counting on 2 to add 2.
1.OA.6: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as: counting on; making ten; decomposing a number leading to ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.	--Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as: counting on; making ten; decomposing a number leading to ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.
<i>Work with addition and subtraction equations:</i>	
1.OA.7: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false, e.g., Which of the following equations are true and which are false? $6=6$, $7=8-1$, $5+2=2+5$, $4+1=5+2$.	CT.K.2.2.11: Write the number sentences that correspond to story problems using addition, subtraction and equals symbols (+, -, =) correctly.
	CT 1.1.2.5: Model real-life situations that represent the result of counting, combining and separation of sets of objects (addition and subtraction of whole numbers) with objects, pictures, symbols and open sentences.
	CT.1.1.3.6: Demonstrate understanding of equivalence or balance with objects, models, diagrams, operations or numbers, e.g., using a balance scale or an arm balance showing the same amount on both sides. --Determine if equations involving addition and subtraction are true or false.
1.OA.8: Determine the unknown whole number in an addition or subtraction equation relating three whole numbers, e.g., Determine the unknown number that makes the equation true in each of the equations $8+? = 11$, $5=?-3$, $6+6=?$	CT.1.1.3.6: Demonstrate understanding of equivalence or balance with objects, models, diagrams, operations or numbers, e.g., using a balance scale or an arm balance showing the same amount on both sides.
	--Determine the unknown whole number in an addition or subtraction equation relating three whole numbers, e.g., Determine the unknown number that makes the equation true in each of the equations $8+? = 11$, $5=?-3$, $6+6=?$

1.NBT - Number and Operations in Base Ten:	
<i>Extend the counting sequence:</i>	
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.	--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.
<i>Understand place value:</i>	
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: --10 can be thought of as a bundle of ten ones – called a “ten.” --The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. --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).	CT.1.2.1.1: Represent and identify whole numbers up to 100 as groups of tens and ones using models and number lines. CT.2.1.2: Recognize, extend and create repeating, growing and number patterns such as skip counting, odd/even, counting on by 10, and one and two attribute patterns. Describe the patterns and the rule used to make it.
1.NBT.3: Compare two two-digit numbers base on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.	--Compare two two-digit numbers base on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.
<i>Use place value understanding and properties of operations to add and subtract:</i>	
1.NBT.4: Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, 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. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	--Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, 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. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
1.NBT.5: Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	--Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
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.	--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.

1.MD – Measurement and Data:	
<i>Measure lengths indirectly and by iterating length units.</i>	
1.MD.1: Order three objects by length; compare the lengths of two objects indirectly by using a third object.	CT.K.3.3.9: Describe and order small sets of familiar objects by size, length or area using comparative language such as more, bigger, longer, shorter and taller.
	CT.1.3.3.9: Use nonstandard units, references or direct comparison of objects (appearance) to order objects by length, area and capacity.
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. (Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps).	--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. (Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps).
<i>Tell and write time.</i>	
1.MD.3: Tell and write time in hours and half-hours using analog and digital clocks.	CT.1.3.3.7: Solve problems involving telling time to the nearest hour using digital and analog clocks. Estimate and compare the length of time needed to complete a task using comparative language such as longer, shorter, more or less.
	CT.2.3.3.6: Solve problems involving telling time, including estimating and measuring the length of time needed to complete a task, to the half-hour using analog and digital clocks.
<i>Represent and interpret data.</i>	
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.	CT.1.4.1.2: Collect and systematically organize and represent the data that answers the questions using lists, charts and tables, tallies, glyphs (coded pictures), picture graphs and bar graphs.
	CT.1.4.2.3: Describe data that have been organized and make comparisons using terms such as largest, smallest, most often or least often.
1.G – Geometry	
<i>Reason with shapes and their attributes.</i>	
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.	--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>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.</p>	<p>CT.2.3.2.4: Investigate and predict the result of putting together and taking apart two- and three-dimensional shapes in the environment, e.g., use objects to find other shapes that can be made from three triangles or a rectangle and a triangle.</p>
	<p>CT.3.3.1.1: Identify, describe, construct and draw two-dimensional shapes such as quadrilaterals (including parallelograms), pentagons and hexagons.</p>
	<p>CT.3.3.1.2: Identify, describe, construct and represent three-dimensional figures such as cubes, spheres, cylinders, cones, pyramids, prisms.</p>
	<p>--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.</p>
<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>	<p>--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>