

New York State Next Generation Mathematics Learning Standards

Grade 2 Crosswalk

Operations and Algebraic Thinking

Cluster	NYS P-12 CCLS	NYS Next Generation Learning Standard
<p>Represent and solve problems involving addition and subtraction.</p>	<p>2.OA.1 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.</p>	<p>NY-2.OA.1a Use addition and subtraction within 100 to solve one-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.</p> <p>e.g., using drawings and equations with a symbol for the unknown number to represent the problem.</p> <p>NY-2.OA.1b Use addition and subtraction within 100 to develop an understanding of solving two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.</p> <p>e.g., using drawings and equations with a symbol for the unknown number to represent the problem.</p>
<p>Add and subtract within 20.</p>	<p>2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.</p> <p><u>Note:</u> See standard 1.OA.6 for a list of mental strategies.</p>	<p>NY-2.OA.2a Fluently add and subtract within 20 using mental strategies. Strategies could include:</p> <ul style="list-style-type: none"> • counting on; • making ten; • decomposing a number leading to a ten; • using the relationship between addition and subtraction; and • creating equivalent but easier or known sums. <p>Note: Fluency involves a mixture of just knowing some answers, knowing some answers from patterns, and knowing some answers from the use of strategies.</p> <p>NY-2.OA.2b Know from memory all sums within 20 of two one-digit numbers.</p>

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<p>Work with equal groups of objects to gain foundations for multiplication.</p>	<p>2.OA.3 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 2's; write an equation to express an even number as a sum of two equal addends.</p>	<p>NY-2.OA.3a 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 2's.</p> <p>NY-2.OA.3b Write an equation to express an even number as a sum of two equal addends.</p>
	<p>2.OA.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.</p>	<p>NY-2.OA.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.</p>

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Number and Operations in Base Ten

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<p>Understand place value.</p>	<p>2.NBT.1 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:</p> <p>a. 100 can be thought of as a bundle of ten tens — called a “hundred.”</p> <p>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).</p>	<p>NY-2.NBT.1 Understand that the digits of a three-digit number represent amounts of hundreds, tens, and ones.</p> <p>e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.</p> <p>NY-2.NBT.1a Understand 100 can be thought of as a bundle of ten tens, called a “hundred.”</p> <p>NY-2.NBT.1b Understand 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).</p>
	<p>2.NBT. 2 Count within 1000; skip-count by 5’s, 10’s, and 100’s.</p>	<p>NY-2.NBT. 2 Count within 1000; skip-count by 5’s, 10’s, and 100’s.</p>
	<p>2.NBT. 3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.</p>	<p>NY-2.NBT. 3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.</p> <p>e.g., expanded form: $237 = 200 + 30 + 7$</p>
	<p>2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p>	<p>NY-2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p>

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Number and Operations in Base Ten

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<p>Use place value understanding and properties of operations to add and subtract.</p>	<p>2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p>	<p>NY-2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. Notes: Students should be taught to use strategies based on place value, properties of operations, and the relationship between addition and subtraction; however, when solving any problem, students can choose any strategy.</p> <p>Fluency involves a mixture of just knowing some answers, knowing some answers from patterns, and knowing some answers from the use of strategies.</p>
	<p>2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.</p>	<p>NY-2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.</p>
	<p>2.NBT.7 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.</p>	<p>NY-2.NBT.7a Add and subtract within 1000, using</p> <ul style="list-style-type: none"> • concrete models or drawings, and • strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. <p>Relate the strategy to a written representation.</p> <p>Notes: Students should be taught to use concrete models and drawings; as well as strategies based on place value, properties of operations, and the relationship between addition and subtraction. When solving any problem, students can choose to use a concrete model or a drawing. Their strategy must be based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p>A written representation is any way of representing a strategy using words, pictures, or numbers.</p> <p>NY-2.NBT.7b Understand that in adding or subtracting up to 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.</p>

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Number and Operations in Base Ten

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<p>Use place value understanding and properties of operations to add and subtract.</p>	<p>2.NBT.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</p>	<p>NY-2.NBT.8 Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.</p>
	<p>2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.</p> <p><u>Note:</u> Explanations may be supported by drawings or objects.</p>	<p>NY-2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.</p> <p><u>Note:</u> Explanations may be supported by drawings or objects.</p>

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Measurement and Data

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Measure and estimate lengths in standard units.	2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	NY-2.MD.1 Measure the length of an object to the nearest whole by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
	2.MD.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.	NY-2.MD.2 Measure the length of an object twice, using different “length units” for the two measurements; describe how the two measurements relate to the size of the unit chosen.
	2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.	NY-2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.
	2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard-length unit.	NY-2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard “length unit.”

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Measurement and Data

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<p>Relate addition and subtraction to length.</p>	<p>2.MD.5 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.</p>	<p>NY-2.MD.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units. e.g., using drawings and equations with a symbol for the unknown number to represent the problem.</p>
	<p>2.MD.6 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.</p>	<p>NY-2.MD.6 Represent whole numbers as lengths from 0 on a number line with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line.</p>
<p>Work with time and money.</p>	<p>2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</p>	<p>NY-2.MD.7 Tell and write time from analog and digital clocks in five-minute increments, using a.m. and p.m. Develop an understanding of common terms, such as, but not limited to, quarter past, half past, and quarter to.</p>
	<p>2.MD.8 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?</p>	<p>NY-2.MD.8a Count a mixed collection of coins whose sum is less than or equal to one dollar. e.g., If you have 2 quarters, 2 dimes and 3 pennies, how many cents do you have?</p> <p>NY-2.MD.8b Solve real world and mathematical problems within one dollar involving quarters, dimes, nickels, and pennies, using the ¢ (cent) symbol appropriately.</p> <p><u>Note:</u> Students are not introduced to decimals, and therefore the dollar symbol, until Grade 4.</p>

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Measurement and Data

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<p>Represent and interpret data.</p>	<p>2.MD.9 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.</p>	<p>NY-2.MD.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Present the measurement data in a line plot, where the horizontal scale is marked off in whole-number units.</p>
	<p>2.MD.10 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.</p>	<p>NY-2.MD.10 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 picture graph or a bar graph.</p>

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Geometry

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<p>Reason with shapes and their attributes.</p>	<p>2.G.1 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.</p> <p><i>Note:</i> Sizes are compared directly or visually, not compared by measuring.</p>	<p>NY-2.G.1 Classify two-dimensional figures as polygons or non-polygons.</p>
	<p>2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</p>	<p>NY-2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</p>
	<p>2.G.3 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.</p>	<p>NY-2.G.3 Partition circles and rectangles into two, three, or four equal shares. Describe the shares using the words <i>halves</i>, <i>thirds</i>, <i>half of</i>, <i>a third of</i>, etc. Describe the whole as <i>two halves</i>, <i>three thirds</i>, <i>four fourths</i>. Recognize that equal shares of identical wholes need not have the same shape.</p>