# New York Progress Mathematics

Correlation to the New York State Next Generation Mathematics Learning Standards (2017) UPDATED JUNE 2019

# Grade 2



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# Sadlier School

### NY-2.OA OPERATIONS AND ALGEBRAIC THINKING

Grade 2 Content Standards

New York Progress Mathematics, Grade 2

#### Represent and solve problems involving addition and subtraction.

NY-2.OA.1	
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. e.g., using drawings and equations with a symbol for the unknown number to represent the problem.	<b>Lesson 1</b> Problem Solving: Addition—pp. 10-17 <b>Lesson 2</b> Problem Solving: Subtraction—pp. 18-25
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. e.g., using drawings and equations with a symbol for the unknown number to represent the problem.	<b>Lesson 1</b> Problem Solving: Addition—pp. 10-17 <b>Lesson 2</b> Problem Solving: Subtraction—pp. 18-25

#### Add and subtract within 20.

NY-2.OA.2	
<b>NY-2.OA.2a</b> Fluently add and subtract within 20 using mental strategies. Strategies could include:	<b>Lesson 3</b> Addition and Subtraction Facts to 20 (Fluency)— pp. 26-33
• counting on;	
• making ten;	
<ul> <li>decomposing a number leading to a ten;</li> </ul>	
<ul> <li>using the relationship between addition and subtraction; and</li> </ul>	
<ul> <li>creating equivalent but easier or known sums.</li> </ul>	
Note: Fluency involves a mixture of just knowing some answers, knowing some answers from patterns, and knowing some answers from the use of strategies.	



# NY-2.OA OPERATIONS AND ALGEBRAIC THINKING

Grade 2 Content Standards	New York Progress Mathematics, Grade 2
<b>NY-2.OA.2b</b> Know from memory all sums within 20 of two one-digit numbers.	Lesson 3 Addition and Subtraction Facts to 20 (Fluency)— pp. 26-33

Work with equal g	groups of objects	to gain foundations	for multiplication.
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NY-2.OA.3	
<b>NY-2.OA.3a</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 2's.	<b>Lesson 4</b> Odd and Even Numbers—pp. 34-41
<b>NY-2.OA.3b</b> Write an equation to express an even number as a sum of two equal addends.	<b>Lesson 4</b> Odd and Even Numbers—pp. 34-41
<b>NY-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>Lesson 5</b> Arrays—pp. 42-55

#### NY-2.NBT NUMBER AND OPERATIONS IN BASE TEN

**Grade 2 Content Standards** 

New York Progress Mathematics, Grade 2

#### Understand place value.

<b>NY-2.NBT.1</b> Understand that the digits of a three- digit number represent amounts of hundreds, tens, and ones.	
e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.	
<b>NY-2.NBT.1a</b> Understand 100 can be thought of as a bundle of ten tens, called a "hundred."	<b>Lesson 6</b> Place Value: Hundreds, Tens, and Ones—pp. 56-63
<b>NY-2.NBT.1b</b> 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).	<b>Lesson 6</b> Place Value: Hundreds, Tens, and Ones—pp. 56-63



#### NY-2.NBT NUMBER AND OPERATIONS IN BASE TEN

Grade 2 Content Standards	New York Progress Mathematics, Grade 2
<b>NY-2.NBT.2</b> Count within 1000; skip-count by 5's, 10's, and 100's.	<b>Lesson 7</b> Skip Count by 5s, 10s, and 100s—pp. 64-71
NY-2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. e.g., expanded form: 237 = 200 + 30 + 7	<b>Lesson 8</b> Read and Write Numbers to 1,000—pp. 72-79
<b>NY-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>Lesson 9</b> Compare Numbers—pp. 80-87
Use place value understanding and properties of	operations to add and subtract.

<ul> <li>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.</li> <li>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.</li> <li>Fluency involves a mixture of just knowing some answers from patterns, and knowing some answers from the use of strategies.</li> </ul>	<b>Lesson 10</b> Add Two-Digit Numbers—pp. 88-95 <b>Lesson 11</b> Subtract Two-Digit Numbers—pp. 96-103
<b>NY-2.NBT.6</b> Add up to four two-digit numbers using strategies based on place value and properties of operations.	<b>Lesson 12</b> Add More than Two Numbers—pp. 104-111



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### NY-2.NBT NUMBER AND OPERATIONS IN BASE TEN

Grade 2 Content Standards	New York Progress Mathematics, Grade 2	
NY-2.NBT.7		
<ul> <li>NY-2.NBT.7a Add and subtract within 1000, using</li> <li>concrete models or drawings, and</li> <li>strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</li> <li>Relate the strategy to a written representation.</li> <li>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.</li> <li>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 operationship between addition and subtraction.</li> <li>A written representation is any way of representing a strategy using words, pictures, or numbers.</li> </ul>	Lesson 13 Add Three-Digit Numbers within 1,000—pp. 112-119 Lesson 14 Subtract Three- Digit Numbers within 1,000—pp. 120-127	
<b>NY-2.NBT.7b</b> 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.	Lesson 13 Add Three-Digit Numbers within 1,000—pp. 112-119 Lesson 14 Subtract Three- Digit Numbers within 1,000—pp. 120-127	
Use place value understanding and properties of operations to add and subtract.		
<b>NY-2.NBT.8</b> Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100	<b>Lesson 15</b> Mentally Add and Subtract 10 or 100—pp. 128-145	

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from a given number 100-900.



#### NY-2.NBT NUMBER AND OPERATIONS IN BASE TEN

Grade 2 Content Standards	New York Progress Mathematics, Grade 2
<b>NY-2.NBT.9</b> Explain why addition and subtraction strategies work, using place value and the properties of operations.	Lesson 10 Add Two-Digit Numbers—pp. 88-95 Lesson 11
Note: Explanations may be supported by drawings or objects.	Subtract Two-Digit Numbers—pp. 96-103

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### MEASUREMENT AND DATA

Grade 2 Content Standards

New York Progress Mathematics, Grade 2

Measure and estimate lengths in standard units.		
<b>NY-2.MD.1</b> 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.	<b>Lesson 16</b> Measure Length: Inches and Feet—pp. 146-153 <b>Lesson 17</b> Measure Length: Centimeters and Meters—pp. 154-161	
<b>NY-2.MD.2</b> 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.	<b>Lesson 18</b> Use Different Units to Measure Length—pp. 162-169	
<b>NY-2.MD.3</b> Estimate lengths using units of inches, feet, centimeters, and meters.	<b>Lesson 19</b> Use Different Units to Measure Length—pp. 162-169	
<b>NY-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>Lesson 20</b> Compare Lengths—pp. 178-185	





# NY-2.MD

#### **MEASUREMENT AND DATA**

**Grade 2 Content Standards** 

New York Progress Mathematics, Grade 2

# Relate addition and subtraction to length.

<b>NY-2.MD.5</b> Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units.	<b>Lesson 21</b>
e.g., using drawings and equations with a symbol for the unknown number to represent the problem.	Add and Subtract Lengths—pp. 186-193
<b>NY-2.MD.6</b> 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.	<b>Lesson 22</b> Number Line Diagrams—pp. 194-201

#### Work with time and money.

<b>NY-2.MD.7</b> 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.	<b>Lesson 23</b> Tell and Write Time—pp. 202-209
NY-2.MD.8	
<b>NY-2.MD.8a</b> 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?	<b>Lesson 24</b> Money—pp. 210-217
NY-2.MD.8b Solve real world and mathematical problems within one dollar involving quarters, dimes, nickels, and pennies, using the ¢ (cent) symbol appropriately. Note: Students are not introduced to decimals, and therefore the dollar symbol, until Grade 4.	<b>Lesson 24</b> Money—pp. 210-217



#### NY-2.MD

#### **MEASUREMENT AND DATA**

**Grade 2 Content Standards** 

New York Progress Mathematics, Grade 2

#### Represent and interpret data.

<b>NY-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. Present the measurement data in a line plot, where the horizontal scale is marked off in whole-number units.	<b>Lesson 25</b> Line Plots—pp. 218-225
<b>NY-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 puttogether, take-apart, and compare problems using information presented in a picture graph or a bar graph.	<b>Lesson 26</b> Picture Graphs—pp. 226-233 <b>Lesson 27</b> Bar Graphs—pp. 234-247

NY-2.G

#### GEOMETRY

Grade 2 Content Standards

New York Progress Mathematics, Grade 2

#### Reason with shapes and their attributes.

<b>NY-2.G.1</b> Classify two-dimensional figures as polygons or non-polygons.	<b>Lesson 28</b> Identify and Draw Shapes—pp. 248-255
<b>NY-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>Lesson 29</b> Partition Rectangles into Same-Size—pp. 256- 263
<b>NY-2.G.3</b> Partition circles and rectangles into two, three, or four equal shares. Describe the shares using the words <i>halves, thirds, half of, a third of,</i> etc. Describe the whole as <i>two halves, three thirds, four fourths</i> . Recognize that equal shares of identical wholes need not have the same shape.	<b>Lesson 30</b> Equal Shares—pp. 264-271

