

A Correlation of
INVESTIGATIONS 
IN NUMBER, DATA, AND SPACE®

©2017



To the
**New York State Next Generation
Mathematics Learning Standards
Grade 1**

**A Correlation of Investigations 3 in Number, Data, and Space, ©2017
To the New York State Next Generation Mathematics Learning Standards**

Grade 1 Units

Unit 1 - Building Numbers and Solving Story Problems

Unit 2 - Comparing and Combining Shapes

Unit 3 - How Many of Each? How Many in All

Unit 4 - Fish Lengths and Fraction Rugs

Unit 5 - Number Games and Crayon Problems

Unit 6 - Would You Rather Be an Eagle or a Whale?

Unit 7 - How Many Tens? How Many Ones?

Unit 8 - Blocks and Buildings

**A Correlation of Investigations 3 in Number, Data, and Space, ©2017
To the New York State Next Generation Mathematics Learning Standards**

New York State Next Generation Mathematics Learning Standards Grade 1	Investigations 3 in Number, Data, and Space ©2017 Grade 1
Mathematical Practices	
1. Make sense of problems and persevere in solving them.	Unit 1: 1.1, 1.2, 2.3, 2.4, 2.7, 2.8, 3.1, 3.2, 3.4, 3.6, 3.7 Unit 6: 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 2.1, 2.2
2. Reason abstractly and quantitatively.	Unit 3: 1.1, 1.2, 2.1, 2.2, 2.4, 2.5, 2.6, 2.7, 3.1, 3.2, 3.5 Unit 7: 1.1, 1.3, 1.6, 1.7, 1.8, 2.1, 2.2, 2.3, 2.4, 2.5, 2.7, 2.8, 3.1, 3.2, 3.6
3. Construct viable arguments and critique the reasoning of others.	Unit 2: 1.4, 1.5, 1.6, 1.7, 2.1, 2.2, 2.3, 2.4 Unit 5: 1.1, 1.4, 2.1, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 3.1, 3.5
4. Model with Mathematics.	Unit 4: 1.1, 1.2, 1.3, 1.5, 1.6, 2.1, 2.2, 2.3, 2.4 Unit 6: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2
5. Use appropriate tools strategically.	Unit 2: 1.1, 1.6, 1.7, 2.2, 2.3, 2.4 Unit 4: 1.2, 1.3, 1.4, 1.5, 1.6, 1.7
6. Attend to precision.	Unit 3: 1.2, 2.2, 2.4, 2.5, 2.8, 3.1, 3.2, 3.4, 4.1 Unit 8: 1.1, 1.2, 1.3, 1.5, 1.6
7. Look for and make use of structure.	Unit 5: 1.2, 1.4, 2.1, 2.2, 2.3, 2.4, 2.5, 2.7, 2.8, 3.1, 3.3 Unit 8: 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8
8. Look for and express regularity in repeated reasoning.	Unit 1: 1.2, 1.4, 2.2, 2.4, 2.5, 2.6, 2.7, 3.1, 3.2, 3.3, 3.4, 3.5 Unit 7: 1.2, 1.4, 2.2, 2.3, 2.5, 2.6, 2.7, 3.1, 3.3, 3.4, 3.5, 3.6, 3.7
NY-1.OA Operations and Algebraic Thinking	
Represent and solve problems involving addition and subtraction.	
1. Use addition and subtraction within 20 to solve one step word problems involving situations of adding to, taking from putting together, taking apart, and/or comparing, with unknowns in all positions. <i>Note: Problems should be represented using objects, drawings, and equations with a symbol for the unknown number. Problems should be solved using objects or drawings, and equations.</i>	Unit 1: 2.3, 2.4, 2.6, 2.7, 2.8, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7 Unit 3: 2.1, 2.4, 2.6, 2.7, 2.8, 3.1, 3.2, 3.6 Unit 4: 1.5, 1.6, 1.7, 1.8, 2.6 Unit 5: 1.1, 1.5, 1.6, 1.7, 1.8, 2.3, 2.4, 2.6, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 Unit 6: Investigation 1, 2.3 Unit 7: CR 1.1, CR 1.2, CR 1.3

**A Correlation of Investigations 3 in Number, Data, and Space, ©2017
To the New York State Next Generation Mathematics Learning Standards**

New York State Next Generation Mathematics Learning Standards Grade 1	Investigations 3 in Number, Data, and Space ©2017 Grade 1
2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.	Unit 2: 1.3 Unit 3: CR 2.3, CR 2.5, 3.1, CR 3.1, CR 3.2, CR 3.4, 3.6, CR 3.6 Unit 6: Investigation 2 Unit 7: 1.1, 1.2
Understand and apply properties of operations and the relationship between addition and subtraction.	
3. Apply properties of operations as strategies to add and subtract. <i>Note: Students need not use formal terms for these properties.</i>	Unit 1: 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7 Unit 2: 1.3 Unit 3: 1.1, 2.1, 2.4, 2.5, 2.6, 2.7, 3.1, 3.2, 3.3, 3.4, 3.6, 4.8 Unit 4: 1.5, 1.6, 1.7, 1.8, 2.6 Unit 5: Investigation 1, Investigation 2, Investigation 3
4. Understand subtraction as an unknown-addend problem within 20.	Unit 1: 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 Unit 3: 1.3, 2.2, 2.3, 2.7 Unit 4: 1.5, 1.6, 1.7, 1.8, 2.6 Unit 5: 1.1, 1.5, 1.6, 1.7, 1.8, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 Unit 6: CR 1.3, CR 1.5, CR 2.2, CR2.3
Add and subtract within 20.	
5. Relate counting to addition and subtraction.	Unit 1: 1.4, 1.5, Investigation 2, Investigation 3 Unit 2: CR 1.3, CR 1.6, CR 2.5 Unit 3: 1.1, 1.3, 1.4, 2.5, 3.1, 3.2 Unit 5: 2.4, 2.6 Unit 7: 1.1, 1.2, 1.3
6a. Add and subtract within 20. Use strategies such as: <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. 	Unit 1: Investigation 2, Investigation 3 Unit 2: 1.1, 1.2, 1.3, 1.4 Unit 3: Investigation 1, Investigation 2, Investigation 3, 4.8 Unit 4: 1.5, 1.6, 1.7, 1.8, 2.6 Unit 5: Investigation 1, Investigation 2, Investigation 3 Unit 6: Investigation 1, 2.3 Unit 7: 1.1, 1.2, 1.3, 2.1, 2.2, 2.4, 2.5

**A Correlation of Investigations 3 in Number, Data, and Space, ©2017
To the New York State Next Generation Mathematics Learning Standards**

New York State Next Generation Mathematics Learning Standards Grade 1	Investigations 3 in Number, Data, and Space ©2017 Grade 1
6b. Fluently add and subtract within 10.	Unit 1: Investigation 2, Investigation 3 Unit 3: Investigation 1, Investigation 2, Investigation 3 Unit 5: Investigation 1, Investigation 2, Investigation 3
Work with addition and subtraction equations.	
7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.	Unit 1: 2.2, 2.4, 2.5, 2.6, 3.2, 3.4 Unit 3: 1.2, 2.5, 2.6, 2.7, 2.8, Investigation 3, 4.8 Unit 5: 2.1, 2.3, 2.5, 2.7, 2.8, 3.1, 3.6
8. Determine the unknown whole number in an addition or subtraction equation with the unknown in all positions.	Unit 1: 2.3, 2.5, 2.6, 2.7, 2.8, 3.2, 3.3, 3.4, 3.6, 3.7 Unit 3: 1.1, 1.3, 1.4 Unit 4: CR 1.2, CR 1.4, 1.6, CR 1.6, CR 2.3 Unit 5: 1.2, 1.4, 1.5, 1.6, 1.7, 1.8, 2.1, 2.2, 2.3, 2.4, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6 Unit 7: 1.6, 1.7, 1.8
NY-1.NBT Number and Operations in Base Ten	
Extend the Counting sequence.	
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.	Unit 1: Investigation 1, 3.6 Unit 2: 2.3 Unit 3: Investigation 4 Unit 4: CR 1.2, CR 1.4, CR 1.6, CR 2.3 Unit 5: CR 1.3, CR 1.3, CR1.5, CR 1.8, CR 2.1, CR 2.3, CR 2.5, CR 2.7, CR 3.1, CR 3.3, CR 3.4, CR 3.5, CR 3.6, CR 3.7 Unit 6: CR 1.3, CR 1.5, CR 2.2, CR 2.3 Unit 7: 1.3, 1.4, 1.5, 1.6, 1.7, 1.8 Investigation 2, Investigation 3

**A Correlation of Investigations 3 in Number, Data, and Space, ©2017
To the New York State Next Generation Mathematics Learning Standards**

New York State Next Generation Mathematics Learning Standards Grade 1	Investigations 3 in Number, Data, and Space ©2017 Grade 1
Understand place value	
2. Understand that the two digits of a two-digit number represent amounts of tens and ones.	<p>Unit 1: 1.3, 1.4, 1.5 Unit 2: CR 1.3, CR 1.6, CR 2.5 Unit 3: 1.2, 1.4, CR 2.1, CR 2.4, CR 2.8, CR 3.6, 4.1, CR 4.2, 4.4, CR 4.4, CR 4.6 Unit 4: CR 1.2, CR 1.4, CR 1.6, CR 2.3 Unit 5: CR 1.4, CR 1.6, 2.1, CR 2.2, 2.3, CR 2.6, CR 3.3, CR 3.4, CR 3.5 Unit 6: 1.1, CR 1.1, CR 1.2, CR 1.4, CR 1.6, CR 1.7, CR 1.9 Unit 7: 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, Investigation 2, Investigation 3</p>
a. Understand 10 can be thought of as a bundle of ten ones, called a “ten”.	<p>Unit 3: 1.2, 1.4, 2.4, 4.1 Unit 4: CR 1.2, CR 1.4, CR 1.6, CR 2.3 Unit 5: CR 1.4, CR 1.6, 2.1, CR 2.2, 2.3, CR 2.6, CR 3.3, CR 3.4, CR 3.5 Unit 6: 1.1, CR 1.1, CR 1.2, CR 1.4, CR 1.6, CR 1.7, CR 1.9 Unit 7: 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, Investigation 2, Investigation 3</p>
b. Understand the numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.	<p>Unit 1: 1.3, 1.4, 1.5 Unit 2: CR 1.3, CR 1.6, CR 2.5 Unit 3: 1.2, 1.4, 2.4 Unit 4: CR 1.2, CR 2.3 Unit 5: 2.1, 2.3, CR 3.3, CR 3.4, CR 3.5</p>
c. Understand 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>Unit 3: 1.4, CR 2.1, CR 2.4, CR 2.8, CR 3.65, CR 4.2, 4.4, CR 4.4, CR 4.6 Unit 4: CR 1.4, CR 1.6, CR 2.3 Unit 5: CR 1.4, CR 1.6, CR 2.2, CR 2.6 Unit 6: 1.1, CR 1.1, CR 1.2, CR 1.4, CR 1.6, CR 1.7, CR 1.9 Unit 7: 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, Investigation 2, Investigation 3</p>

**A Correlation of Investigations 3 in Number, Data, and Space, ©2017
To the New York State Next Generation Mathematics Learning Standards**

New York State Next Generation Mathematics Learning Standards Grade 1	Investigations 3 in Number, Data, and Space ©2017 Grade 1
3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.	<p>Unit 1: 2.5, 3.6 , CR 3.7</p> <p>Unit 2: CR 1.1, CR 1.2, CR 1.5, CR 1.7, CR 2.2</p> <p>Unit 3: CR 1.2, CR 1.3, CR 2.1, CR 2.2, CR 2.4, CR 2.6, CR 2.8, 3.3, CR 3.3, 3.4, CR 3.5, CR 4.1, CR 4.2, CR 4.4, CR 4.5, CR 4.6, CR 4.7, CR 4.8</p> <p>Unit 4: CR 1.2, CR 1.4, CR 1.6, CR 2.3</p> <p>Unit 7: 1.6, 2.2, 2.4, 2.5, 2.6, 2.7, 2.8</p>
Use place value understanding and properties of operations to add and subtract.	
<p>4. Add within 100, including</p> <ul style="list-style-type: none"> • a two-digit number and a one-digit number, • a two-digit number and a multiple of 10 <p><i>Use concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</i></p> <p><i>Understand that in adding two-digit numbers, one adds tens and tens, ones and ones, and sometimes it is necessary to compose a ten.</i></p> <p><i>Relate the strategy to a written representation and explain the reasoning used.</i></p>	<p>Unit 7: 1.2, 1.3, 1.4, 1.5, 1.7, 1.8, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8</p>
5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	<p>Unit 7: 1.3, 1.4, 1.5, 1.6, 1.8, 2.5, 2.6, 2.7, 2.8, Investigation 3</p>
<p>6. Subtract multiples of 10 from multiples of 10 in the range 10-90 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><i>Relate the strategy used to a written representation and explain the reasoning.</i></p>	<p>Unit 7: 1.6, 1.7, 1.8</p>

**A Correlation of Investigations 3 in Number, Data, and Space, ©2017
To the New York State Next Generation Mathematics Learning Standards**

New York State Next Generation Mathematics Learning Standards Grade 1	Investigations 3 in Number, Data, and Space ©2017 Grade 1
NY-1.MD Measurement and Data	
Measure lengths indirectly and by iterating length units.	
1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.	Unit 4: 1.1, 1.2, 1.3
2. Measure the length of an object using the same-size "length units" placed end to end with no gaps or overlaps. Express the length of an object as a whole number of "length units."	Unit 4: 1.3, 1.4, 1.5, 1.6, 1.7
Tell and write time and money.	
3a. Tell and write time in hours and half hours using analog and digital clocks. Develop an understanding of common terms, such as, but not limited to, <i>o'clock</i> and <i>half past</i> .	Unit 1: CR 2.3 Unit 3: CR 1.4, CR 2.7, CR 4.3 Unit 4: 1.2, 2.1, 2.5 Unit 5: CR 1.1, CR 1.7, CR 2.4, CR 2.8, CR 3.2 Unit 6: CR 1.8, CR 2.1 Unit 7: CR 2.1, CR 3.3 Unit 8: CR 1.1, CR 1.3, CR 1.5, 1.6, CR 1.6
3b. Recognize and identify coins (penny, nickel, dime, and quarter) and their value and use the cent symbol (¢) appropriately.	Unit 1: 1.2, 1.3, 1.5, 2.1, 2.6, 3.5, 3.6 Unit 5: 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 Unit 6: 1.3, 1.5, 2.2, 2.3 Unit 7: 1.1, 1.2, 1.3, 3.4
3c. Count a mixed collection of dimes and pennies and determine the cent value (total not to exceed 100 cents).	Unit 1: 1.2, 1.3, 1.5, 2.1, 2.6, 3.5, 3.6 Unit 5: 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 Unit 6: 1.3, 1.5, 2.2, 2.3 Unit 7: 1.1, 1.2, 1.3, 3.4
Represent and interpret data.	
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.	Unit 1: 1.5 Unit 2: 2.1, 2.2, 2.3, 2.4 Unit 3: 4.1 Unit 6: Investigation 1, Investigation 2

**A Correlation of Investigations 3 in Number, Data, and Space, ©2017
To the New York State Next Generation Mathematics Learning Standards**

New York State Next Generation Mathematics Learning Standards Grade 1	Investigations 3 in Number, Data, and Space ©2017 Grade 1
NY-1.G Geometry	
Reason with shapes and their attributes.	
1. Distinguish between defining attributes versus non-defining attributes for a wide variety of shapes. Build and/or draw shapes to possess defining attributes.	Unit 2: 1.1, 1.2, 1.3, 1.4, 1.6, 1.7, Investigation 2 Unit 4: CR 1.8, CR 2.1, 2.2, CR 2.2, 2.3, CR 2,4, CR 2.5, CR 2.6 Unit 8: Investigation 1
2. Compose two-dimensional shapes (rectangles, 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 composite shape. <i>Note: Students do not need to learn format names such as "right rectangular prism."</i>	Unit 1: Investigation 1 Unit 2: Investigation 1 Unit 4: 2.2, 2.3, 2.4, 2.5 Unit 8: 1.3, 1.5, 1.6, 1.7, 1.8, 1.9
3. Partition circles and rectangles into two and four equal shares, describe the shares using the words <i>halves, fourths, and quarters</i> , and use the phrases <i>half of, fourth of, and quarter of</i> . Understand for these examples that decomposing into more equal shares creates similar shares.	Unit 4: Investigation 2