

Summit Public Schools
Summit, New Jersey
Grade Level: Grade 1
Content Area: Math

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

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

First Grade Scope and Sequence

Please Note - This scope and First Grade Scope and Sequence

Please Note - This scope and sequence is a general guideline and will vary depending upon the math program teachers are using and the needs of the students.

<p>Summary of the Year In Grade 1, instructional time should focus on four critical areas: (1) developing understanding of addition, subtraction, and strategies for addition and subtraction within 20; (2) developing understanding of whole number relationships and place value, including grouping in tens and ones; (3) developing understanding of linear measurement and measuring lengths as iterating length units; and (4) reasoning about attributes of, and composing and decomposing geometric shapes.</p>	<p>Overview</p> <p>OPERATIONS AND ALGEBRAIC THINKING Represent and solve problems involving addition and subtraction. Understand and apply properties of operations and the relationship between addition and subtraction. Add and subtract within 20. Work with addition and subtraction equations.</p> <p>NUMBER AND OPERATIONS IN BASE TEN Extend the counting sequence. Understand place value. Use place value understanding and properties of operations to add and subtract.</p> <p>MEASUREMENT AND DATA Measure lengths indirectly and by iterating length units. Tell and write time. Represent and interpret data. GEOMETRY Reason with shapes and their attributes.</p>
<p style="text-align: center;">Year-at-a-Glance</p> <p>Marking Period 1 Addition and Subtraction of Numbers to 0-10 and Fluency Place Value Comparison, Addition and Subtraction of Numbers to 0-20 Measurement and Data</p>	<p>STANDARDS FOR MATHEMATICAL PRACTICE:</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.

Marking Period 2

Addition and Subtraction of Numbers to 0-10 *Fluency*

Place Value

Comparison, Addition and Subtraction of Numbers to 0-40

Measurement and Data

Marking Period 3

Addition and Subtraction of Numbers to 0-10 *Fluency*

Place Value

Comparison, Addition and Subtraction of Numbers to 0-100

Measurement and Data

Reason with Shapes and Their Attributes

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.

MP	Unit Title/Focus	Resources	Everyday Math Units	Go Math Units	enVision Units	Standards
1	<p>Title: Addition and Subtraction of Numbers to 0-10 and Fluency</p> <p><i>Approximate number of instructional days: 28</i></p> <p>Pre-/Post-Assessment #1</p>	<p>k-5mathteachingresources.com/kindergarten-math-activities (i.e. addition bag, 5 little ducks, counting on cup, sums of five etc.)</p> <p>http://www.k-5mathteachingresources.com/1st-grade-number-activities.html (see list of number activities on webpage)</p> <p><i>Math Their Way- Chapter 7-9</i> http://www.center.edu/MathTheirWay.shtml</p> <p>Diller, D. 2011. <i>Math Work Stations</i>. Stenhouse Publishers. Chapter 4- pp. 69-100.</p> <p>Pre-/post-assessment -Hand Games http://www.center.edu/NewsLetterText/documents/Chapter3.pdf - 3.13)</p>				<p>K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings</p> <p>K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.</p> <p>K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation</p> <p>K.OA.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.</p> <p>1.OA.6 - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.</p>
1	<p>Title: Place Value</p> <p><i>Approximate number of instructional days: 18</i></p> <p>Pre-/Post-Assessment #2</p>	<p>Diller, D. 2011. <i>Math Work Stations</i>. Stenhouse Publishers. Chapter 6- pp. 133-158.</p>	<p>Lessons: 1.1, 1.2, 1.4,1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.12,</p>	<p>Chapters 6-8</p>	<p>Topics 7-9</p>	<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.</p> <p>1.NBT.2 Understand that the two digits of</p>

			1.13, 2.1, 2.2, 2.3, 2.4, 2.11, 2.13			a two-digit number represent amounts of tens and ones. 1.NBT.2A 10 can be thought of as a bundle of ten ones – called a “ten.” 1.NBT.2B The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. 1.NBT.2C 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).
1	Title: Comparison, Addition and Subtraction of Numbers to 0-20 <i>Approximate number of instructional days: 20</i> Pre-/Post-Assessment #3	http://www.k-5mathteachingresources.com/1st-grade-number-activities.html (see list of number activities on webpage) Diller, D. 2011. <i>Math Work Stations</i> . Stenhouse Publishers. Chapter 4- pp. 69-100.	1.5, 1.6, 1.12, 1.13, 2.1, 2.2, 2.3, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 3.8, 3.9, 3.10, 3.12, 3.13, 3.14	Chapters 1-6	Topics 1-6	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, 1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, 1.OA.3 Apply properties of operations as strategies to add and subtract 1.OA.4 Understand subtraction as an unknown-addend problem. 1.OA.5 Relate counting to addition and subtraction 1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. 1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.

1	<p>Title: Measurement and Data</p> <p><i>Approximate number of instructional days: 5</i></p> <p>Pre-/Post-Assessment #2</p>	<p>http://www.k5mathteachingresources.com/1st-grade-measurement-and-data.html</p>	<p>1.7, 2.5, 2.6, 2.11</p>	<p>Chapters 9-10</p>	<p>Topics 13-14</p>	<p>1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks. 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>
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Marking Period	Unit Title/Focus	Resources	Everyday Math Units	Go Math Units	enVision Units	Standards
2	<p>Title: Review Addition and Subtraction of Numbers to 0-10</p> <p>Fluency Approximate number of instructional days: 3</p> <p>Pre-/Post-Assessment #4</p>	<p>k-5mathteachingresources.com/kindergarten-math-activities (i.e. addition bag, 5 little ducks, counting on cup, sums of five etc.)</p> <p><i>Math Their Way - Chapter 7-9</i> http://www.center.edu/MathTheirWay.shtml</p> <p>http://www.k-5mathteachingresources.com/1st-grade-number-activities.html (see list of number activities on webpage)</p> <p>Diller, D. 2011. <i>Math Work Stations</i>. Stenhouse Publishers. Chapter 5- pp. 101-132.</p>				<p>K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings</p> <p>K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.</p> <p>K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation</p> <p>K.OA.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.</p> <p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.</p>
2	Title: Place	Diller, D. 2011. <i>Math Work Stations</i> . Stenhouse	2.13, 3.2,	Chapters	Topics 7-11	1.NBT.1 Count to 120, starting

	<p>Value <i>Approximate</i> number of instructional days: 20</p> <p><i>Fluency</i> <i>Approximate</i> number of instructional days: 3</p> <p>Pre-/Post- Assessment #5</p>	<p>Publishers. Chapter 6- pp. 133-158.</p> <p>http://www.k-5mathteachingresources.com/1st-grade-number-activities.html (see list of base ten activities on webpage)</p>	<p>3.3,3.5, 3.6, 3.9, 3.11, 4.10, 5.1,5.2, 5.3, 5.5, 5.6, 5.7, 5.8, 5.9, 6.4, 8.3, 8.4, 9.2</p>	<p>6-8</p>	<p>at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.</p> <p>1.NBT.2 Understand that the two digits of a two-digit number represent amounts of tens and ones.</p> <p>1.NBT.2B The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</p> <p>1.NBT.2C 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.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 $<$.</p> <p>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</p>
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						<p>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.</p> <p>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.</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>
2	<p>Title: Comparison, Addition and Subtraction of Numbers to 0-40</p> <p><i>Approximate</i></p>	<p>http://www.k-5mathteachingresources.com/1st-grade-number-activities.html (see list of number activities on webpage)</p> <p>Diller, D. 2011. <i>Math Work Stations</i>. Stenhouse Publishers. Chapter 5-pp. 101- 132.</p>	<p>4.2, 4.3, 4.7, 4.9, 4.11, 4.12, 5.3, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.13, 6.1, 6.2, 6.3, 6.4,</p>	<p>Chapters 1-6</p>	<p>Topics 1-6</p>	<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, 1.OA.2 Solve word problems</p>

	<p><i>number of instructional days:</i> 24</p> <p><i>Fluency</i> <i>Approximate</i> <i>number of instructional days:</i> 3</p> <p>Pre-/Post-Assessment #5</p>		<p>6.5, 6.7 6.8, 6.9, 6.10</p>		<p>that call for addition of three whole numbers whose sum is less than or equal to 20, 1.OA.3 Apply properties of operations as strategies to add and subtract 1.OA.4 Understand subtraction as an unknown-addend problem. 1.OA.5 Relate counting to addition and subtraction 1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. 1.OA.7 Understand the meaning of the equal sign, and 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.</p>
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2	<p>Title: Measure- ment and Data</p> <p><i><u>Approximate</u></i> <i>number of</i> <i>instructional days:</i> 10</p> <p>Pre-/Post- Assessment #6</p>	<p>http://www.k-5mathteachingresources.com/1st-grade-measurement-and-data.html</p>	<p>3.7, 3.13, 4.2, 4.3, 4.7, 4.9, 4.10, 5.9, 6.10, 6.12</p>	<p>Chapters 9-10</p>	<p>Topics 12-14</p>	<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.</p> <p>1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.</p> <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>
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Marking Period	Unit Title/Focus	Resources	Everyday Math Units	Go Math Units	enVision Units	Standards
3	<p>Title: Review of Addition and Subtraction of Numbers to 0-10</p> <p>Fluency Approximate <i>number of instructional days: 3</i></p> <p>Pre-/Post-Assessment RocketMath</p>	<p>k-5mathteachingresources.com/kindergarten-math-activities (i.e. addition bag, 5 little ducks, counting on cup, sums of five etc.)</p> <p><i>Math Their Way - Chapter 7-9</i> http://www.center.edu/MathTheirWay.shtml</p> <p>http://www.k-5mathteachingresources.com/1st-grade-number-activities.html (see list of number activities on webpage)</p> <p>Diller, D. 2011. <i>Math Work Stations</i>. Stenhouse Publishers. Chapter 5- pp. 101-132.</p>				<p>K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings</p> <p>K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.</p> <p>K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation</p> <p>K.OA.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.</p> <p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.</p>
3	<p>Title: Place Value</p> <p>Approximate <i>number of instructional days: 11</i></p>	<p>Diller, D. 2011. <i>Math Work Stations</i>. Stenhouse Publishers. Chapter 6- pp. 133-158.</p> <p>http://www.k-5mathteachingresources.com/1st-grade-number-activities.html (see list of base ten activities on webpage)</p>	8.2, 8.3, 8.4, 8.6, 9.1, 9.2, 9.3, 9.4, 10.3, 10.4, 10.7	Chapters 6-8	Topic 9-11	<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 $<$.</p> <p>1.NBT.4 Add within 100, including adding a two-digit number and a one-digit</p>

	Pre-/Post-Assessment #8					<p>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.</p> <p>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.</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>
3	<p>Title: Comparison, Addition and Subtraction of Numbers to 0-100</p> <p><i>Approximate number of instructional</i></p>	<p>Diller, D. 2011. <i>Math Work Stations</i>. Stenhouse Publishers. Chapter 6- pp. 133-158..</p>	<p>7.1, 7.2, 7.3, 8.2, 8.3, 8.4, 8.8, 8.9, 9.1, 10.3, 10.4</p>	<p>Chapters 1-6</p>	<p>Topics 1-6</p>	<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,</p> <p>1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20,</p>

	<p><i>days: 11</i></p> <p>Pre-/Post-Assessment #9</p>					<p>1.OA.3 Apply properties of operations as strategies to add and subtract</p> <p>1.OA.4 Understand subtraction as an unknown-addend problem.</p> <p>1.OA.5 Relate counting to addition and subtraction</p> <p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.</p> <p>1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.</p> <p>1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.</p>
3	<p>Title: Measurement and Data</p> <p><i>Approximate number of instructional days: 7</i></p> <p>Pre-/Post-Assessment #7</p>	<p>Diller, D. 2011. <i>Math Work Stations</i>. Stenhouse Publishers. Chapter 8- pp. 183-210.</p> <p>http://www.k-5mathteachingresources.com/1st-grade-measurement-and-data.html</p>	<p>7.2, 7.3, 7.4, 8.1, 9.2, 10.2, 10.5</p>	<p>Chapters 9-10</p>	<p>Topics 13-14</p>	<p>1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.</p> <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>
3	<p>Title: Reason with Shapes and Their Attributes</p> <p><i>Approximate number of instructional days: 11</i></p>	<p>Diller, D. 2011. <i>Math Work Stations</i>. Stenhouse Publishers. Chapter 7- pp. 159-182.</p> <p>http://www.k-5mathteachingresources.com/1st-grade-geometry.html</p>	<p>7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 8.6, 8.9, 9.3, 9.6, 10.5, 10.7</p>	<p>Chapters 11-12</p>	<p>Topics 15-16</p>	<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</p>

	<p>Pre-/Post-Assessment #10</p>				<p>(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>
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Unit Description: Marking Period 1

Standard
Operations and Algebraic Thinking 1.OA
Number and Operations in Base Ten 1.NBT
Measurement and Data 1.MD

Big Ideas: *Course Objectives / Content Statement(s)*

Operations and Algebraic Thinking 1.OA

- A. *Represent and solve problems involving addition and subtraction.*
- B. *Understand and apply properties of operations and the relationship between addition and subtraction.*
- C. *Add and subtract within 20.*
- D. *Work with addition and subtraction equations.*

Number and Operations in Base Ten 1.NBT

- E. *Extend the counting sequence*
- G. *Use place value understanding and properties of operations to add and subtract.*

Measurement and Data 1.MD

- H. *Measure lengths indirectly and by iterating length units.*
- I. *Tell and write time.*
- J. *Represent and Interpret Data*

Essential Questions

What provocative questions will foster inquiry, understanding, and transfer of learning?

Enduring Understandings

What will students understand about the big ideas?

- How is math relevant to me?

Students will understand that...

- Numbers can represent quantity, position, location and relationships

<ul style="list-style-type: none"> • Why are different ways of counting important? • How can we compare and contrast numbers? • What do numbers tell us about the world around us? • Why do I measure? • Why do I need standardized units of measurement? 	<ul style="list-style-type: none"> • Counting finds out the answer to “how many” in objects/sets. • Measurement describes the attributes of objects and events. • Standard units of measure enable people to interpret results or data.
Areas of Focus: Proficiencies (CCSS)	Examples, Outcomes, Assessments
<p>Students will:</p> <p>Operations and Algebraic Thinking 1.OA</p> <p>A. <i>Represent and solve problems involving addition and subtraction.</i></p> <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</p>	<p>Instructional Strategies</p> <ul style="list-style-type: none"> • Count on from a given number • Compare two numbers 0-20 using the words more, less, and the same • Apply patterning skills to solve simple problems • Compare and contrast objects based on their attributes • Match numbers to sets of objects and to pictures of sets (0-20) • Form and identify, orally and in written form, two-part combinations of a given quantity through the number nine • Identify whether a set has more than, less than, or the same number of objects as a reference set up to 20 • Identify spatial relationships • Use tally marks or concrete objects to represent objects in a set • Identify and count sets of pennies • Order a set of 3 to 5 objects from shortest to longest • Identify the longer and shorter of two objects

<p>for the unknown number to represent the problem.</p> <p>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.</p> <p>B. <i>Understand and apply properties of operations and the relationship between addition and subtraction.</i></p> <p>1.OA.3 Apply properties of operations as strategies to add and subtract. (Students need not use formal terms for these properties.) <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</i></p>	<ul style="list-style-type: none"> • Given a common occurring event, tell when it usually occurs • Solve calendar reading problems • Associate a specific date with the name of the day • Solve word problems using solution strategies <p>Sample Assessments:</p> <ul style="list-style-type: none"> • Students answer – <ul style="list-style-type: none"> ○ Result Unknown: There are 9 students on the playground. Then 8 more students showed up. How many students are there now? ($9+8 = \underline{\quad}$) ○ Change Unknown: There are 9 students on the playground. Some more students show up. There are now 17 students. How many students came? ($9+ \underline{\quad} = 17$) ○ Start Unknown: There are some students on the playground. Then 8 more students came. There are now 17 students. How many students were on the playground at the beginning? ($\underline{\quad} + 8 = 17$) • Exit slips <ul style="list-style-type: none"> ○ Which is longer: the height of the bookshelf or the height of a desk? • Game record sheets • Student self-assessment <ul style="list-style-type: none"> ○ Student can build a tower of 8 green cubes and 3 yellow cubes and another tower of 3 yellow and 8 green cubes to show that order does not change the result in the operation of addition. Students can also use cubes of 3 different is equivalent to $2 + (6 + 4)$ and then to prove $2 + 6 + 4 = 2 + 10$. • Writing prompts <ul style="list-style-type: none"> ○ There are cookies on the plate. There are 4 oatmeal raisin cookies, 5 chocolate chip cookies, and 6 gingerbread cookies. How many cookies are there total? • Math journals/Interactive Student Notebooks • Record sheets • Teacher observation
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<p>addition.)</p> <p>1.OA.4 Understand subtraction as an unknown-addend problem.</p> <p>C. <i>Add and subtract within 20.</i></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 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 $6 + 6 + 1 = 12 + 1 = 13$).</p>	<ul style="list-style-type: none"> ○ Ask for students to make a connection between counting and adding and subtraction. ○ How long is the paper in terms of paper clips? • Beginning, Middle, End-of-Year assessments • Progress check written assessment • Class checklists <p>Instructional Strategies:</p> <p>Interdisciplinary Connections</p> <ul style="list-style-type: none"> • Interactive Student Notebooks • Reading/writing word problems • Math literature list (see attached) • Create wrapping paper and greeting cards using patterns and shapes • Use tally marks to tally the number of books read per day/ week on a reading log, count the marks at the end of the day/week <p>Technology Integration</p> <ul style="list-style-type: none"> • Everyday Math games • http://www.carolhurst.com/subjects/math/mathout.htm • http://www.sci.tamucc.edu/~eyoung/teacher_lit.html <p>Media Literacy Integration</p> <ul style="list-style-type: none"> • Use objects from print media to create addition and subtraction story problems <p>Global Perspectives</p> <ul style="list-style-type: none"> • Explore songs from other countries that focus on numbers <p>21st Century Skills:</p> <p>Creativity and Innovation</p>
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<p>D. <i>Work with addition and subtraction equations.</i></p> <p>1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false</p> <p>1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.</p>	<p>Critical Thinking and Problem Solving – Use measurement and create a plan for designing the classroom setup</p> <p>Communication and Collaboration</p> <p>Information Literacy</p> <p>Media Literacy</p> <p>Life and Career Skills</p> <ul style="list-style-type: none"> • What jobs use these skills? • How do your parents use these skills?
<p>Number and Operations in Base Ten 1.NBT</p> <p>E. <i>Extend the counting sequence</i></p> <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.</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 $<$.</p>	<p>21st Century Themes (as applies to content area):</p> <p>Financial, Economic, Business, and Entrepreneurial Literacy</p> <ul style="list-style-type: none"> • How do you save money? How can knowing about money help you as a 1st grader? <p>Civic Literacy</p> <ul style="list-style-type: none"> • How can knowing math help others? <p>Health Literacy</p>

G. Use place value understanding and properties of operations to add and subtract.

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.

Measurement and Data 1.MD

H. Measure lengths indirectly and by iterating length units.

1.MD.1 Order three objects by

length; compare the lengths of two objects indirectly by using a third object.

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.*

I. Tell and write time.

1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.

J. Represent and Interpret Data

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.

Unit Description: Marking Period 2

Standard Operations and Algebraic Thinking 1.OA Number and Operations in Base Ten 1.NBT Measurement and Data 1.MD Geometry 1.G	
<p>Big Ideas: <i>Course Objectives / Content Statement(s)</i></p> <p>Operations and Algebraic Thinking 1.OA</p> <ul style="list-style-type: none"> A. <i>Represent and solve problems involving addition and subtraction.</i> B. <i>Understand and apply properties of operations and the relationship between addition and subtraction.</i> C. <i>Add and subtract within 20.</i> D. <i>Work with addition and subtraction equations.</i> <p>Number and Operations in Base Ten 1.NBT</p> <ul style="list-style-type: none"> E. <i>Extend the counting sequence</i> F. <i>Understand Place Value</i> G. <i>Use place value understanding and properties of operations to add and subtract.</i> <p>Measurement and Data 1.MD</p> <ul style="list-style-type: none"> H. <i>Measure lengths indirectly and by iterating length units.</i> I. <i>Tell time and write time.</i> J. <i>Represent and Interpret Data</i> <p>Geometry 1.G</p> <ul style="list-style-type: none"> K. <i>Reason with shapes and their attributes.</i> 	
Essential Questions <i>What provocative questions will foster inquiry, understanding, and transfer of learning?</i>	Enduring Understandings <i>What will students understand about the big ideas?</i>
<ul style="list-style-type: none"> • What tools and units are used to measure time? • How are place value 	<p>Students will understand that...</p> <ul style="list-style-type: none"> • Time is a standard unit of measurement. • Placed value is based on groups of ten

<p>patterns repeated in numbers?</p> <ul style="list-style-type: none"> • How do you use measurement in your life? • Why do I need to know basic facts? 	<ul style="list-style-type: none"> • Standard units of measurement help us communicate effectively • Mastering the basic facts assists in accuracy and problem solving
<p>Areas of Focus: Proficiencies (CCSS)</p>	<p>Examples, Outcomes, Assessments</p>
<p>Students will:</p> <p>Operations and Algebraic Thinking 1.OA</p> <p>A. <i>Represent and solve problems involving addition and subtraction.</i></p> <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.</p> <p>B. <i>Understand and apply properties of operations and the relationship between addition</i></p>	<p>Instructional Strategies:</p> <ul style="list-style-type: none"> • Form and identify, orally and in written form, two-part combinations of a given quantity through the number nine • Count objects and events to 100 • Form groups of 20-100 items • Identify whether a set has more than, less than, or the same number of objects as a reference set • Compare any two numbers less than 100 using the words more or less • Apply patterning skills to solve simple problems • Interpret real and picture graphs (4 or more columns) • Write or tell a summary statement about a given set of data using a graph or table • Tell time to the hour and half hour • Count and identify sets of pennies and nickels • Solve word problems using solution strategies • Recognize equality when combining parts to form a whole or dividing a whole into parts • Use ten or fewer objects to demonstrate addition and subtraction and attach the number sentence using addition, subtraction, and equality signs • Use a number line to demonstrate addition and subtraction • Given an addition and subtraction problem in story form presented verbally or in writing solve with manipulatives • Write addition and subtraction fact family equations (facts to 10) horizontally and vertically • Create addition and subtraction word problems to match a given drawing, picture, physical

<p><i>and subtraction.</i></p> <p>1.OA.3 Apply properties of operations as strategies to add and subtract. (Students need not use formal terms for these properties.) <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></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>C. <i>Add and subtract within 20.</i></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 Add and subtract within 20,</p>	<p>model, or number sentence</p> <p>Sample Assessments:</p> <ul style="list-style-type: none"> • Student work- <ul style="list-style-type: none"> ○ Have students draw how addition symbol (+) represent joining situations, the subtraction symbol (-) represent separating situations, and the equal sign (=) represent a relationship regarding quantity between one side of the equation and the other. ○ Which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$. ○ Determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = \square - 3$, $6 + 6 = \square$. • Exit slips <ul style="list-style-type: none"> ○ Show $-12 + 5 = \underline{\quad}$ could be expressed as $5 + \underline{\quad} = 12$. ○ Show the different shapes that you can make by joining a triangle with a square and show the different shapes you could make with a cube and a rectangular prism. • Game record sheets • Student self-assessment • Writing prompts <ul style="list-style-type: none"> ○ Ask students to write and draw pictures of an example of adding and subtracting in their job. ○ Show a piece of paper. How can you and a friend share equally (partition) this piece of paper so that you both have the same amount of paper to paint a picture? • Math journals/Interactive Student Notebooks • Record sheets • Teacher observation • Beginning, Middle, End-of-Year assessments • Progress check written assessment • Class checklists <p>Interdisciplinary Connections</p>
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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 $6 + 6 + 1 = 12 + 1 = 13$).

D. *Work with addition and subtraction equations.*

1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or

- Create a weekly and daily schedule of how time is spent
- Study the changing seasons and how they depend on time
- Record time beginning and ending to read on a reading log
- Read aloud stories about time and clocks: Clocks and More Clocks by Pat Hutchins; What's the Time Mr. Wolf by Annie Kubler; Telling Time With Big Mama Cat by Dan Harper

Technology Integration

- <http://www.kidsnumbers.com/telling-time.php>
- Use SMAT notebook to create clocks

Media Literacy Integration

- Create a log of how much time is “screen time”

Global Perspectives

- Investigate how time zones are different throughout the globe
- Investigate how children around the world spend their time in school and at home

21st Century Skills:

Creativity and Innovation

Critical Thinking and Problem Solving

Communication and Collaboration

Information Literacy

Media Literacy

Life and Career Skills

<p>false. 1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.</p>	<p>21st Century Themes (as applies to content area):</p> <p>Financial, Economic, Business, and Entrepreneurial Literacy</p> <p>Civic Literacy</p> <p>Health Literacy</p>
<p>Number and Operations in Base Ten 1.NBT</p> <p><i>E. Extend the counting sequence</i></p> <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.</p> <p><i>F. Understand Place Value</i></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> <ul style="list-style-type: none"> a. 10 can be thought of as a bundle of ten ones — called a “ten.” b. The numbers from 11 to 19 are 	

composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

- 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).

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 $<$.

G. Use place value understanding and properties of operations to add and subtract.

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.

Measurement and Data 1.MD

H. Measure lengths indirectly and by iterating length units.

1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.

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.*

I. *Tell and write time.*

1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.

J. *Represent and Interpret Data*

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.

Geometry 1.G

K. *Reason with shapes and their*

attributes.

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.

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. (Students do not need to learn formal names such as “right rectangular prism.”)

Unit Description: Marking Period 3

Standard Operations and Algebraic Thinking 1.OA Number and Operations in Base Ten 1.NBT Measurement and Data 1.MD Geometry 1.G	
<p>Big Ideas: <i>Course Objectives / Content Statement(s)</i></p> <p>Operations and Algebraic Thinking 1.OA</p> <p>B. <i>Understand and apply properties of operations and the relationship between addition and subtraction.</i></p> <p>C. <i>Add and subtract within 20.</i></p> <p>D. <i>Work with addition and subtraction equations.</i></p> <p>Number and Operations in Base Ten 1.NBT</p> <p>F. <i>Understand Place Value</i></p> <p>Measurement and Data 1.MD</p> <p>H. <i>Measure lengths indirectly and by iterating length units.</i></p> <p>I. <i>Tell and write time.</i></p> <p>J. <i>Represent and Interpret Data</i></p> <p>Geometry 1.G</p> <p>K. <i>Reason with shapes and their attributes.</i></p>	
Essential Questions <i>What provocative questions will foster inquiry, understanding, and transfer of learning?</i>	Enduring Understandings <i>What will students understand about the big ideas?</i>
<ul style="list-style-type: none"> • Where in the real world can I find shapes? • In what ways can I match solid geometric figures to real-life 	<p>Students will understand that...</p> <ul style="list-style-type: none"> • Objects can be described and compared using their geometric attributes. • Shapes make up the world around us. • Addition and subtraction are inverse operations.

<p>objects?</p> <ul style="list-style-type: none"> • How can I put shapes together and take them apart to form other shapes? • How does adding relate to subtracting? 	
<p>Areas of Focus: Proficiencies (CCSS)</p>	<p>Examples, Outcomes, Assessments</p>
<p>Students will:</p> <p>Operations and Algebraic Thinking 1.OA</p> <p>B. <i>Understand and apply properties of operations and the relationship between addition and subtraction.</i></p> <p>1.OA.3 Apply properties of operations as strategies to add and subtract. (Students need not use formal terms for these properties.) <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</i></p>	<p>Instructional Strategies:</p> <ul style="list-style-type: none"> • Collect and work with equivalent names for numbers (fact families/fact triangles) • Revisit the relationship between addition and subtraction • Use strategies to subtract • Find the values of collections of various coins • Tell time to the hour and the half hour • Collect data to make bar graphs • Identify, describe, and compare plane shapes/polygons • Identify and describe solid figures <p>Interdisciplinary Connections</p> <ul style="list-style-type: none"> • Interactive Student Notebooks • Reading/writing word problems • Math literature list (see attached) • Read aloud nonfiction books about shapes: <u><i>A Circle Here, a Square There</i></u> by David Diehl; <u><i>The Shape of Me and Other Stuff</i></u> by Dr. Seuss; <u><i>When a Line Bends, a Shape Begins</i></u> by Rhonda Gowler Green

<p>added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (<i>Associative property of addition.</i>)</p> <p>1.OA.4 Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.</p> <p>C. Add and subtract within 20.</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 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</p>	<p>Sample Assessment:</p> <ul style="list-style-type: none"> • Student work- <ul style="list-style-type: none"> ○ Determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = \square - 3$, $6 + 6 = \square$. ○ Show students three shapes one that is a triangle and two that look similar to triangles and ask, “Which figure is a triangle? How do you know that this it is a triangle?” • Exit slips <ul style="list-style-type: none"> ○ Show - $12 + 5 = \underline{\quad}$ could be expressed as $5 + \underline{\quad} = 12$. • Game record sheets • Student self-assessment • Writing prompts <ul style="list-style-type: none"> ○ Ask students to write and draw pictures of an example of adding and subtracting. • Math journals/Interactive Student Notebooks • Record sheets • Teacher observation • Beginning, Middle, End-of-Year assessments • Progress check written assessment • Class checklists <p>Interdisciplinary Connections</p> <ul style="list-style-type: none"> • Create a book based on shape characters (such as <i>The Greddy Triangle</i> by Marilyn Burns) • Study different artists to compare how they use shapes in their design <p>Technology Integration</p> <ul style="list-style-type: none"> • Everyday Math games • http://www.schooltube.com/video/8d5524f67be2b5611701/The-Greedy-Triangle • Shape Sudoku -
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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 $6 + 6 + 1 = 12 + 1 = 13$).

D. *Work with addition and subtraction equations.*

1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are*

<http://www.thekidzpage.com/freekidsgames/games/sudoku/4x4/sudoku-01.html>

Media Literacy Integration

- Look through magazines and catalogs to indentify 2D and 3 D shapes
- Evaluate kid-friendly websites to determine how shapes create an appealing design

Global Perspectives

- Learn how to say “one hundred” in multiple languages to celebrate 100th day
- Research global events that happened 100 years ago

21st Century Skills:

Critical Thinking and Problem Solving

Communication and Collaboration

Information Literacy

Media Literacy

Life and Career Skills

21st Century Themes (as applies to content area):

Financial, Economic, Business, and Entrepreneurial Literacy

Civic Literacy

<p><i>false? $6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.$</i></p> <p>1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers</p>	<p>Health Literacy</p>
<p>Number and Operations in Base Ten 1.NBT</p> <p><i>F. Understand Place Value</i></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> <ul style="list-style-type: none"> a. 10 can be thought of as a bundle of ten ones — called a “ten.” 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).

Measurement and Data 1.MD

*H. Measure lengths indirectly
and by iterating length units.*

1.MD.1 Order three objects
by length; compare
the lengths of two
objects indirectly by
using a third object.

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.

I. Tell and write time.

1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.

J. Represent and Interpret Data

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.

Geometry 1.G

K. Reason with shapes and their attributes.

1.G.1 Distinguish between defining

<p>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. (Students do not need to learn formal names such as “right rectangular</p>	
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prism.”)	
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Unit Description: Marking Period 4

Standard Operations and Algebraic Thinking 1.OA Number and Operations in Base Ten 1.NBT Measurement and Data 1.MD Geometry 1.G	
<p>Big Ideas: <i>Course Objectives / Content Statement(s)</i></p> <p>Operations and Algebraic Thinking 1.OA</p> <p>A. <i>Represent and solve problems involving addition and subtraction</i></p> <p>B. <i>Understand and apply properties of operations and the relationship between addition and subtraction.</i></p> <p>C. <i>Add and subtract within 20.</i></p> <p>D. <i>Work with addition and subtraction equations</i></p> <p>Number and Operations in Base Ten 1.NBT</p> <p>E. <i>Extend the counting sequence</i></p> <p>F. <i>Understand Place Value</i></p> <p>G. <i>Use place value understanding and properties of operations to add and subtract.</i></p> <p>Measurement and Data 1.MD</p> <p>H. <i>Measure lengths indirectly and by iterating length units.</i></p> <p>I. <i>Tell and write time.</i></p> <p>J. <i>Represent and Interpret Data</i></p> <p>Geometry 1.G</p> <p>K. <i>Reason with shapes and their attributes.</i></p>	
Essential Questions <i>What provocative questions will foster inquiry, understanding, and transfer of learning?</i>	Enduring Understandings <i>What will students understand about the big ideas?</i>
<ul style="list-style-type: none"> • Why do I need mathematical operations? 	<p>Students will understand that...</p> <ul style="list-style-type: none"> • Operations create relationships between numbers. • Number sense develops through experience.

<ul style="list-style-type: none"> • How do mathematical operations relate to each other? • What kinds of experiences help develop number sense? • How many different ways can a whole be divided? 	<ul style="list-style-type: none"> • A whole can be divided into equal parts.
<p>Areas of Focus: Proficiencies (CCSS)</p>	<p>Examples, Outcomes, Assessments</p>
<p>Students will:</p>	<p>Instructional Strategies</p> <ul style="list-style-type: none"> • Recognize coins and dollars • Extend place value concepts to 100 • Solve addition and subtraction story problems • Divide regions into equal parts • Add and subtract tens • Add and subtract two-digit numbers • Tell time to the hour and half hour • Name polygons and 3D shapes <p>Sample Assessments:</p> <ul style="list-style-type: none"> • Student work- <ul style="list-style-type: none"> ○ Use base 10 blocks to identify numbers and their place value. • Exit slips <ul style="list-style-type: none"> ○ Fill in a fact triangle. Identify the fact family. ○ Draw the clock hands based on a digital time. • Game record sheets
<p>Operations and Algebraic Thinking 1.OA</p> <p><i>A. Represent and solve problems involving addition and subtraction.</i></p> <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</p>	

<p>using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</p> <p>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.</p> <p>B. <i>Understand and apply properties of operations and the relationship between addition and subtraction.</i></p> <p>1.OA.3 Apply properties of operations as strategies to add and subtract. (Students need</p>	<ul style="list-style-type: none"> • Student self-assessment • Writing prompts <ul style="list-style-type: none"> ○ If we cut a pizza into four slices (fourths), do you think the slices would be the same size, larger, or smaller as the slices on this pizza? ○ 4 people share 12 cookies. How many cookies does each person get? How can you be sure? • Math journals/Interactive Student Notebooks • Record sheets • Teacher observation <ul style="list-style-type: none"> ○ Add $4 + 7 + 6$. Tell which numbers you added first and why. • Beginning, Middle, End-of-Year assessments • Progress check written assessment • Class checklists <p>Interdisciplinary Connections</p> <ul style="list-style-type: none"> • Write and solve number problems based on the cost of items that might be sold at a school store. • Movement – Have the class stand in line and move to divide into halves and quarters. Do the same in smaller groups. • Read aloud books about money: <u>One Cent, Two Cents, Old Cent, New Cent</u> by Dr. Seuss; <u>The Berenstain Bears’ Trouble with Money</u> by Stan and Jan Berenstain; <u>All About Money</u> (Rookie Read-About Math) by Erin Roberson <p>Technology Integration</p> <ul style="list-style-type: none"> • http://nlvm.usu.edu/en/nav/category_g_1_t_3.html • http://nlvm.usu.edu/en/nav/category_g_1_t_4.html • http://nlvm.usu.edu/en/nav/category_g_1_t_1.html <p>Media Literacy Integration</p>
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<p>not use formal terms for these properties.) <i>Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known.</i> <i>(Commutative property of addition.)</i> <i>To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$.</i> <i>(Associative property of addition.)</i></p> <p>1.OA.4 Understand subtraction as an unknown-addend problem.</p> <p>C. <i>Add and subtract within 20.</i></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 Add and subtract within 20, demonstrating fluency</p>	<p>Global Perspectives</p> <p>21st Century Skills:</p> <ul style="list-style-type: none"> Creativity and Innovation Critical Thinking and Problem Solving Communication and Collaboration Information Literacy Media Literacy Life and Career Skills <p>21st Century Themes (as applies to content area):</p> <ul style="list-style-type: none"> Financial, Economic, Business, and Entrepreneurial Literacy Civic Literacy Health Literacy
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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 $6 + 6 + 1 = 12 + 1 = 13$).C.

Add and subtract within 20.

1.OA.5 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 (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 $6 + 6 + 1 = 12 + 1 = 13$).

D. *Work with addition and subtraction equations.*

<p>1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.</p> <p>1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.</p>	
<p>Number and Operations in Base Ten 1.NBT</p> <p><i>E. Extend the counting sequence</i></p> <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.</p> <p><i>F. Understand Place Value</i></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:

- a. 10 can be thought of as a bundle of ten ones — called a “ten.”
- 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).

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 $<$.

G. Use *place value understanding and properties of operations to add and subtract.*

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-

<p>digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</p> <p>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.</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</p>	
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and subtraction;
relate the strategy
to a written
method and
explain the
reasoning used.

Measurement and Data 1.MD

*H. Measure lengths indirectly
and by iterating length units.*

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*

<p><i>units with no gaps or overlaps.</i></p> <p><i>I. Tell and write time.</i></p> <p>1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.</p> <p><i>J. Represent and Interpret Data</i></p> <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>	
<p>Geometry 1.G</p> <p><i>K. Reason with shapes and their attributes.</i></p> <p>1.G.1 Distinguish between defining attributes (e.g.,</p>	

<p>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.</p>	
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<p>(Students do not need to learn formal names such as “right rectangular prism.”)</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.</p> <p>Understand for these examples that decomposing into more equal shares creates smaller shares.</p>	
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Operations and Algebraic Thinking 1.OA
Number and Operations in Base Ten 1.NBT
Measurement and Data 1.MD
Geometry 1.G

Big Ideas: *Course Objectives / Content Statement(s)*

Essential Questions <i>What provocative questions will foster inquiry, understanding, and transfer of learning?</i>	Enduring Understandings <i>What will students understand about the big ideas?</i>
•	Students will understand that... •
Areas of Focus: Proficiencies (CCSS)	Examples, Outcomes, Assessments
<p>Students will:</p> <p>Operations and Algebraic Thinking 1.OA</p> <p>1. <i>Represent and solve problems involving addition and subtraction.</i></p> <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.</p> <p>1.OA.2 <i>Understand and apply properties of operations and the relationship between addition and subtraction.</i></p> <p>1.OA.3 Apply properties of operations as strategies to add and subtract. (Students need not use formal terms for these properties.) <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></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.5 <i>Add and subtract within 20.</i></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 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 $6 + 6 + 1 = 12 + 1 = 13$).</p>	<p>Instructional Strategies:</p> <p>Sample Assessments</p> <p>Interdisciplinary Connections</p> <ul style="list-style-type: none"> • Interactive Student Notebooks • Reading/writing word problems • Math literature list (see attached) <p>Technology Integration</p> <p>21st Century Skills:</p> <p>Creativity and Innovation</p> <p>Critical Thinking and Problem Solving</p> <p>Communication and Collaboration</p> <p>Information Literacy</p>

<p>d. <i>Work with addition and subtraction equations.</i></p> <p>.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></p> <p>.OA.8 Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = \square - 3$, $6 + 6 = \square$.</i></p>	<p>Media Literacy</p> <p>Life and Career Skills</p> <ul style="list-style-type: none"> How do your parents use these skills? <p>21st Century Themes (as applies to content area):</p> <p>Financial, Economic, Business, and Entrepreneurial Literacy</p> <ul style="list-style-type: none"> How do you save money? How can knowing about money help you as a 1st grader? <p>Civic Literacy</p> <p>Health Literacy</p>
<p>Number and Operations in Base Ten 1.NBT</p> <p>i. <i>Extend the counting sequence</i></p> <p>.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.</p> <p>j. <i>Understand Place Value</i></p> <p>.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> <ol style="list-style-type: none"> 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). <p>.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 $<$.</p> <p>k. <i>Use place value understanding and properties of operations to add and subtract.</i></p> <p>.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.</p>	
<p>Measurement and Data 1.MD</p>	

<p>I. <i>Measure lengths indirectly and by iterating length units.</i></p> <p>.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.</p> <p>.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> <i>Tell and write time.</i></p> <p>.MD.3 Tell and write time in hours and half-hours using analog and digital clocks. <i>Represent and Interpret Data</i></p> <p>.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>	
<p>Geometry 1.G</p> <p>I. <i>Reason with shapes and their attributes.</i></p> <p>.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>.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. (Students do not need to learn formal names such as “right rectangular prism.”)</p>	