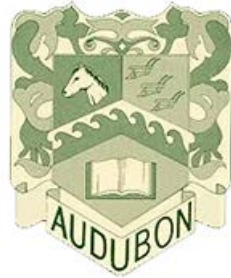


# Audubon Public Schools



Grade 1: Math  
Curriculum Guide

Developed by:  
Ms. Shelly Chester  
Ms. Blake Zetusky

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## **Course Description**

### **Grade 1: Math**

In first grade, students refine their understanding of the base ten system and use place value concepts of ones, tens, and hundreds to understand number relationships. They become fluent in writing and renaming numbers in a variety of ways. Students focus on what it means to add and subtract as they become fluent with single-digit addition and subtraction facts and develop addition and subtraction procedures for two-digit numbers. Students make sense of the procedures by building on what they know about place value and number relationships and putting together and taking apart sets of objects. Students will tell time on different types of clocks, as well as identify coins and determine the value of a collection of coins. Students make predictions and answer questions about data as they apply their growing understanding of numbers and the operations of addition and subtraction. Students understand the process of measuring length and progress from measuring with objects such as toothpicks and craft sticks to the more practical skill of measuring length with standard units and tools.

## Overview / Progressions

Overview	Standards for Mathematical Content	Unit Focus	Standards for Mathematical Practice
<p style="text-align: center;"><b>Unit 1</b></p> <ul style="list-style-type: none"> <li>● Addition and Subtraction Concepts</li> <li>● Measurement and Time</li> <li>● Money</li> </ul>	<ul style="list-style-type: none"> <li>● 1.OA.A.1*</li> <li>● 1.OA.B.3*</li> <li>● 1.OA.B.4</li> <li>● 1.OA.C.5</li> <li>● 1.OA.D.7*</li> <li>● 1.OA.D.8*</li> <li>● 1.NBT.A.1*</li> <li>● 1.MD.A.1</li> <li>● 1.MD.A.2</li> <li>● 1.MD.B.3</li> </ul>	<ul style="list-style-type: none"> <li>● Represent and solve problems involving addition and subtraction</li> <li>● Understand and apply properties of operations and the relationship between addition and subtraction</li> <li>● Add and subtract within 10</li> <li>● Work with addition and subtraction equations</li> <li>● Extend the counting sequence</li> <li>● Count by 5 and 1</li> <li>● Identify pennies and nickels</li> <li>● Tell and write time</li> <li>● Measure lengths indirectly by iterating length units</li> </ul>	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments &amp; critique the reasoning. of others.</p> <p>MP.4 Model with mathematics.</p>

<p style="text-align: center;"><b>Unit 2</b></p> <ul style="list-style-type: none"> <li>● Addition Strategies to 20</li> <li>● Subtraction Strategies to 20</li> <li>● Place Value</li> <li>● 2 Digit Addition and Subtraction</li> <li>● Money</li> </ul>	<ul style="list-style-type: none"> <li>● 1.OA.A.1*</li> <li>● 1.OA.D.7*</li> <li>● 1.OA.D.8</li> <li>● 1.OA.B.3*</li> <li>● 1.OA.C.6*</li> <li>● 1.OA.A.2</li> <li>● 1.NBT.B.2a-b</li> <li>● 1.NBT.B.3</li> <li>● 1.NBT.A.1*</li> <li>● 1.NBT.B.2c</li> <li>● 1.NBT.C.4*</li> <li>● 1.NBT.C.5</li> <li>● 1.NBT.C.6</li> </ul>	<ul style="list-style-type: none"> <li>● Represent and solve problems involving addition and subtraction</li> <li>● Work with addition and subtraction equations</li> <li>● Understand and apply properties of operations and the relationship between addition and subtraction</li> <li>● Add and subtract within 20</li> <li>● Understand place value</li> <li>● Extend the counting sequence</li> <li>● Use place value understanding and properties of operations to add and subtract</li> </ul>	<p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>
<p style="text-align: center;"><b>Unit 3</b></p> <ul style="list-style-type: none"> <li>● 2 Digit Addition and Subtraction</li> <li>● Data and Graphs</li> </ul>	<ul style="list-style-type: none"> <li>● 1.NBT.B.2c</li> <li>● 1.NBT.C.4*</li> <li>● 1.NBT.C.5</li> <li>● 1.NBT.C.6</li> </ul>	<ul style="list-style-type: none"> <li>● Reason with shapes and their attributes</li> </ul>	

<ul style="list-style-type: none"> <li>● 2D Shapes</li> <li>● 3D Shapes</li> <li>● Equal Shares</li> <li>● Money</li> </ul>	<ul style="list-style-type: none"> <li>● 1.OA.C.6*</li> <li>● 1.G.A.1</li> <li>● 1.G.A.2</li> <li>● 1.G.A.3</li> <li>● 1.OA.A.1*</li> <li>● 1.NBT.A.1*</li> <li>● 1.MD.C.4</li> </ul>	<ul style="list-style-type: none"> <li>● Represent and solve problems involving addition and subtraction.</li> <li>● Add and subtract within 20</li> <li>● Extend the counting sequence</li> <li>● Use place value understanding and properties of operations to add and subtract</li> <li>● Represent and interpret data</li> </ul>	
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<b>Subject: Math</b>	<b>Grade: 1</b>	<b>Unit: 1</b> <ul style="list-style-type: none"> <li>● <b>Addition and subtraction concepts</b></li> <li>● <b>Measurement</b></li> <li>● <b>Time</b></li> <li>● <b>Money</b></li> </ul>	<b>1<sup>st</sup> Trimester</b> (See calendar for specific months)
<b>Content Standards</b>	<b>Suggested Standards for Mathematical Practice</b>	<b>Critical Knowledge &amp; Skills</b>	
1.OA.A.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, <i>e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</i> *(benchmarked)	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Symbol (unknowns) can be in any position.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● add, using objects and drawings, to solve word problems involving situations of adding to and putting together.</li> <li>· subtract, using objects and drawings, to solve world problems involving situations of taking from and taking apart.</li> </ul> <p>Learning Goal 1: Use addition and subtraction <u>within 10</u> to solve problems, including word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.</p>	

<p>1.OA.C.5. Relate counting to addition and subtraction (e.g., by counting 2 to add 2).</p>	<p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Counting can be used to add and subtract.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● count on to add.</li> <li>● count back to subtract.</li> </ul> <p>Learning Goal 4: Count on to add and count backwards to subtract to solve addition and subtraction problems <u>within 10</u>.</p>
<p>1.NBT.A.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 *(benchmarked)</p>	<p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Number names and the count sequence up to 100</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● count orally by ones <u>up to 100</u>.</li> <li>● count up to 100 beginning at any number less than 100.</li> <li>● read numerals up to 100.</li> <li>● write numerals up to 100.</li> <li>● represent a number of objects up to 100 with a written number.</li> </ul> <p>Learning Goal 7: Count to 100 orally, read and write numerals, and write numerals to represent the number of objects (<u>up to 100</u>).</p>
<p>1.MD.A.1. Order three objects by length; compare the lengths of two</p>	<p>MP.6 Attend to precision. MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Objects can be compared and ordered based on length.</li> </ul> <p>Students will be able to:</p>



<p>objects indirectly by using a third object</p>		<ul style="list-style-type: none"> <li>● compare the length of two objects.</li> <li>● compare the length of two objects by using a third object as a measuring tool.</li> <li>● order three objects by length.</li> </ul> <p>Learning Goal 6: Order three objects by length and compare the lengths of two objects by using the third object (e.g., if the crayon is shorter than the marker and the marker is shorter than the pencil then the crayon is shorter than the pencil).</p>
<p>1.MD.A.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><i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i></p>	<p>MP.6 Attend to precision. MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● The length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.</li> </ul> <p>Students will be able to:</p> <ul style="list-style-type: none"> <li>● lay multiple copies of a shorter object (the length unit) end to end.</li> <li>● use a shorter object to express the length of a longer object.</li> </ul> <p>Learning Goal 7: Order three objects by length and compare the lengths of two objects by using the third object (e.g., if the crayon is shorter than the marker and the marker is shorter than the pencil then the crayon is shorter than the pencil).</p>

<p>1.MD.B.3. Tell and write time in hours and half-hours using analog and digital clocks</p>	<p>MP.6 Attend to precision. MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>• Time is represented on analog and on digital clocks.</li> <li>• Analog clocks have <i>hands</i> that indicate the time in hours and minutes.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>• tell and write time in hours using analog and digital clocks.</li> <li>• tell and write time in half-hours using analog and digital clocks.</li> <li>• use the term <i>o'clock</i> in reporting time to the hour.</li> </ul> <p>Learning Goal 8: Tell and write time to the half-hour using the term <i>o'clock</i> and using digital notation (include both analog and digital clocks).</p>
<p>1.OA.C.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., <math>8 + 6 = 8 + 2 + 4 = 10 + 4 = 14</math>); decomposing a number leading to a ten (e.g., <math>13 - 4 = 13 - 3 - 1 = 10 - 1 = 9</math>); using the relationship between addition and subtraction (e.g., knowing that <math>8 + 4 = 12</math>, one knows <math>12 - 8 = 4</math>); and creating equivalent but easier or known sums (e.g., adding <math>6 + 7</math> by</p>	<p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>• Different strategies can be used to add and subtract .</li> </ul> <p>Students will be able to:</p> <ul style="list-style-type: none"> <li>• add and subtract <u>within 20</u> using the following strategies:</li> <li>• counting on;</li> <li>• making ten;</li> <li>• composing numbers;</li> <li>• decomposing numbers;</li> <li>• relationship between addition and subtraction, and</li> <li>• creating equivalent but easier or known sums.</li> <li>• fluently add or subtract whole numbers <u>within 20</u>.</li> </ul> <p>Learning Goal 9: Add and subtract whole numbers <u>within 20</u> using various strategies: counting on, making ten, composing, decomposing, relationship between addition and subtraction, creating equivalent but easier or known</p>

<p>creating the known equivalent <math>6 + 6 + 1 = 12 + 1 = 13</math>).</p> <p>*(benchmarked)</p>		<p>sums, etc</p>
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<p><b>Formative Assessments</b></p>	<p><b>Summative Assessments</b></p>
<ul style="list-style-type: none"> <li>● Observation in whole group</li> <li>● Slate work</li> <li>● Observations in math groups</li> <li>● Math Notebooks/ Problem solving</li> <li>● Daily workbook practice</li> <li>● Plickers</li> </ul>	<ul style="list-style-type: none"> <li>● Check My Progress Assessments</li> <li>● Unit Tests</li> <li>● Vocabulary assessments</li> <li>● End of trimester assessments</li> <li>● Fact assessments</li> <li>● MAP Testing</li> </ul>
<p><b>Suggested Primary Resources</b></p>	<p><b>Suggested Supplemental Resources</b></p>
<p>My Math- Ch 1, 2, 8</p>	<ul style="list-style-type: none"> <li>● Number sense skill builders- RekenReks; Using number grid; math fact cards, math talks, dot cards, ten frames</li> <li>● Games for addition/ subtraction- Top It; Addition Top It; Ladybug Doubles Game; Rolling to 100; Around the World ; Dominoes; Dice; Number Line;</li> <li>● Part, part, total wipe off mats; number bonds wipe off mat;</li> <li>● Anchor charts- making 10; doubles facts</li> </ul>

	<ul style="list-style-type: none"> <li>● Technology games- xtramath.org; IXL; Give a Dog a Bone, Fun 4 the Brain</li> <li>● Ipad and Google Tablet apps - Math Slicer, Mummy Math, Squeebles, Sushi Monster, Math Blaster, Math Zombies, Math Museum, Amazing Coin, My Piggy Bank, Math Run, Goldfish Math</li> <li>● STEAM- Building with cubes, cups and popsicle sticks</li> <li>● Money games- Coin Exchange Game (Everyday Math); Coin Top It, coin puzzles; coin matching; money grab</li> <li>● PMI- Money resources as needed</li> <li>● Problem solving questions</li> <li>● Math word wall</li> </ul>
<p><b>Cross-Curricular Connections &amp; 21<sup>st</sup> Century Skills</b></p>	
<ul style="list-style-type: none"> <li>● Math read alouds- <u>Super Sandcastle Saturday- Measuring, 100 Days of Cool- Numbers 1-100, Mall Mania- Addition Strategies, Elevator Magic- Subtracting</u> By: Stuart J. Murphy</li> <li>● YouTube videos- Doubles; When you subtract with a pirate; songs by Jack Hartman, Count to 20</li> <li>● Writing in math notebooks to explain thinking (in response to open ended problems )</li> <li>● STEAM activities</li> <li>● Adding up word wall words</li> </ul>	
<p><b>Essential Questions</b></p>	<p><b>Enduring Understanding</b></p>
<ul style="list-style-type: none"> <li>● How can I add or subtract up to 20 to solve problems?</li> <li>● How can I solve word problems?</li> <li>● How can I solve word problems that call for addition of 3 whole numbers with a sum of 20 or less?</li> <li>● How is subtraction connected to addition?</li> <li>● What is an equal sign?</li> <li>● How can I iterate to measure?</li> </ul>	<ul style="list-style-type: none"> <li>● I can add and subtract up to 20 to solve problems by using objects, drawings and equations.</li> <li>● I can solve word problems through addition and subtraction strategies such as: adding to, putting together, taking from and taking apart.</li> <li>● I can use the commutative and associative properties to subtract. I understand that subtraction is involves an unknown addend..</li> </ul>

<ul style="list-style-type: none"> <li>● How can I order three objects by length?</li> <li>● How can you use smaller same sized units to measure other objects?</li> <li>● What is the most common way to tell time?</li> <li>● How can I organize data?</li> </ul>	<ul style="list-style-type: none"> <li>● I can solve addition word problems with 3 whole numbers by using objects, drawing and equations.</li> <li>● I know the equal sign means “the same as”. I understand the terms “total,same as, sum and difference” are words that can be translated into equations..The equal sign helps to determine if the equation is true or false.</li> <li>● I need to understand and know the value of nickels and pennies in order to identify and count money</li> <li>● I can iterate to measure by using a shorter object.</li> <li>● I can order three objects by length by aligning them all at the same starting point and put in order of shortest to longest or longest to shortest.</li> <li>● I can use smaller same sized objects (unifix cubes) to find the length of other objects.</li> <li>● I can tell time to the hour and half hour..</li> <li>● I can organize data into categories. These categories can be used to ask and answer questions and solve problems.</li> </ul>
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<b>Differentiation</b>		
<b>504</b>	<ul style="list-style-type: none"> <li>● preferential seating</li> <li>● extended time on tests and assignments</li> <li>● reduced homework or classwork</li> <li>● verbal, visual, or technology aids</li> </ul>	<ul style="list-style-type: none"> <li>● modified textbooks or audio-video materials</li> <li>● behavior management support</li> <li>● adjusted class schedules or grading</li> <li>● verbal testing</li> </ul>
<b>Enrichment</b>	<ul style="list-style-type: none"> <li>● Utilize collaborative media tools</li> <li>● Provide differentiated feedback</li> <li>● Opportunities for reflection</li> </ul>	<ul style="list-style-type: none"> <li>● Encourage student voice and input</li> <li>● Model close reading</li> <li>● Distinguish long term and short term goals</li> </ul>

IEP	<ul style="list-style-type: none"> <li>● Utilize “skeleton notes” where some required information is already filled in for the student</li> <li>● Provide access to a variety of tools for responses</li> <li>● Provide opportunities to build familiarity and to practice with multiple media tools</li> <li>● Graphic organizers</li> </ul>	<ul style="list-style-type: none"> <li>● Leveled text and activities that adapt as students build skills</li> <li>● Provide multiple means of action and expression</li> <li>● Consider learning styles and interests</li> <li>● Provide differentiated mentors</li> </ul>
ELLs	<ul style="list-style-type: none"> <li>● Pre-teach new vocabulary and meaning of symbols</li> <li>● Embed glossaries or definitions</li> <li>● Provide translations</li> <li>● Connect new vocabulary to background knowledge</li> </ul>	<ul style="list-style-type: none"> <li>● Provide flash cards</li> <li>● Incorporate as many learning senses as possible</li> <li>● Portray structure, relationships, and associations through concept webs</li> <li>● Graphic organizers</li> </ul>
At-risk	<ul style="list-style-type: none"> <li>● Purposeful seating</li> <li>● Counselor involvement</li> <li>● Parent involvement</li> </ul>	<ul style="list-style-type: none"> <li>● Contracts</li> <li>● Alternate assessments</li> <li>● Hands-on learning</li> </ul>
<b>21st Century Skills</b>		
<ul style="list-style-type: none"> <li>● Creativity</li> <li>● Innovation</li> <li>● Critical Thinking</li> </ul>	<ul style="list-style-type: none"> <li>● Problem Solving</li> <li>● Communication</li> <li>● Collaboration</li> </ul>	
<b>Integrating Technology</b>		

<ul style="list-style-type: none"> <li>● Chromebooks</li> <li>● Internet research</li> <li>● Online programs</li> </ul>	<ul style="list-style-type: none"> <li>● Virtual collaboration and projects</li> <li>● Presentations using presentation hardware and software</li> </ul>
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<b>Subject: Math</b>	<b>Grade: 1</b>	<b>Unit 2:</b> <ul style="list-style-type: none"> <li>● Addition Strategies to 20</li> <li>● Subtraction Strategies to 20</li> <li>● Place Value</li> <li>● 2 Digit Addition and Subtraction</li> <li>● Money</li> </ul>	<b>2nd Trimester (See calendar for specific months)</b>
<b>Content Standards</b>	<b>Suggested Standards for Mathematical Practice</b>	<b>Critical Knowledge &amp; Skills</b>	
1.OA.A.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, <i>e.g.</i> , by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. *(benchmarked)	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Symbol (unknowns) can be in any position.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● add, using objects and drawings, to solve word problems involving situations of adding to and putting together.</li> <li>● subtract, using objects and drawings, to solve world problems involving situations of taking from and taking apart.</li> </ul> <p>Learning Goal 1: Use addition and subtraction <u>within 10</u> to solve problems, including word problems involving situations of adding to,</p>	

	<p>MP.5 Use appropriate tools strategically.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>	<p>taking from, putting together, taking apart, and comparing with unknowns in all positions.</p>
<p>1.OA.B.3. Apply properties of operations as strategies to add and subtract. <i>Examples: If <math>8 + 3 = 11</math> is known, then <math>3 + 8 = 11</math> is also known. (Commutative property of addition.) To add <math>2 + 6 + 4</math>, the second two numbers can be added to make a ten, so <math>2 + 6 + 4 = 2 + 10 = 12</math>. (Associative property of addition.)</i></p> <p><i>(Students need not use formal terms for these properties)</i></p> <p>*(benchmarked)</p>	<p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>Knowing <math>4 + 3</math> means that <math>3 + 4</math> is also known (commutative property/fact families).</li> <li>When adding, the numbers need not be added in any particular order.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>add and subtract, within 10, using properties of operations as strategies (commutative property).</li> </ul> <p>Learning Goal 2: Apply properties of operations (commutative property) as strategies to add or subtract <u>within 10</u>.</p>
<p>1.OA.B.4. Understand subtraction as an unknown-addend problem.</p> <p><i>For example, subtract <math>10 - 8</math> by finding the number that makes 10 when added to 8</i></p>	<p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>Subtraction can be represented as an unknown-addend problem.</li> <li>Finding 9 minus 3 means solving <math>? + 3 = 9</math> or <math>3 + ? = 9</math> (fact families).</li> </ul> <p>Students are able to:</p>



	regularity in repeated reasoning.	<ul style="list-style-type: none"> <li>represent subtraction as an unknown addend problem.</li> <li>solve subtraction problems, <u>within 10</u>, using unknown addends.</li> </ul> <p>Learning Goal 3: Solve subtraction problems, <u>within 10</u>, by representing subtraction as an unknown added problem and finding the unknown addend</p>
<p>1.OA.D.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.</p> <p><i>For example, which of the following equations are true and which are false? <math>6 = 6</math>, <math>7 = 8 - 1</math>, <math>5 + 2 = 2 + 5</math>, <math>4 + 1 = 5 + 2</math>.</i></p>	<p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>The meaning of the equal sign</li> <li>True and false statements</li> <li>The expression can be on the right side of the equal sign (e.g. <math>7 = 8 - 1</math>).</li> <li>Both the left and right side of the equal sign may contain expressions (e.g. <math>5 + 2 = 1 + 4</math>).</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>determine if addition equations are true or false.</li> <li>determine if subtraction equations are true or false.</li> </ul> <p>Learning Goal 5: Determine if addition and subtraction equations, <u>within 10</u>, are true or false.</p>
<p>1.OA.D.8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.</p> <p><i>For example, determine the unknown number that makes the</i></p>	<p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p>	<p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>determine the unknown number that makes an equation true.</li> </ul>

<p><i>equation true in each of the equations <math>8 + ? = 11</math>, <math>5 = \_ - 3</math>, <math>6 + 6 = \_</math>. *(benchmarked)</i></p>		<ul style="list-style-type: none"> <li>● solve addition or subtraction equations by finding the missing whole number.</li> </ul> <p>Learning Goal 6: Solve addition and subtraction equations, <u>within 10</u>, by finding the missing whole number in any position.</p>
<p>1.OA.A.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, <i>e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem</i></p>	<p>MP.1 Make sense of problems and persevere in solving them.  MP.2 Reason abstractly and quantitatively.  MP.3 Construct viable arguments and critique the reasoning of others.  MP.4 Model with mathematics.  MP.5 Use appropriate tools strategically.  MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Symbols can be used to represent unknown numbers.</li> <li>● The symbol (unknowns) can be in any position.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● use <i>objects and drawings</i> to represent word problems that call for less than or equal to 20.</li> </ul> <p>Learning Goal 6: Solve addition word problems with three whole numbers with sums less than or equal to 20.</p>
<p>1.NBT.B.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:</p> <p>1.NBT.B.2. a. 10 can be thought of as a bundle of ten ones — called a "ten."</p>	<p>MP.2 Reason abstractly and quantitatively.  MP.7 Look for and make use of structure.  MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Two digits represent amounts of tens and ones.</li> <li>● 10 can be thought of as a bundle of ten ones — called a <i>ten</i>.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● compose numbers to 20.</li> <li>● decompose numbers to 20.</li> </ul>

<p>1.NBT.B.2. b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</p>		<ul style="list-style-type: none"> <li>● identify the value of the number in the tens or ones place.</li> </ul> <p>Learning Goal 8: Compose and decompose numbers <u>to 20</u> to identify the value of the number in the tens and ones place.</p>
<p>1.NBT.B.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols <math>&gt;</math>, <math>=</math>, and <math>&lt;</math>.</p>	<p>MP.2 Reason abstractly and quantitatively.  MP.6 Attend to precision.  MP.7 Look for and make use of structure.  MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Use place value understanding to compare two digit numbers.</li> <li>● Comparing numbers using symbols.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● use the meaning of tens and ones digits to compare 2 two-digit numbers using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols.</li> </ul> <p>Learning Goal 9: Use the meaning of tens and ones digits to record comparisons of 2 two-digit numbers using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols.</p>
<p>1.NBT.C.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 (e.g. base ten blocks) or drawings and strategies based on place value, properties of</p>	<p>MP.2 Reason abstractly and quantitatively.  MP.3 Construct viable arguments and critique the reasoning of others.  MP.4 Model with mathematics.  MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● In adding two-digit numbers, add tens with tens and ones with ones.</li> <li>● In adding two-digit numbers, sometimes it is necessary to compose a ten.</li> </ul> <p>Students are able to:</p>

<p>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. *(benchmarked)</p>	<p>MP.8 Look for and express regularity in repeated reasoning.</p>	<ul style="list-style-type: none"> <li>● use concrete models and drawings with a strategy based on place value to add a two-digit number and a one-digit number.</li> <li>● use concrete models and drawings with properties of operations to add a two-digit number and a one-digit number.</li> <li>● use concrete models and drawings with a strategy based on place value to add a two-digit number and a multiple of 10.</li> <li>● use concrete models and drawings with properties of operations to add a two-digit number and a multiple of 10.</li> <li>● explain or show how the model relates to the strategy.</li> </ul> <p>Learning Goal 2: Add a 2-digit and a 1-digit number using concrete models and drawings with a place value strategy or properties of operations; explain or show how the model relates to the strategy (sums within 100).</p>
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<p>.NBT.C.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>MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.7 Look for and make use of structure</p>	<p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● given a two-digit number, find 10 more than the number without counting.</li> <li>● given a two-digit number, find 10 less than the number without counting.</li> <li>● explain, given a two-digit number, how to find 10 more or ten less than the number without counting.</li> </ul>
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		Learning Goal 4: Explain, given a two-digit number, how to find 10 more or ten less than the number without having to count
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1.NBT.C.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>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically</p> <p>MP.7 Look for and make use of structure.</p>	<p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● use concrete models and drawings with a strategy based on place value to subtract a multiple of 10 from a multiple of 10 (both within the range 10-90).</li> <li>● use concrete models and drawings with properties of operations to subtract a multiple of 10 from a multiple of 10 (both within the range 10-90).</li> <li>● explain or show how the model relates to the strategy.</li> </ul> <p>Learning Goal 5: Subtract a multiple of 10 from a multiple of 10 (both within the range 10-90) using concrete models and drawings with a place value strategy or properties of operations. Explain or show how the model relates to the strategy (sums within 100)</p>
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<b>Formative Assessments</b>	<b>Summative Assessments</b>
<ul style="list-style-type: none"> <li>● Observation in whole group</li> <li>● Slate work</li> <li>● Observations in math groups</li> <li>● Math Notebooks/ problem solving</li> <li>● Daily workbook practice</li> <li>● Plickers</li> </ul>	<ul style="list-style-type: none"> <li>● Check My Progress Assessment</li> <li>● Unit Tests</li> <li>● Vocabulary assessments</li> <li>● End of trimester assessments</li> <li>● Fact assessments</li> <li>● MAP Testing</li> </ul>

<b>Suggested Primary Resources</b>	<b>Suggested Supplemental Resources</b>
My Math Chapters 3,4,5,6	<ul style="list-style-type: none"> <li>● Games- Place value top-it; Place Value- Base Ten Exchange; fact practice games</li> <li>● Online games- Sheppard Software; xtramath.org; IXL. Starfall, ABCya</li> <li>● Youtube- Jack Hartman songs</li> <li>● Ipad and Google Tablet apps - Missing Numbers, Telling Time, TT Clock, Base Ten, Slate Math</li> <li>● STEAM- Build using base ten blocks- estimate and count total value of blocks;</li> <li>● Manipulatives- Base Ten Blocks/ place value mat; individual or class number grids to 100</li> <li>● 100th day of school activities/ STEAM- hopping, jumping, etc in 100 seconds, making a pyramid with 100 cups, fruit loop necklaces by tens to 100</li> <li>● Problem solving questions by teachers pay teachers</li> </ul>
<b>Cross-Curricular Connections &amp; 21<sup>st</sup> Century Skills</b>	
<ul style="list-style-type: none"> <li>● Math read alouds- <u>Leaping Lizards- Counting by 5's and 10's</u> by: Stuart J. Murphy , <u>If You Made a Million</u> by: David M. Schwartz, <u>Candy Counting</u> by: Lisa McCourt, <u>A Place for Zero</u></li> <li>● YouTube videos- Doubles; When you subtract with a pirate; When you add with a pirate</li> <li>● Writing in math notebooks to explain thinking (in response to open ended problems )</li> </ul>	
<b>Essential Questions</b>	<b>Enduring Understanding</b>
<ul style="list-style-type: none"> <li>● What do two digit numbers represent?</li> <li>● What does a bundle 10 represent?</li> <li>● How can I easily add or subtract by 10s within 90?</li> <li>● What do the teen numbers 11-19 represent?</li> <li>● How do we represent the numbers 10, 20, 30, 40, 50, 60, 70, 80 and 90?</li> <li>● What are the ways I can add within 100?</li> <li>● How can I count beyond 120, using tens, within 1000?</li> <li>● How can I read and write numbers to 1000?</li> </ul>	<ul style="list-style-type: none"> <li>● I can show that a two digit number represents <ul style="list-style-type: none"> <li>● a group of tens and some ones.</li> </ul> </li> <li>● I can show that a bundle of ten is a unit of ten (10) ones.</li> <li>● I can use concrete models, or drawing and the following strategies to add within 100: place value, properties of operations and the relationship between adding and subtracting.</li> <li>● I can show that the teen numbers represent 1 group of ten and one, two, three, four, five, six, seven, eight or nine ones.</li> </ul>

<ul style="list-style-type: none"> <li>● How can you compare 2 two-digit numbers?</li> <li>● What is the best way to mentally find 10 more or 10 less than a given 2 digit number?</li> <li>● How can I add or subtract up to 20 to solve problems?</li> <li>● How can I solve word problems?</li> <li>● How can I solve word problems that call for addition of 3 whole numbers with a sum of 20 or less?</li> <li>● How is subtraction connected to addition?</li> <li>● What is an equal sign?</li> </ul>	<ul style="list-style-type: none"> <li>● I can show that the numbers 10,20,30,40,50,60,70,80 and 90 are composed of some groups of “ten” and zero “ones”.</li> <li>● I can add within 100 by adding ones and ones and tens and tens and if necessary, to compose a new ten.</li> <li>● I can recognize skip counting by 10 to count beyond 120 to within 1000.</li> <li>● I can read and write numbers to 1000 by recognizing the digits and their place value.</li> <li>● I can compare 2 two-digit numbers by using the <math>&gt;</math>, <math>=</math>, <math>&lt;</math> symbols. I will know that the digit in the tens place is more important for determining the size and comparison of two-digit numbers.</li> <li>● I can use place value to mentally find 10 more and 10 less than a given two-digit number.</li> <li>● I can add and subtract up to 20 to solve problems by using objects, drawings and equations.</li> <li>● I can solve word problems through addition and subtraction strategies such as: adding to, putting together, taking from and taking apart.</li> <li>● I can use the commutative and associative properties to subtract. I understand that subtraction involves an unknown addend.</li> <li>● I can solve addition word problems with 3 whole numbers by using objects, drawing and equations.</li> <li>● I know the equal sign means “the same as”. I understand the terms “total,same as, sum and difference” are words that can be translated into equations..The equal sign helps to determine if the equation is true or false.</li> </ul>
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**Differentiation**

504	<ul style="list-style-type: none"> <li>● preferential seating</li> <li>● extended time on tests and assignments</li> <li>● reduced homework or classwork</li> <li>● verbal, visual, or technology aids</li> </ul>	<ul style="list-style-type: none"> <li>● modified textbooks or audio-video materials</li> <li>● behavior management support</li> <li>● adjusted class schedules or grading</li> <li>● verbal testing</li> </ul>
Enrichment	<ul style="list-style-type: none"> <li>● Utilize collaborative media tools</li> <li>● Provide differentiated feedback</li> <li>● Opportunities for reflection</li> </ul>	<ul style="list-style-type: none"> <li>● Encourage student voice and input</li> <li>● Model close reading</li> <li>● Distinguish long term and short term goals</li> </ul>
IEP	<ul style="list-style-type: none"> <li>● Utilize “skeleton notes” where some required information is already filled in for the student</li> <li>● Provide access to a variety of tools for responses</li> <li>● Provide opportunities to build familiarity and to practice with multiple media tools</li> <li>● Graphic organizers</li> </ul>	<ul style="list-style-type: none"> <li>● Leveled text and activities that adapt as students build skills</li> <li>● Provide multiple means of action and expression</li> <li>● Consider learning styles and interests</li> <li>● Provide differentiated mentors</li> </ul>
ELLs	<ul style="list-style-type: none"> <li>● Pre-teach new vocabulary and meaning of symbols</li> <li>● Embed glossaries or definitions</li> <li>● Provide translations</li> <li>● Connect new vocabulary to background knowledge</li> </ul>	<ul style="list-style-type: none"> <li>● Provide flash cards</li> <li>● Incorporate as many learning senses as possible</li> <li>● Portray structure, relationships, and associations through concept webs</li> <li>● Graphic organizers</li> </ul>
At-risk	<ul style="list-style-type: none"> <li>● Purposeful seating</li> <li>● Counselor involvement</li> <li>● Parent involvement</li> </ul>	<ul style="list-style-type: none"> <li>● Contracts</li> <li>● Alternate assessments</li> <li>● Hands-on learning</li> </ul>



<b>21st Century Skills</b>	
<ul style="list-style-type: none"> <li>● Creativity</li> <li>● Innovation</li> <li>● Critical Thinking</li> </ul>	<ul style="list-style-type: none"> <li>● Problem Solving</li> <li>● Communication</li> <li>● Collaboration</li> </ul>
<b>Integrating Technology</b>	
<ul style="list-style-type: none"> <li>● Chromebooks</li> <li>● Internet research</li> <li>● Online programs</li> </ul>	<ul style="list-style-type: none"> <li>● Virtual collaboration and projects</li> <li>● Presentations using presentation hardware and software</li> </ul>

<b>Subject: Math</b>	<b>Grade: 1</b>	<b>Unit 3:</b> <ul style="list-style-type: none"> <li>● <b>2 Digit Addition and Subtraction</b></li> <li>● <b>Data and Graphs</b></li> <li>● <b>2D shapes</b></li> </ul>	<b>3rd Trimester (See calendar for specific months)</b>
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		<ul style="list-style-type: none"> <li>● <b>3D shapes</b></li> <li>● <b>Equal Shares</b></li> <li>● <b>Money</b></li> </ul>	
<b>Content Standards</b>	<b>Suggested Standards for Mathematical Practice</b>	<b>Critical Knowledge &amp; Skills</b>	
<p>1.NBT.B.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:</p> <p>1.NBT.B.2.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). *(benchmarked)</p>	<p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Place value:</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● Mentally add 10 or 100 from any given number between 100 and 900.</li> <li>● Mentally subtract 10 or 100 from any given number between 100 and 900.</li> </ul> <p>Learning Goal 9: Mentally add or subtract 10 or 100 from any given number between 100 and 900.</p>	
<p>1.NBT.C.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 (e.g. base ten blocks) or drawings and strategies based on place value, properties of</p>	<p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● In adding two-digit numbers, add tens with tens and ones with ones.</li> <li>● In adding two-digit numbers, sometimes it is necessary to compose a ten.</li> </ul> <p>Students are able to:</p>	

<p>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. *(benchmarked)</p>	<p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>	<ul style="list-style-type: none"> <li>● use concrete models and drawings with a strategy based on place value to add a two-digit number and a one-digit number.</li> <li>● use concrete models and drawings with properties of operations to add a two-digit number and a one-digit number.</li> <li>● use concrete models and drawings with a strategy based on place value to add a two-digit number and a multiple of 10.</li> <li>● use concrete models and drawings with properties of operations to add a two-digit number and a multiple of 10.</li> <li>● explain or show how the model relates to the strategy.</li> </ul> <p>Learning Goal 2: Add a 2-digit and a 1-digit number using concrete models and drawings with a place value strategy or properties of operations; explain or show how the model relates to the strategy (sums within 100).</p>
<p>1.NBT.C.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>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.7 Look for and make use of structure.</p>	<p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● given a two-digit number, find 10 more than the number without counting.</li> <li>● given a two-digit number, find 10 less than the number without counting.</li> <li>● explain, given a two-digit number, how to find 10 more or ten less than the number without counting.</li> </ul>

		Learning Goal 4: Explain, given a two-digit number, how to find 10 more or ten less than the number without having to count.
1.NBT.C.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>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically</p> <p>MP.7 Look for and make use of structure</p>	<p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● use concrete models and drawings with a strategy based on place value to subtract a multiple of 10 from a multiple of 10 (both within the range 10-90).</li> <li>● use concrete models and drawings with properties of operations to subtract a multiple of 10 from a multiple of 10 (both within the range 10-90).</li> <li>● explain or show how the model relates to the strategy.</li> </ul> <p>Learning Goal 5: Subtract a multiple of 10 from a multiple of 10 (both within the range 10-90) using concrete models and drawings with a place value strategy or properties of operations. Explain or show how the model relates to the strategy (sums within 100).</p>
1.NBT.B.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>MP.2 Reason abstractly and quantitatively.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Use place value understanding to compare two digit numbers.</li> <li>● Comparing numbers using symbols.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● use the meaning of tens and ones digits to compare 2 two-digit numbers using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols.</li> </ul>

	MP.7 Look for and make use of structure.	Learning Goal 9: Use the meaning of tens and ones digits to record comparisons of 2 two- digit numbers using $>$ , $=$ , and $<$ symbols.
1.G.A.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.	MP.3 Construct viable arguments and critique the reasoning of others.  MP.4 Model with mathematics.  MP.7 Look for and make use of structure.	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>Defining attributes versus non defining attributes.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>name attributes that define two-dimensional shapes (square, triangle, rectangle, regular hexagon).</li> <li>name attributes that are not two-dimensional shapes.</li> <li>build and draw shapes when given defining attributes.</li> </ul> <p>Learning Goal 1: Name the attributes of a given two-dimensional shape (square, triangle, rectangle, regular hexagon), distinguishing between defining and non-defining attributes.</p> <p>Learning Goal 2: Build and draw shapes when given defining attributes.</p>
1.G.A.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.	MP.4 Model with mathematics.  MP.7 Look for and make use of structure.	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>Shapes can be composed from other shapes (e.g. trapezoids can be composed from triangles).</li> <li>New shapes can be composed from composite shapes.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>create a composite shape using two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles).</li> </ul>

		<ul style="list-style-type: none"> <li>● create a composite shape using three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders).</li> <li>● compose <i>new</i> shapes from the <i>composite</i> shapes.</li> </ul> <p>Learning Goal 3: Create a composite shape by composing 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), and compose new shapes from the composite shape.</p>
<p>1.G.A.3. Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares</p>	<p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.6 Attend to precision.</p> <p>MP.4 Model with mathematics.</p> <p>MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Shapes can be partitioned into equal parts or shares.</li> <li>● Equal shares are named based on the number of shares that make the whole (e.g. halves, fourths, quarters).</li> <li>● Shares can be described based on their relation to the whole (e.g. <i>half of, fourth of, quarter of</i>).</li> <li>● The whole can be described based on the number of shares.</li> <li>● Decomposing a whole into more equal shares creates smaller shares.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● partition circles and rectangles into two or four equal shares.</li> <li>● distinguish equal shares from those that are not equal.</li> <li>● describe shares using the words halves, fourths, and quarters.</li> <li>● describe the relationship between the whole and the share using the phrases <i>half of, fourth of, and quarter of</i>.</li> <li>● describe the whole as <i>two of, or four of</i> the shares.</li> </ul>

		<ul style="list-style-type: none"> <li>● decompose a whole into a greater number of equal shares and identify the new shares as smaller.</li> </ul> <p>Learning Goal 4: Partition circles and rectangles into two or four equal shares, describing the shares using halves, fourths, and quarters and use the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. Describe the whole circle (or rectangle) partitioned into two or four equal shares as <i>two of</i>, or <i>four of</i> the shares.</p>
<p>1.MD.C.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>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> <li>● Numbers can be organized to represent data.</li> </ul> <p>Students are able to:</p> <ul style="list-style-type: none"> <li>● organize objects, representing data, in up to three categories.</li> <li>● represent data with objects, drawings, or numerals, in up to three categories.</li> <li>● ask and answer questions about: <ul style="list-style-type: none"> <li>● the total number of data points;</li> <li>● the number of data points in each category, and</li> <li>● how many more or less are in one category than in another.</li> </ul> </li> </ul> <p>Learning Goal 7: Organize, represent, and interpret data with up to three categories, compare the number of data points among the categories, and find the total number of data points.</p>

<b>Formative Assessments</b>	<b>Summative Assessments</b>
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<ul style="list-style-type: none"> <li>● Observation in whole group</li> <li>● Slate work</li> <li>● Observations in math groups</li> <li>● Math Notebooks/ problem solving</li> <li>● Daily workbook practice</li> </ul>	<ul style="list-style-type: none"> <li>● Check My Progress Assessment</li> <li>● Unit Tests</li> <li>● End of trimester assessments</li> <li>● Fact assessments</li> <li>● MAP Testing</li> </ul>
<b>Suggested Primary Resources</b>	<b>Suggested Supplemental Resources</b>
My Math- Chapters 6, 7, 9, 10	<ul style="list-style-type: none"> <li>● PMI- as needed</li> <li>● Games- Make My Design; Pattern Blocks and templates,</li> <li>● Online games- Sheppard Software; xtramath.org; IXL; Arcademics; Mathisfun.com- graph maker;</li> <li>● Youtube- Jack Hartman songs</li> <li>● Ipad and Google Tablet apps</li> <li>● STEAM- Jellybean sorting and graphing, building 2D and 3D shapes using toothpicks</li> <li>● Manipulatives- pattern blocks, 3D blocks</li> <li>● Making shapes activities- using straws and play doh to build shapes, Foldable 3D shapes; folding shapes into equal parts</li> </ul>
<b>Cross-Curricular Connections &amp; 21<sup>st</sup> Century Skills</b>	
<ul style="list-style-type: none"> <li>● Math read alouds- <u>The Greedy Triangle</u> by Marilyn Burns, <u>How Big is a Foot?</u> by Rolf Myller, <u>Twelve Snails to One Lizard</u> by Susan Hightower, <u>The Best Vacation- Collecting Data</u>, <u>Captain Invincible and the Space Shapes- 3D Shapes</u>, <u>Give Me Half</u>: by: Stuart J. Murphy</li> <li>● PlantsGraphingandWritingActivities.pdf - located in 2nd Grade Math Resources website</li> <li>● Writing in math notebooks to explain thinking (in response to open ended problems )</li> </ul>	
<b>Essential Questions</b>	<b>Enduring Understanding</b>
<ul style="list-style-type: none"> <li>● What do two digit numbers represent?</li> <li>● What does a bundle 10 represent?</li> <li>● How can I easily add or subtract by 10s within 90?</li> <li>● What do the teen numbers 11-19 represent?</li> <li>● How do we represent the numbers 10, 20, 30, 40, 50, 60, 70, 80 and 90?</li> </ul>	<ul style="list-style-type: none"> <li>● I can show that a two digit number represents</li> <li>● a group of tens and some ones.</li> <li>● I can show that a bundle of ten is a unit of ten (10) ones.</li> </ul>



<ul style="list-style-type: none"> <li>● What are the ways I can add within 100?</li> <li>● How can I count beyond 120, using tens, within 1000?</li> <li>● How can I read and write numbers to 1000?</li> <li>● How can you compare 2 two-digit numbers?</li> <li>● What is the best way to mentally find 10 more or 10 less than a given 2 digit number?</li> <li>● What is the difference between defining and non defining attributes?</li> <li>● Can I compose composite shapes from other composite shapes?</li> <li>● How can I partition a circle or a rectangle?</li> <li>● How can I organize data?</li> </ul>	<ul style="list-style-type: none"> <li>● I can use concrete models, or drawing and the following strategies to add within 100: place value, properties of operations and the relationship between adding and subtracting.</li> <li>● I can show that the teen numbers represent 1 group of ten and one, two, three, four, five, six, seven, eight or nine ones.</li> <li>● I can show that the numbers 10,20,30,40,50,60,70,80 and 90 are composed of some groups of “ten” and zero “ones”.</li> <li>● I can add within 100 by adding ones and ones and tens and tens and if necessary, to compose a new ten.</li> <li>● I can recognize skip counting by 10 to count beyond 120 to within 1000.</li> <li>● I can read and write numbers to 1000 by recognizing the digits and their place value.</li> <li>● I can compare 2 two-digit numbers by using the <math>&gt;</math>, <math>=</math>, <math>&lt;</math> symbols. I will know that the digit in the tens place is more important for determining the size and comparison of two-digit numbers.</li> <li>● I can use place value to mentally find 10 more and 10 less than a given two-digit number.</li> <li>● I can organize data into categories. These categories can be used to ask and answer questions and solve problems.</li> <li>● I can distinguish between defining attributes of an object (shape and number of sides) and non-defining attributes of a shape (size, color, orientation).</li> <li>● I can build composite shapes by combining other simple shapes to create new shapes..</li> <li>● I can partition circles and rectangles into smaller equal shares such as halves, thirds and quarters.</li> </ul>
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## Appendix A

**Audubon Public Schools**  
**Engaging Students ~ Fostering Achievement ~ Cultivating 21st Century Global Skills**  
**Written By: Kim Felix, Patricia Martel, Beth Canzanese**  
**Course Title: First Grade Math Unit Name: Operations and Algebraic Thinking**

**Grade Level: 1**

<p><b>Content Statements</b> Representation and solving of problems involving addition and subtraction. Application of properties of operations and the relationship of addition and subtraction. Introduction to equations.</p>	<p><b>NJSLS:</b> 1.OA, 1-8</p>
<p><b>Overarching Essential Questions</b> How can I add and subtract within 20, using unknowns in any position? How can I use properties of operations? What is an equation?</p>	<p><b>Overarching Enduring Understandings</b> I can solve for unknowns within 20 by adding to, taking from, putting together, taking apart and comparing. I can use the commutative and associative properties to add and subtract. An equation is a mathematical statement showing equality, using an equal sign.</p>
<p><b>Unit Essential Questions</b> <b>How can I add or subtract up to 20 to solve problems? 1.OA.A.1</b> How can I solve word problems?1.OA.A.2 How can I solve word problems that call for addition of 3 whole numbers with a sum of 20 or less?1.OA.A.2  How is subtraction connected to addition?1.OA.D.8 What is an equal sign?1.OA.D.7</p>	<p><b>Unit Enduring Understandings</b> I can add and subtract up to 20 to solve problems by using objects, drawings and equations. I can solve word problems through addition and subtraction strategies such as: adding to, putting together, taking from and taking apart. I can use the commutative and associative properties to subtract. I understand that subtraction involves an unknown addend. I can solve addition word problems with 3 whole numbers by using objects, drawing and equations.  I know the equal sign means “the same as”. I understand the terms “total,same as, sum and difference” are words that can be translated into equations..The equal sign helps to determine if the equation is true or false. .</p>

<p><b>Unit Rationale</b> Understanding equations is the foundation of solving problems and more complex computations.</p>	<p><b>Unit Overview</b> Students will learn to use equations and commutative and associative properties as strategies to solve problems.</p>
<p><b>Activities:</b></p> <ul style="list-style-type: none"> <li>● <b>Chapter 1-6 Activities</b></li> <li>● <a href="http://www.ixl.com">www.ixl.com</a> (nNumber Patterns, Understanding Addition, Addition Skills Builders, Addition, Addition Strategies, Subtraction, Subtraction Skills Builders, Understanding Subtraction, Mixed Operations)</li> <li>● <a href="http://www.xtramath.com">www.xtramath.com</a></li> <li>● <a href="http://www.abcya.com">www.abcya.com</a></li> <li>● iPad apps</li> <li>● CGI math binder,</li> <li>● 10-frames to build numbers in word problems,</li> <li>● Mymath activities in each chapter</li> <li>● use of part-part-whole mat, use of manipulatives to build and take away parts to understand “add to”, “take from” and “compare”</li> <li>● Word problem activities from TeachersPayTeachers</li> <li>● Read Alouds <ul style="list-style-type: none"> <li>○ The Action of Subtraction</li> <li>○ The Mission of Addition</li> <li>○ Five Little Monkeys</li> <li>○ If I Were a Minus Sign</li> <li>○ Each Orange Had 8 Slices</li> </ul> </li> </ul>	

**Audubon Public Schools**  
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**Written By: Kim Felix, Patricia Martel, Beth Canzanese**  
**Course Title: First Grade Math Unit Name: Numbers and Operations in Base Ten**  
**Grade Level: 1**

<b>Content Statements</b> Counting sequence is extended to 120, starting with any number. Place value up to 3 digits and properties of operations are introduced within 100.	<b>NJSLS:</b> 1.NBT.1
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<p><b>Overarching Essential Questions</b>  How can I count and write numerals past 100?  What is place value?  What are the properties of operations in addition and subtraction?</p>	<p><b>Overarching Enduring Understandings</b>  I can count to numerals past 100 by 10s.  Place value is the meaning of a position of a number.  The properties of operations are commutative and associative.</p>
<p><b>Unit Essential Questions</b>  What do two digit numbers represent?1.NBT.B.2-1  What does a bundle 10 represent?1.NBT.B.2-2</p> <p>How can I easily add or subtract by 10s within 90?  What do the teen numbers 11-19 represent? 1.NBT.2-3  t  How do we represent the numbers 10, 20, 30, 40, 50, 60, 70, 80 and 90? 1.NBT.2-4  What are the ways I can add within 100?1.NBT.C.4  How can I count beyond 120, using tens, within 1000?  How can I read and write numbers to 1000?  How can you compare 2 two-digit numbers?1.NBT.B.3  What is the best way to mentally find 10 more or 10 less than a given 2 digit number?1.NBT.C.5</p>	<p><b>Unit Enduring Understandings</b>  I can show that a two digit number represents a group of tens and some ones.</p> <p>I can show that a bundle of ten is a unit of ten (10) ones.  I can use concrete models, or drawing and the following strategies to add within 100: place value, properties of operations and the relationship between adding and subtracting.</p> <p>I can show that the teen numbers represent 1 group of ten and one, two, three, four, five, six, seven, eight or nine ones.  I can show that the numbers 10,20,30,40,50,60,70,80 and 90 are composed of some groups of “ten” and zero “ones”.</p> <p>I can add within 100 by adding ones and ones and tens and tens and if necessary, to compose a new ten.</p> <p>I can recognize skip counting by 10 to count beyond 120 to within 1000.</p> <p>I can read and write numbers to 1000 by recognizing the digits and their place value.</p> <p>I can compare 2 two-digit numbers by using the <math>&gt;</math>, <math>=</math>, <math>&lt;</math> symbols. I will know that the digit in the tens place is</p>

	<p>more important for determining the size and comparison of two-digit numbers.</p> <p>I can use place value to mentally find 10 more and 10 less than a given two-digit number.</p>
<p><b>Unit Rationale</b> Understanding and using equations is the foundation of every other mathematical domain.</p>	<p><b>Unit Overview</b> Students will learn to add and subtract within 100, by using base ten and properties of operations for addition and subtraction in order to solve word problems.</p>
<ul style="list-style-type: none"> <li>● <b>MyMath Chapter 5 activities</b></li> <li>● <b>place value mats</b></li> <li>● <b>base-10 blocks to build numbers</b></li> <li>● <b>TeachersPayTeachers downloadable games and activities</b></li> <li>● <b>10 frame mats to build numbers</b></li> <li>● <b>Top-It place value game</b></li> <li>● <a href="http://www.ixl.com">www.ixl.com</a> (Place Value section)</li> <li>● <a href="http://oceansoffirstgradefun.blogspot.com/2011/06/math-work-stations-chapter-6-place.html">http://oceansoffirstgradefun.blogspot.com/2011/06/math-work-stations-chapter-6-place.html</a></li> <li>● <a href="http://secondgradewiththeteacherwearsprada.blogspot.com/2012/07/place-value-student-booklet.html">http://secondgradewiththeteacherwearsprada.blogspot.com/2012/07/place-value-student-booklet.html</a></li> <li>● <a href="http://www.ictgames.com/placeValue.htm">http://www.ictgames.com/placeValue.htm</a> <ul style="list-style-type: none"> <li>○ <b>Shark Numbers</b></li> <li>○ <b>Shark Pool Place Value</b></li> <li>○ <b>Dinosaur Place value</b></li> <li>○ <b>Partitioning Numbers</b></li> </ul> </li> <li>● <b>Read Alouds</b> <ul style="list-style-type: none"> <li>○ <b>Cheerios-Count to 100</b></li> <li>○ <b>A Place for Zero</b></li> </ul> </li> </ul>	

**Audubon Public Schools**  
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**Written By: Kim Felix, Patricia Martel, Beth Canzanese**  
**Course Title: First Grade Math Unit Name: Measurement and Data**  
**Grade Level: 1**

<p><b>Content Statements</b>  <b>Measurement of lengths, indirectly and by iterating (repeating) length units. Telling and writing time using digital and analog clocks. Representing and interpreting data.</b></p>	<p><b>NJSLS:</b>  <b>1.MD, 1-4</b></p>
<p><b>Overarching Essential Questions</b>  <b>How can I measure lengths indirectly?</b>  <b>How can I tell what time it is?</b>  <b>What does it mean to iterate?</b>  <b>What is data?</b></p>	<p><b>Overarching Enduring Understandings</b>  <b>I can measure lengths of two objects by using a third object.</b>  <b>I can use an analog and digital clock.</b>  <b>Iterating in math means making repeated use of a mathematical procedure.</b>  <b>Data is factual information that is organized to help me analyze or make decisions.</b></p>

<p><b>Unit Essential Questions</b>  How can I iterate to measure?  How can I order three objects by length?  How can you use smaller same sized units to measure other objects?</p> <p>What is the most common way to tell time?  How can I organize data?</p>	<p><b>Unit Enduring Understandings</b>  I can iterate to measure by using a shorter object.</p> <p>I can order three objects by length by aligning them all at the same starting point and put in order of shortest to longest or longest to shortest.</p> <p>I can use smaller same sized objects (unifix cubes) to find the length of other objects.</p> <p>I can tell time to the hour and half hour..  I can organize data into categories. These categories can be used to ask and answer questions and solve problems.</p>
<p><b>Unit Rationale</b>  Measurement and data analysis are the basis of understanding geometric shapes, composition and problem solving. Most applied math involves measurement.</p>	<p><b>Unit Overview</b>  Students will learn to measure lengths indirectly and by iterating length units. They will also be introduced to telling time, as well as rudimentary data analysis.</p>
<p><b>Activities:</b></p> <ul style="list-style-type: none"> <li>● MyMath Chapter 7 and 8 activities</li> <li>● <a href="http://www.ixl.com">www.ixl.com</a> ( Measurement Section, Time Section, Graphs and Data section)</li> <li>● <a href="http://www.teacherspayteachers.com">www.teacherspayteachers.com</a> games and materials</li> <li>● Classroom sized and individual student sized Judy clocks</li> <li>● Time Memory and Lotto games</li> <li>● measurement games with unifix cubes, paper clips, or any nonstandard units</li> <li>● foot long ruler measurement games</li> <li>● <a href="http://www.mathisfun.com">www.mathisfun.com</a> (make your own graphs)</li> <li>● <a href="http://secondgradewiththeteacherwearsprada.blogspot.com/2012/07/place-value-student-booklet.html">http://secondgradewiththeteacherwearsprada.blogspot.com/2012/07/place-value-student-booklet.html</a> <ul style="list-style-type: none"> <li>○ Match the Times</li> <li>○ Telling the Time</li> <li>○ Measures</li> </ul> </li> </ul>	



- **Read Alouds (Time)**
  - *The Grouchy Ladybug* by Eric Carle
  - *Bats Around the Clock* by Kathi Appelti
  - *Midnight Fright* by Kathryn Helig
- **Read Alouds (Measurement)**
  - *How Big is a Foot?* by Rolf Myler
  - *How Big Was a Dinosaur*
  - *Hersey’s Weights and Measures* by Jerry Palotto
  - *Inch by Inch* by Leo Lionni

**Engaging Students ~ Fostering Achievement ~ Cultivating 21st Century Global Skills**

**Written By: Kim Felix, Patricia Martel, Beth Canzanese**

**Course Title: First Grade Math Unit Name: Geometry**

**Grade Level: 1**

<p><b>Content Statements</b> Reasoning with, defining, composing shapes and their attributes.</p>	<p><b>NJSLS:</b> 1.G, 1-3</p>
<p><b>Overarching Essential Questions</b> Why do I need to know how to distinguish attributes of shapes? What is a composite shape? How can I decompose a shape?</p>	<p><b>Overarching Enduring Understandings</b> Attributes of shapes help me to understand objects and compose new shapes. Composites are formed by combining shapes. A shape can be decomposed by partitioning.</p>
<p><b>Unit Essential Questions</b> What is the difference between defining and non defining attributes? Can I compose composite shapes from other composite shapes? How can I partition a circle or a rectangle?</p>	<p><b>Unit Enduring Understandings</b> I can distinguish between defining attributes of an object (shape and number of sides) and non-defining attributes of a shape (size, color, orientation). I can build composite shapes by combining other simple shapes to create new shapes.. I can partition circles and rectangles into smaller equal shares such as halves, thirds and quarters..</p>

<p><b>Unit Rationale</b> Understanding the attributes of shapes provides a foundation for recognizing, analyzing and drawing more complex shapes.</p>	<p><b>Unit Overview</b> Students will identify and compose composite shapes. They will be able to identify the attributes of those shapes and partition circles and rectangles.</p>
<p><b><u>Activities</u></b></p> <ul style="list-style-type: none"> <li>● MyMath Chapter 9 and 10 activities</li> <li>● <a href="http://www.ixl.com">www.ixl.com</a> (Two Dimensional Shapes, Three Dimensional Shapes and Fractions sections)</li> <li>● STEM Activities <ul style="list-style-type: none"> <li>○ marshmallow-toothpick shapes</li> <li>○ marshmallow-toothpick towers</li> <li>○ straw-pipe cleaner 2-D shapes (Everyday Math)</li> <li>○ <a href="http://www.teacherspayteachers.com">www.teacherspayteachers.com</a> activities</li> <li>○ Lego play</li> <li>○ Lakeshore geometry shapes builders</li> </ul> </li> <li>● pattern blocks activities</li> <li>● sculpting 3D shapes with clay or playdough</li> <li>● Shapes Museum (students bring in real life items of various 3-D shapes)</li> <li>● Read Alouds <ul style="list-style-type: none"> <li>○ Shape by Shape by Karen Nagle</li> <li>○ Captain Invincible &amp; the Space Shapes by Stuart J. Murphy</li> <li>○ Icky Bug Shapes by Jerry Pallotta</li> <li>○ The Greedy Triangle by Marilyn Burns</li> </ul> </li> <li>● <a href="http://secondgradewiththeteacherwearsprada.blogspot.com/2012/07/place-value-student-booklet.html">http://secondgradewiththeteacherwearsprada.blogspot.com/2012/07/place-value-student-booklet.html</a> <ul style="list-style-type: none"> <li>○ Shapes in Space</li> <li>○ 3D Objects and 2D shapes</li> <li>○ 3DExplorations</li> </ul> </li> </ul>	

<b>Time frame(this is just a guide)</b>	<b>Math Concepts</b>	<b>Standards</b>
First week of school	# sense activities	
End of September- Beginning of October	Chapter 1- Apply Addition Concepts	1.OA.1, 1.OA.3, 1.OA.6-8
End of October- Beginning of November	Chapter 2- Apply Subtraction Concepts	1.OA.1, 1.OA.3-4, 1.OA.6-7
End of November	Introduce Coins and coin counting	Intro for 2nd grade
December	Chapter 8- Measurement and Time	1.MD.1-3
January	Chapter 3- Addition Strategies to 20	1.OA.1-3, 1.OA.5-6
End of January	Chapter 4- Subtraction Strategies to 20	1.OA.1, 1.OA.4-5, 1.OA.6, 1.OA.8
February	Chapter 5- Place Value	1.NBT.1, 1.NBT.2, a, b, c, 1.NBT.3, 1.NBT.5

March	Chapter 6- 2 Digit Addition and Subtraction	1.NBT.4, 1.NBT.6
End of March- Beginning of April	Chapter 7- Organizing and using graphs	1.MD.4
End of April- Beginning of May	Chapter 9- 2D Shapes and Equal Shares	1G1.2-3
End of May- Beginning of June	Chapter 10- 3D Shapes	1G.1-2