

Hillsborough Township Public Schools  
Mathematics Department  
Kindergarten Curriculum Map

Essential Questions	Enduring Understandings	Domain	Cluster	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
<b>Unit 1</b>								
<b>Pacing – 20 days</b>								
<p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>How do numbers represent objects?</p> <p>How is math relevant to me?</p> <p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p>	<p>Numbers can represent quantity, position, location, and relationships.</p> <p>Counting finds out the answer to how many in objects/sets.</p> <p>Grouping (unitizing) is a way to count, measure, and estimate.</p> <p>Estimating is a way to get an approximate answer.</p> <p>Patterns can be found in many forms and can grow and repeat.</p> <p>Graphs convey data in a concise way.</p> <p>A quantity can be represented numerically in various ways.</p>	<p>Counting and Cardinality</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 4 - Model with mathematics.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 – Look for and make use of structure.</p>	<p>Know number names and the count sequence.</p> <p>Count to tell the number of objects.</p>	<p>K.CC.1 - Count to 100 by ones and by tens.</p> <p>K.CC.2 - Count forward beginning from a given number within the known sequence (instead of having to begin at 1).</p> <p>K.CC.3 - Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).</p> <p>K.CC.4.A - When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.</p> <p>K.CC.4.B - Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.</p> <p>K.CC.4.C - Understand that each successive number name refers to a quantity that is one larger.</p> <p>K.CC.5 - Count to answer "how many?" questions</p>	<p>Establish Daily Routines</p> <p>Number of the Day</p> <p>Attendance</p> <p>Daily Schedule</p> <p>Monthly Calendar</p> <p>Weather and Temperature Observation</p> <p>Survey</p> <p>Estimation Jar</p>	<p>Attendance Chart</p> <p>Daily Calendar</p> <p>Weather Chart</p> <p>Survey</p> <p>Estimation Jar</p>		<p>The following standards are ongoing throughout each unit.</p> <p>9.1.4.A.1 - Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.</p> <p>9.1.4.A.2 - Evaluate available resources that can assist in solving problems.</p> <p>9.1.4.C.1 - Practice collaborative skills in groups, and explain how these skills assist in completing tasks in different settings (at home, in school, and during play).</p> <p>9.1.4.A.5 - Apply critical thinking and problem-solving skills in classroom and family settings.</p>

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				<p>about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.</p> <p>K.CC.6 - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.</p>	<p>Count on by 1s.</p> <p>Read and recognize numbers 0-10.</p>	<p>Choral count for 0-10. Monitor children's accuracy and automaticity.</p> <p>Given a number card for 0-10, show correct number of fingers.</p> <p>Create class bar or pictographs using birthday and age information. Pose questions, such as: Which month has the most/fewest? Is there any that are the same? Do any months/ages have none?</p>		
<p>What are efficient methods for finding sums and differences?</p> <p>What questions can be answered using addition and subtraction?</p>	<p>Computation involves taking apart and combining numbers using a variety of approaches.</p> <p>Flexible methods of computation involve grouping numbers in strategic ways.</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 6 - Attend to precision.</p>	<p>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</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 (e.g., <math>5 = 2 + 3</math> and <math>5 = 4 + 1</math>).</p> <p>K.OA.A.5 – Demonstrate fluency for addition and subtraction within 5.</p>	<p>Show addition and subtraction in many ways.</p> <p>Break down numbers into added pairs in 2 or more ways.</p> <p>Add and subtract within 5 for fluency.</p>	<p>Show addition and subtraction in many ways.</p> <p>Break down numbers into added pairs in 2 or more ways.</p> <p>Add and subtract within 5 for fluency.</p>		
<p>How can measurements be used to solve problems?</p>	<p>Everyday objects have a variety of attributes, each of which can be measured in many ways.</p> <p>Measurements can be used to</p>	<p>Measurement and Data</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Describe and compare measurable attributes.</p>	<p>K.MD.1 - Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.2 - Directly compare two objects with a</p>	<p>Use comparison vocabulary to directly compare the lengths of objects.</p>	<p>Identify various representations of the number 5 correctly.</p> <p>Given number cards and dot patterns, recognize that dots in different</p>	<p><b>K-LS1-1.</b> Use observations to describe patterns of what plants and animals (including humans) need to survive.</p> <p>K-PS2-1. Plan and</p>	

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	describe, compare, and make sense of phenomena.			measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i>		arrangements can represent the same quantity.	conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	
How can spatial relationships be described by careful use of geometric language?  How are geometric properties used to solve problems in everyday life?  How are geometric figures constructed?  How will a shape look when rotated?	Geometric properties can be used to construct geometric figures.  Objects can be compared and described using their geometric attributes.  Transforming an object does not affect its attributes.	Geometry  SMP 6 - Attend to precision.  SMP 7 - Look for and make use of structure.	Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders and spheres).	K.G.1 - Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as <i>above, below, beside, in front of, behind, and next to.</i>  K.G.2 - Correctly name shapes regardless of their orientations or overall size. K.G.4 - Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).  K.G.6 - Compose simple shapes to form larger shapes.	Identify and describe 2-dimensional geometric shapes.  Extend, describe and create patterns.	Teacher holds up a pattern block-students identify and hold up a matching block from their pile.  Have students create a pattern using attribute blocks.	L.K.5a - Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.	
<b>Unit 2</b>								
<b>Pacing – 20 days</b>								
How do mathematical ideas interconnect and build on one another to produce a coherent whole?	One representation may sometimes be more helpful than another; used together, multiple representations give a fuller understanding of a	Counting and Cardinality  SMP 1 - Make sense of problems and persevere in	Know number names and the count sequence.	K.CC.2 - Count forward beginning from a given number within the known sequence (instead of having to begin at 1).  K.CC.3 - Write numbers from 0 to 20. Represent a	Count orally, recognize, and sequence from 0-10.  Use concrete objects to represent the numbers 0-10.	Given a number card, create a group with that many objects in it.  Use dot cards to play Memory Match with a partner.		

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	<p>problem.</p> <p>Problem solving depends upon choosing wise ways.</p> <p>Numeric fluency includes both the understanding of and the ability to appropriately use numbers.</p> <p>A quantity can be represented numerically in various ways.</p> <p>Place value is based on groups of 10.</p>	<p>solving them.</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>		<p>number of objects with a written numeral 0-20 (with 0 representing a count of no objects).</p> <p>K.CC.4.A - When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.</p> <p>K.CC.4.B - Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.</p> <p>K.CC.4.C - Understand that each successive number name refers to a quantity that is one larger.</p> <p>K.CC.5 - Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.</p> <p>K.CC.6 - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and</p>	<p>Count objects to find out how many are in a group.</p> <p>Explain what happens to the number of objects in a group when another object is added.</p> <p>Count the objects in a group 1 by 1.</p>	<p>Play Top-It.</p> <p>Write or draw how many counters are in a can after one more is added.</p>		

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				counting strategies.				
<p>How do operations affect numbers?</p> <p>What are efficient methods for finding sums and differences?</p> <p>What questions can be answered using addition and/or subtraction?</p>	<p>Computation involves taking apart and combining numbers using a variety of approaches.</p> <p>Flexible methods of computation involve grouping numbers in strategic ways.</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 4 - Model with mathematics.</p>	<p>Compare numbers</p> <p>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</p>	<p>K.OA.A.1 – Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expression or equations.</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>Show addition and subtraction in many ways. (ex. objects, fingers, drawings)</p> <p>Solve number stories by adding and subtracting and include units. (Within 10)</p>			
<p>How can attributes be used to classify data/objects?</p>	<p>Grouping by attributes (classification) can be used to answer mathematical questions.</p> <p>Objects have distinct attributes that can be measured.</p>	<p>Measurement and Data</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Describe and compare measurable attributes.</p> <p>Classify objects and count the number of objects in each category.</p>	<p>K.MD.1- Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.3 - Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p>	<p>Use a rule to sort objects, count the number of objects in each group and compare the number of objects in the groups.</p> <p>Describe objects by how they can be measured.</p>	<p>Sort objects into groups using obvious attributes.</p>	<p>.L.K.5a - Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.</p> <p>K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.</p>	
<p>How can spatial relationships be described by careful use of geometric language?</p> <p>How are geometric figures constructed?</p>	<p>Objects can be described and compared using their geometric attributes.</p> <p>Geometric properties can be used to construct geometric figures.</p>	<p>Geometry</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Identify and describe shapes</p> <p>Draw and identify lines and angles, and classify</p>	<p>K.G.1 - Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p> <p>K.G.2 - Correctly name shapes regardless of their</p>	<p>Identify and describe the attributes of circles, triangles, squares and rectangles.</p> <p>Describe familiar objects using the names of shapes.</p>	<p>Find examples of circles, triangles, squares and rectangles in the room and in other print material.</p>		

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How will a shape look when rotated, flipped, or translated?	Transforming an object does not affect its attributes.		shapes by properties of their lines and angles. <b>(Introduce)</b>	orientations or overall size.  K.G.4 - Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	Identify shapes no matter what size they are or how they are placed.			
<b>Unit 3</b>								
<b>Pacing – 20 Days</b>								
How do mathematical ideas interconnect and build on one another to produce a coherent whole?  How can we compare and contrast numbers?  How do numbers represent objects?	One representation may sometimes be more helpful than another; used together, multiple representations give a fuller understanding of a problem.  A quantity can be represented numerically in various ways.  Numeric fluency includes both the understanding of and the ability to appropriately use numbers.	Counting and Cardinality  SMP 1 - Make sense of problems and persevere in solving them.  SMP 2 - Reason abstractly and quantitatively.  SMP 4 - Model with mathematics.  SMP 6 - Attend to precision.  SMP 7 - Look for and make use of structure.	Know number names and the count sequence.  Count to tell the number of objects.  Compare numbers.	K.CC.1 - Count to 100 by ones and by tens.  K.CC.2 - Count forward beginning from a given number within the known sequence (instead of having to begin at 1).  K.CC.3 - Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).  K.CC.4.A - When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.  K.CC.4.B - Understand that the last number name said tells the number of objects counted. The number of	Count orally, recognize, and sequence from 0-10  Use concrete objects to represent the numbers 0-10.  Count objects to find out how many are in a group.  Explain what happens to the number of objects in a group when another object is added.  Count the objects in a group 1 by 1.  Model numbers with manipulatives and pictures  Read and write	Create number books to represent the numbers 0-10 numerically using pictures.  Count the number of dots on the face of a die and record the throw on a graph.  Match dot number cards and the appropriate number card.		

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				<p>objects is the same regardless of their arrangement or the order in which they were counted.</p> <p>KCC.4.C - Understand that each successive number name refers to a quantity that is one larger.</p> <p>K.CC.5 - Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.</p> <p>K.CC.6 - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.</p> <p>K.CC.7 - Compare 2 numbers between 1 and 10 written as numerals.</p>	<p>numbers 0-10</p> <p>Compare and order numbers.</p>			
How do operations affect numbers?	<p>Numeric fluency includes both the understanding of and the ability to appropriately use numbers.</p> <p>The magnitude of numbers affects the outcome of operations on them.</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</p>	<p>K.OA.A.1 – Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expression or equations.</p> <p>K.OA.3 - Decompose numbers less than or equal to 10 into pairs in more than</p>	<p>Break down numbers up to 10 into adding pairs in two or more ways.</p> <p>When given any number from 1 - 9, show the number needed to make 10.</p>	<p>Represent numbers 1 - 10 using manipulatives on a ten frame.</p>		

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				<p>one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., <math>5 = 2 + 3</math> and <math>5 = 4 + 1</math>).</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>How can measurements be used to solve problems?</p> <p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p>	<p>Everyday objects have a variety of attributes, each of which can be measured in many ways.</p> <p>Measurements can be used to describe, compare, and make sense of objects.</p>	<p>Measurement and Data</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Describe and compare measurable attributes.</p> <p>Classify objects and count the number of objects in each category.</p>	<p>K.MD.1 - Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.2 - Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i></p> <p>K.MD.3 - Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p>	<p>Use nonstandard tools and techniques to estimate and compare weight and length.</p> <p>Collect and organize data to create bar graphs.</p> <p>Create a class graph and use the graph to answer simple questions.</p>	<p>Compare objects to determine which are longer, shorter, or the same length.</p> <p>Sort, count, compare, and graph pattern blocks by shape.</p>	<p><b>K-LS1-1.</b> Use observations to describe patterns of what plants and animals (including humans) need to survive.</p> <p>K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.</p>	
<p>How are geometric properties used to solve problems in everyday life?</p>	<p>Objects can be described and compared using their attributes.</p> <p>Transforming an</p>	<p>Geometry</p> <p>SMP 1 - Make sense of problems and persevere in</p>	<p>Identify and describe shapes.</p>	<p>K.G.1 - Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in</p>	<p>Describe familiar objects using the names of shapes.</p> <p>Describe where objects are located</p>	<p>Recognize and name basic shapes such as: triangles, circles, rectangles, and squares.</p>	<p>L.K.5c - Identify real-life connections between words and their use (e.g., note places at school that are colorful).</p>	

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How will a shape look when rotated, reflected, and/or translated?	object does not affect its attributes.	solving them.  SMP 2 - Reason abstractly and quantitatively.  SMP 6 - Attend to precision.		front of, behind, and next to.  K.G.2 - Correctly name shapes regardless of their orientations or overall size.  K.G.4 - Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).  K.G.5 - Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	using terms such as: above, below, beside, in front of, etc.  Determine if shapes are 2 dimensional or 3 dimensional.  Compare 2 dimensional and 3 dimensional shapes using a variety of figures.  Create models of shapes by building or drawing them.	Use shapes (triangle, square, rectangle)-rotate them while children watch. Ask questions, such as: Is this still a triangle? Why/why not? Then, show two different shapes and pose questions, such as: Are these both triangles? Why or why not? Repeat with squares and rectangles. Watch for children who can't name shapes when shape's orientation is changed.		
<b>Unit 4</b> <b>Pacing – 20 days</b>								
How can we compare and contrast numbers?  How do mathematical ideas interconnect and build on one another to produce a coherent whole?  How do we count?  Why do we count?	One representation may sometimes be more helpful than another; used together, multiple representations give a fuller understanding of a problem.  Numbers have names and we can use them to count.  Everything can be counted. Number names tell us how many objects are	Counting and Cardinality  SMP 1 - Make sense of problems and persevere in solving them.  SMP 2 - Reason abstractly and quantitatively.  SMP 4 - Model with mathematics.	Know number names and the count sequence.  Count to tell the number of objects.	K.CC.1 - Count to 100 by ones and by tens.  K.CC.2 - Count forward beginning from a given number within the known sequence (instead of having to begin at 1).  K.CC.3 - Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).  K.CC.5 - Count to answer "how many?" questions	Collect and organize data to create class-constructed tally charts, tables and bar graphs.  Use graphs to answer simple questions.  Counting on by 1s.  Counting by 10's.  Compare 2 numbers when written as	Play Top-It  Count from a given number until stopped.		

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	in groups and allow us to count in order and compare groups of objects.	SMP 5 - Use appropriate tools strategically.  SMP 6 - Attend to precision.  SMP 7 - Look for and make use of structure.  SMP 8 - Look for and express regularity in repeated reasoning.		about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.  K.CC.6 - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.  K.CC.7 Compare 2 numbers between 1 and 10 written as numerals.	numerals.  Recognize teen numbers.			
How do operations affect numbers?  What makes a computational strategy both effective and efficient?  What happens when we combine groups or take groups away?	Computational fluency includes understanding the meaning and the appropriate use of numerical operations.  Flexible methods of computation involve grouping numbers in strategic ways.  Proficiency with basic facts aids estimation and computation of larger and smaller numbers.	Operations and Algebraic Thinking  SMP 2 - Reason abstractly and quantitatively.  SMP 6 - Attend to precision.  SMP 7 - Look for and make use of structure.	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.  Count to tell the number of objects.	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 (e.g., $5 = 2 + 3$ and $5 = 4 + 1$ ).  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.  K.OA.A.5 – Demonstrate fluency for addition and subtraction within 5.	Break down numbers up to 10 into added pairs in two or more ways.  When given any number from 1-9 show the number needed to make 10.  Add and subtract within 5 for fluency.	Represent numbers 1-10 using manipulatives on a ten frame.		
How do we measure things?	Everyday objects have a variety of attributes, each of	Measurement and Data	Describe and compare	K.MD.1 - Describe measurable attributes of objects, such as length or	Use nonstandard tools and techniques to	Sort objects by attributes and describe the sort.	L.K.5a - Sort common objects into categories (e.g.,	

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<p>Why do we measure things?</p> <p>How can objects be classified?</p> <p>What types of problems are solved with measuring?</p> <p>What are the tools of measurement and how are they used?</p>	<p>which can be measured in many ways.</p> <p>Measurements can be used to describe, compare, and make sense of objects.</p> <p>The choice of measurement tool depends on the measureable attributes and the degree of precision desired.</p> <p>The size of an object does not always tell you its weight. For ex. larger does not always mean heavier.</p>	<p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 4 - Model with mathematics.</p> <p>SMP 5 - Use appropriate tools strategically.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p> <p>SMP 8 - Look for and express regularity in repeated reasoning.</p>	<p>measurable attributes.</p> <p>Classify objects and count the number of objects in each category.</p>	<p>weight. Describe several measurable attributes of a single object.</p> <p>K.MD.2 - Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i></p> <p>K.MD.3 - Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p>	<p>estimate and compare weight and length.</p> <p>Describe objects by how they can be measured.</p> <p>Compare two objects by their measurements.</p> <p>Compare the weights of objects and the capacity of the containers through exploration.</p> <p>Sort objects into categories and put the categories in order by the number of objects.</p> <p>Collect and organize data to create bar graphs.</p> <p>Create a class graph and use the graph to answer simple questions.</p>	<p>Use various containers and water or sand to compare volume. Answer questions such as: Which container holds more? Why? How can you find out which container holds more? Will any container fit inside another?</p> <p>Compare weights of objects using a pan balance. Answer questions about which object is heavier or lighter.</p>	<p>shapes, foods) to gain a sense of the concepts the categories represent.</p> <p><b>K-LS1-1.</b> Use observations to describe patterns of what plants and animals (including humans) need to survive.</p> <p>K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.</p>	

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<p>What are the different shapes in our world?</p> <p>How are shapes the same and different?</p> <p>How are geometric properties used to solve problems in everyday life?</p> <p>How will a shape look when rotated, reflected, and/or translated?</p> <p>How are geometric figures constructed?</p>	<p>Objects can be described and compared using their attributes.</p> <p>Transforming an object does not affect its attributes.</p> <p>All objects have a shape with a specific name.</p> <p>Objects can be similar to others in one way and different in other ways.</p>	<p>Geometry</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p> <p>SMP 6 - Attend to precision.</p>	<p>Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders and spheres).</p> <p>Analyze, compare, create and compose shapes.</p>	<p>K.G.1 - Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p> <p>K.G.2 - Correctly name shapes regardless of their orientations or overall size.</p> <p>K.G.4 - Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).</p> <p>K.G.6 - Compose simple shapes to form larger shapes.</p>	<p>Identify 2-dimensional geometric shapes.</p> <p>Describe familiar objects using the names of shapes.</p> <p>Create models of shapes by building or drawing them.</p> <p>Identify shapes no matter what size or orientation.</p>	<p>Use pattern blocks to construct a bigger more complex shape.</p> <p>Identify basic shapes.</p>		
<p><b>Unit 5</b> <b>Pacing – 20 days</b></p>								
<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p> <p>How do mathematical ideas interconnect and build on one</p>	<p>One representation may sometimes be more helpful than another; used together, multiple representations give a fuller understanding of a problem.</p> <p>Numbers have names and we can use them to count.</p>	<p>Counting and Cardinality</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 2 - Reason abstractly and quantitatively.</p>	<p>Know number names and the count sequence.</p> <p>Count to tell the number of objects.</p>	<p>K.CC.1- Count to 100 by ones and by tens.</p> <p>K.CC.2 - Count forward beginning from a given number within the known sequence (instead of having to begin at 1.)</p> <p>K.CC.3 - Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no</p>	<p>Model numbers with manipulative.</p> <p>Give equivalent names for numbers.</p> <p>Read 2-digit numbers on the number grid.</p> <p>Counting on by 1s.</p> <p>Counting by 10's.</p>	<p>Do choral counts by 1s to 100.</p> <p>Have students note patterns on the number grid.</p> <p>Record numbers on a number scroll to 20 or higher.</p>		

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<p>another to produce a coherent whole?</p> <p>How can we compare and contrast numbers?</p> <p>How do numbers represent objects?</p> <p>How do we count?</p> <p>Why do we count?</p>	<p>Everything can be counted. Number names tell us how many objects are in groups and allow us to count in order and compare groups of objects.</p>	<p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p> <p>SMP 4 - Model with mathematics.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p> <p>SMP 8 - Look for and express regularity in repeated reasoning.</p>		<p>objects).</p> <p>K.CC.5 - Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.</p> <p>K.CC.6 - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.</p> <p>K.CC.7 - Compare 2 numbers between 1 and 10 written as numerals.</p>	<p>Compare 2 numbers when written as numerals.</p> <p>Recognize teen numbers.</p>			
<p>What is addition and what is the addition and equal symbols?</p> <p>What happens when we combine groups or take groups apart?</p> <p>In what ways can items be grouped?</p> <p>In what ways can numbers be composed and decomposed?</p>	<p>Grouping is a way to count, measure, and estimate.</p> <p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p> <p>Adding is putting groups together and making more. Subtraction is taking groups away and making less.</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 3 - Construct viable arguments and critique the</p>	<p>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</p>	<p>K.OA.A.1 – Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expression or equations.</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</p>	<p>I can break down numbers up to 10 into added pairs in two or more ways.</p> <p>When given any number from 1-9 show the number needed to make 10.</p> <p>Solve story problems by adding or subtracting within 10.</p> <p>Solve number stories and use addition</p>	<p>Draw a comparison number story and justify and prove solutions.</p> <p>Develop counting on as an addition strategy through a dice game. Roll 2 dice and compare dots to determine larger number and count on from the higher number to get the sum.</p>		

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<p>What questions can be answered using addition and subtraction?</p> <p>How can relationships be expressed symbolically?</p>	<p>Flexible methods of computation involve grouping numbers in strategic ways.</p> <p>Computation involves taking apart and combining numbers using a variety of approaches.</p>	<p>reasoning of others.</p> <p>SMP 4 - Model with mathematics.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>		<p>one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., <math>5 = 2 + 3</math> and <math>5 = 4 + 1</math>).</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>	terminology and symbols.			
<p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>What is base ten and how can it be used?</p>	<p>Place value is based on groups of 10.</p> <p>We can break numbers apart into groups of 10s and 1s to help us understand large numbers.</p>	<p>Numbers and Operations in Base Ten</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Work with numbers 11-19 to gain foundation for place value.</p>	<p>K.NBT.1 - Compose and decompose numbers from 11 to 19 into tens ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., <math>18 = 10 + 8</math>); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.</p>	<p>Explain how to use groups of 10s and 1s to represent any number from 11-19.</p>	<p>With a partner, use fingers to represent a teen number.</p> <p>Build teen numbers on the tens frames.</p>		
<p>How can measurements be used to solve problems?</p> <p>How can objects be classified?</p>	<p>What we measure affects how we measure it.</p>	<p>Measurement and Data</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Describe and compare measurable attributes.</p> <p>Classify objects and count the number of objects in each category.</p>	<p>K.MD.1 - Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.2 - Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. <i>For example, directly compare the heights</i></p>	<p>Use nonstandard tools and techniques to estimate and compare weight and length.</p>	<p>Given a common objects use nonstandard tools and techniques to estimate and compare weight and length.</p>	<p><b>K-LS1-1.</b> Use observations to describe patterns of what plants and animals (including humans) need to survive.</p> <p>K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls</p>	

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				<i>of two children and describe one child as taller/shorter.</i>			on the motion of an object.	
<p>What are the different shapes in our world?</p> <p>How are shapes the same and different?</p> <p>How are geometric properties used to solve problems in everyday life?</p> <p>How will a shape look when rotated, reflected, and/or translated?</p> <p>How are geometric figures constructed?</p>	<p>Objects can be described and compared using their attributes.</p> <p>Transforming an object does not affect its attributes.</p> <p>All objects have a shape with a specific name.</p> <p>Objects can be similar to others in one way and different in other ways.</p>	<p>Geometry</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p> <p>SMP 4 - Model with mathematics.</p> <p>SMP 6 - Attend to precision.</p>	<p>Identify and describe shapes.</p> <p>Analyze, compare, create and compose shapes.</p>	<p>K.G.1 - Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p> <p>K.G.2 - Correctly name shapes regardless of their orientations or overall size.</p> <p>K.G.4 - Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).</p> <p>K.G.5 - Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.</p> <p>K.G.6 - Compose simple shapes to form larger shapes.</p>	<p>Identify 2-dimensional geometric shapes.</p> <p>Describe familiar objects using the names of shapes.</p> <p>Create models of shapes by building or drawing them.</p> <p>Identify shapes no matter what size or orientation.</p>	<p>Find and name shapes located in the room.</p> <p>Take a shape walk and use spatial vocabulary words to describe the position and/or location of the shape.</p>	<p>L.K.5c - Identify real-life connections between words and their use (e.g., note places at school that are colorful).</p>	
<b>Mid Year Assessment – 1 Day</b>								

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<b>Unit 6 Pacing – 19 days</b>								
<p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>How do operations affect numbers?</p> <p>How can we compare and contrast numbers?</p> <p>How do numbers represent objects?</p>	<p>Numeric fluency includes both the understanding of and the ability to appropriately use numbers.</p> <p>A quantity can be represented numerically in various ways.</p> <p>Problem solving depends upon choosing wise ways.</p> <p>Place value is based on groups of 10.</p> <p>Numbers have names and we can use them to count.</p>	<p>Counting and Cardinality</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 6 - Attend to precision.</p>	<p>Know number names and the count sequence.</p> <p>Count to tell the number of objects.</p> <p>Compare numbers.</p>	<p>K.CC.3 - Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).</p> <p>K.CC.5 - Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.</p> <p>K.CC.6 - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.</p> <p>K.CC.7 - Compare 2 numbers between 1 and 10 written as numerals.</p>	<p>Model subtraction concretely and symbolically.</p> <p>Find combinations that add to 10.</p> <p>Practice simple addition and subtraction.</p>	<p>Answer questions about a class graph: Which has the most/fewest? Are there any that are the same? Is there any that have none? Can student interpret the data on the graph to answer the questions?</p> <p>Sort attribute blocks in various ways and describe how they are sorted.</p>		
<p>How do operations affect numbers?</p> <p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>What are</p>	<p>The magnitude of numbers affects the outcome of operations on them.</p> <p>One representation may sometimes be more helpful than another; used together, multiple representations give a fuller</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 2 - Reason abstractly and</p>	<p>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</p>	<p>K.OA.A.1 – Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expression or equations.</p> <p>K.OA.2 - Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or</p>	<p>Model and solve comparison number stories with pictures and manipulatives.</p>	<p>Solve this problem: Jay has five trucks and Sue has three trucks. Who has more trucks? How many more trucks?</p> <p>Given an equation, identify the addition, subtraction, and/or equals symbol.</p>		

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<p>different models of and for addition and subtraction?</p> <p>What are efficient methods for finding sums and differences?</p> <p>What questions can be answered using addition and/or subtraction?</p>	<p>understanding of a problem.</p> <p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p> <p>Computation involves taking apart and combining numbers using a variety of approaches.</p>	<p>quantitatively.</p> <p>SMP 4 - Model with mathematics.</p> <p>SMP 7 - Look for and make use of structure.</p>		<p>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 (e.g., <math>5 = 2 + 3</math> and <math>5 = 4 + 1</math>).</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>How can spatial relationships be described by careful use of geometric language?</p> <p>How are geometric properties used to solve problems in everyday life?</p> <p>How can plain and solid shapes be described?</p> <p>How are geometric figures constructed?</p> <p>What are the different shapes</p>	<p>Geometric properties can be used to construct geometric figures.</p> <p>Geometric relationships provide a means to make sense of a variety of phenomena.</p> <p>All objects have a shape with a specific name.</p> <p>Objects can be similar to others in one way and different in other ways.</p>	<p>Geometry</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Identify and describe shapes.</p> <p>Analyze, compare, create, and compose shapes.</p>	<p>K.G.1 - Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p> <p>K.G.2 - Correctly name shapes regardless of their orientations or overall size.</p> <p>K.G.3 – Identify shapes as two-dimensional (lying in a plane “flat”) or three-dimensional (“solid”).</p> <p>K.G.4 - Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their</p>	<p>Identify 3-dimensional geometric solids (cubes, spheres, cones, rectangular prisms and cylinders)</p> <p>Describe familiar objects using the names of shapes.</p>	<p>Name real-life objects that are cubes, spheres, cones, rectangular prisms and cylinders.</p> <p>When shown a solid, tell whether it is cube, sphere or cylinder.</p>		

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in our world?  How are shapes the same and different?				similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length)				
<b>Unit 7</b>								
<b>Pacing – 20 days</b>								
How do mathematical ideas interconnect and build on one another to produce a coherent whole?  What makes a computational strategy both effective and efficient?  How do operations affect numbers?  How can we compare and contrast numbers?  How do numbers represent objects?  How do we count?  Why do we count?	A quantity can be represented numerically in various ways.  Numeric fluency includes both the understanding of and the ability to appropriately use numbers.  One representation may sometimes be more helpful than another; used together, multiple representations give a fuller understanding of a problem.  Problem solving depends upon choosing wise ways.  Numbers have names and we can use them to count.	Counting and Cardinality  SMP 1 - Make sense of problems and persevere in solving them.  SMP 2 - Reason abstractly and quantitatively.  SMP 3 - Construct viable arguments and critique the reasoning of others.  SMP 4 - Model with mathematics.  SMP 5 - Use appropriate tools strategically.  SMP 6 - Attend to precision.  SMP 7 - Look for and make use of structure.	Know number names and the count sequence.  Count to tell the number of objects.	K.CC.1- Count to 100 by ones and by tens.  K.CC.2 - Count forward beginning from a given number within the known sequence (instead of having to begin at 1.)  K.CC.3 - Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).  K.CC.5 - Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.  K.CC.6 - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.  K.CC.7 - Compare 2 numbers between 1 and 10	Count on by 1s and count by 10s.  Count objects.  Compare and order numbers.  Recognize teen numbers.	Oral counts (watch for students who cannot count higher than 50)  Choose a type of item to collect. Then build and track the collection over a period of 1 to 2 weeks or longer. Periodically count how many items are in the collection.  Create an estimation jar and periodically vary the size of objects in the jar. Have students give estimates and talk about the strategies they use to estimate.		

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				written as numerals.				
<p>How do operations affect numbers?</p> <p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>What are different models of and for addition and subtraction?</p> <p>In what ways can numbers be composed and decomposed?</p> <p>How can relationships be expressed symbolically?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p> <p>Computation involves taking apart and combining numbers using a variety of approaches.</p> <p>Flexible methods of computation involve grouping numbers in strategic ways.</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 4 - Model with mathematics.</p> <p>SMP 5 - Use appropriate tools strategically.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</p>	<p>K.OA.A.1 – Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expression or equations.</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 (e.g., <math>5 = 2 + 3</math> and <math>5 = 4 + 1</math>).</p> <p>K.OA.A.5 – Demonstrate fluency for addition and subtraction within 5.</p>	<p>Solve number stories.</p> <p>Identify join and take-away situations.</p> <p>Add and subtract on a number line.</p> <p>Read and write expressions and number sentences using the symbols +, - and =.</p> <p>Model and solve comparison number stories with pictures and manipulatives.</p> <p>Add the dots on dominoes and match the totals to written numerals and record the addition number sentences.</p> <p>Develop fluency with addition facts within 5.</p>	<p>Draw a picture to solve this number story and write a number sentence about it: There are four squirrels on the ground. One squirrel ran up a tree. How many squirrels are still on the ground?</p> <p>Play dice addition game with two dice.</p>		

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<p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>What is base ten and how can it be used?</p> <p>Why do we break numbers apart into 10s and 1s?</p>	<p>One representation may sometimes be more helpful than another; used together, multiple representations give a fuller understanding of a problem.</p> <p>A quantity can be represented numerically in various ways. Problem solving depends upon choosing wise ways.</p>	<p>Numbers and Operations in Base Ten</p> <p>SMP 2 - Reason abstractly and quantitatively.</p>	<p>Work with numbers 11 - 19 to gain foundation for place value.</p>	<p>K.NBT.1 - Compose and decompose numbers from 11 to 19 into tens ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., <math>18=10+8</math>); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.</p>	<p>Represent numbers with manipulatives as 10s and 1s.</p> <p>Explain how groups of 10s and 1s represent any number between 11- 19.</p>	<p>Represent numbers with manipulatives as 10s and 1s.</p> <p>Explain how groups of 10s and 1s represent any number between 11- 19.</p>		
<p>How can objects be classified?</p> <p>How do we measure things?</p> <p>Why do we measure things?</p> <p>What types of problems are solved with measuring?</p> <p>What are the tools of measurement and how are they used?</p>	<p>The message conveyed by the data depends on how the data is collected, represented, and summarized.</p> <p>The choice of measurement tool depends on the measureable attributes and the degree of precision desired.</p> <p>The size of an object does not always tell you its weight. For ex. larger does not always mean heavier.</p>	<p>Measurement and Data</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Describe and compare measurable attributes.</p> <p>Classify objects and count the number of objects in each category.</p>	<p>K.MD.1 - Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.2 - Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i></p> <p>K.MD.3 - Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p>	<p>Compare two objects by their measurements.</p> <p>Sort objects into categories and put the categories in order by the number of objects.</p>	<p>Conduct simple survey and analyze the data as a class.</p> <p>Use a pan balance to compare weights.</p>	<p>L.K.5a -Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.</p> <p>K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.</p> <p>K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an</p>	

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							object.	
<p>How do geometric relationships help to solve problems and/or make sense of phenomena?</p> <p>How can spatial relationships be described by careful use of geometric language?</p> <p>What are the different shapes in our world?</p> <p>How are shapes the same and different?</p> <p>How will a shape look when rotated, reflected, and/or translated?</p>	<p>Geometric relationships provide a means to make sense of a variety of phenomena.</p> <p>Objects can be described and compared using their geometric attributes.</p> <p>Transforming an object does not affect its attributes.</p>	<p>Geometry</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p> <p>SMP 8 - Look for and express regularity in repeated reasoning.</p>	<p>Identify and describe shapes.</p> <p>Analyze, compare, create, and compose shapes.</p>	<p>K.G.1 - Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p> <p>K.G.2 - Correctly name shapes regardless of their orientations or overall size.</p> <p>K.G.3 – Identify shapes as two-dimensional (lying in a plane “flat”) or three-dimensional (“solid”).</p> <p>K.G.4 - Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).</p>	<p>Identify 2-dimensional geometric shapes.</p> <p>Identify 3-dimensional geometric solids.</p>	<p>Identify a given shape as either 2-dimensional or 3-dimensional</p>		
<b>Unit 8</b>								
<b>Pacing – 20 days</b>								
<p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>What makes a computational strategy both</p>	<p>Numeric fluency includes both the understanding of and the ability to appropriately use numbers.</p> <p>A quantity can be represented numerically in various ways.</p>	<p>Counting and Cardinality</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 3 - Construct viable arguments and</p>	<p>Know number names and count sequence.</p> <p>Count to tell the number of objects.</p>	<p>K.CC.1- Count to 100 by ones and by tens.</p> <p>K.CC.2 - Count forward beginning from a given number within the known sequence (instead of having to begin at 1.)</p> <p>K.CC.3 - Write numbers from 0 to 20. Represent a</p>	<p>Count on by 1s.</p> <p>Add and subtract within 5.</p> <p>Compare and order numbers.</p>	<p>Count forward from numbers other than 1 throughout the 1-100 sequence.</p> <p>Order non-consecutive numbers from smallest to greatest.</p> <p>Bundle craft sticks</p>		

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<p>effective and efficient?</p> <p>How do operations affect numbers?</p> <p>How can we compare and contrast numbers?</p> <p>How do numbers represent objects?</p>	<p>Numbers have names and we can use them to count.</p> <p>Everything can be counted. Number names tell us how many objects are in groups and allow us to count in order and compare groups of objects.</p>	<p>critique the reasoning of others.</p> <p>SMP 5 - Use appropriate tools strategically.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>		<p>number of objects with a written numeral 0-20 (with 0 representing a count of no objects).</p> <p>K.CC.5 - Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.</p> <p>K.CC.7 - Compare 2 numbers between 1 and 10 written as numerals.</p>		<p>into groups of 10 and leave leftover sticks unbundled. Count the bundles by 10 and leftovers by 1. Write the total number and point out that the number on the left is how many bundles of 10 and the number on the right is the leftover sticks.</p>		
<p>How do operations affect numbers?</p> <p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>What are different models of and for addition and subtraction?</p> <p>What are efficient methods for finding sums and differences?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p> <p>A quantity can be represented numerically in various ways.</p> <p>Patterns and relationships can be represented graphically, numerically, symbolically, or verbally.</p> <p>The magnitude of numbers affects the outcome of</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p> <p>SMP 5 - Use appropriate tools</p>	<p>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</p>	<p>K.OA.A.1 – Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expression or equations.</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 (e.g., <math>5 = 2 + 3</math> and <math>5 = 4 +</math></p>	<p>Add numbers using a counting on strategy.</p> <p>Solve number stories.</p> <p>Identify join and take away situations.</p> <p>Read and write expressions and number sentences using the symbols +, -, =.</p> <p>Use mental strategies to add and subtract numbers.</p> <p>Model numbers with manipulative.</p>	<p>Develop counting on as an addition strategy through practice and games.</p> <p>Give students two numbers less than 10 and ask them to add and subtract them.</p>		

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<p>What questions can be answered using addition and/or subtraction?</p> <p>What makes a computational strategy both effective and efficient?</p>	<p>operations on them.</p> <p>Computation involves taking apart and combining numbers using a variety of approaches.</p>	<p>strategically.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>		<p>1).</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>K.OA.A.5 – Demonstrate fluency for addition and subtraction within 5.</p>	<p>Give equivalent names for numbers.</p>			
<p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>What is base ten and how can it be used?</p> <p>Why do we break numbers apart into 10s and 1s?</p>	<p>We can break numbers apart into groups of 10s and 1s to help us understand large numbers.</p> <p>Knowing the value of numbers in each place will help us.</p>	<p>Number and Operations in Base Ten</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of others</p> <p>SMP 8 - Look for and express regularity in repeated reasoning.</p>	<p>Work with numbers 11 - 19 to gain foundations for place value.</p>	<p><b>K.NBT.1</b> - Compose and decompose numbers from 11 to 19 into tens ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., <math>18=10+8</math>); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.</p>	<p>Give equivalent names for numbers.</p> <p>Represent numbers with manipulatives as 10s and 1s.</p>	<p>Give students a bag of craft sticks with 11 or more sticks. Students make bundles of 10 with the sticks and count the leftovers.</p> <p>Use name collection posters to assess children’s ability to represent equivalent names for numbers. Children are making adequate progress if they are able to represent equivalent names for numbers up to 10 using manipulative, drawing, and simple numerical expressions.</p>		

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<p>How and why do we measure things?</p> <p>What types of problems are solved with measuring?</p> <p>What are the tools of measurement and how are they used?</p>	<p>Measurements can be used to describe, compare, and make sense of phenomena.</p>	<p>Measurement and Data</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p> <p>SMP 6 - Attend to precision.</p>	<p>Describe and Compare Measurable Attributes.</p>	<p>K.MD.2 - Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i></p>	<p>Use nonstandard tools and techniques to estimate and compare time.</p>		<p><b>K-LS1-1.</b> Use observations to describe patterns of what plants and animals (including humans) need to survive.</p>	
<p>How can 2-dimensional and 3-dimensional shapes be described?</p> <p>How are geometric figures constructed?</p> <p>How are shapes the same and different?</p> <p>How will a shape look when rotated, reflected, and/or translated?</p>	<p>Geometric properties can be used to construct geometric figures.</p> <p>Objects can be compared and described using their geometric attributes.</p> <p>Transforming an object does not affect its attributes.</p>	<p>Geometry</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p> <p>SMP 4 - Model with mathematics.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Identify and describe shapes.</p> <p>Analyze, compare, create, and compose shapes.</p>	<p>K.G.1 - Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p> <p>K.G.2 - Correctly name shapes regardless of their orientations or overall size.</p> <p>K.G.3 – Identify shapes as two-dimensional (lying in a plane “flat”) or three-dimensional (“solid”).</p> <p>K.G.4 - Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).</p>	<p>Identify 2-dimensional and 3-dimensional geometric shapes.</p> <p>Recognize, describe, analyze, and model 2-dimensional and 3-dimensional shapes.</p>	<p>Construct 3-dimensional shapes using manipulatives.</p>		

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				<p>K.G.5 - Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.</p> <p>K.G.6 - Compose simple shapes to form larger shapes</p>				
<b>Unit 9</b>								
<b>Pacing – 20 days</b>								
<p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>How can we compare and contrast numbers?</p> <p>How do numbers represent objects?</p> <p>How and why do we count?</p>	<p>A quantity can be represented numerically in various ways.</p> <p>One representation may sometimes be more helpful than another; used together, multiple representations give a fuller understanding of a problem.</p> <p>Everything can be counted. Number names tell us how many objects are in groups and allow us to count in order and compare groups of objects.</p>	<p>Counting and Cardinality</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p> <p>SMP 4 - Model with mathematics.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 7 - Look for and make use of structure.</p>	<p>Know number names and sequence.</p> <p>Count to tell the number of objects.</p>	<p>K.CC.1- Count to 100 by ones and by tens.</p> <p>K.CC.2 - Count forward beginning from a given number within the known sequence (instead of having to begin at 1.)</p> <p>K.CC.3 - Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).</p> <p>K.CC.5 - Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.</p> <p>K.CC.6 - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group,</p>	<p>Count on by 1s.</p> <p>Compare groups of objects using the words greater than, less than, and equal to.</p>	<p>Count by 1s to 100.</p> <p>Count by 10s to 100.</p> <p>Count forward starting at any number.</p> <p>Read and write numbers from 0-20.</p> <p>Count objects in a group.</p> <p>Compare 2 numbers between 1 and 10.</p>		

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				e.g., by using matching and counting strategies.  K.CC.7 - Compare 2 numbers between 1 and 10 written as numerals.				
<p>How do operations affect numbers?</p> <p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>What are different models of and for addition and subtraction?</p> <p>What are efficient methods for finding sums and differences?</p> <p>What questions can be answered using addition and/or subtraction?</p> <p>What is addition and what is the addition and equal symbols?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p> <p>Numeric fluency includes both the understanding of and the ability to appropriately use numbers.</p> <p>A quantity can be represented numerically in various ways.</p> <p>Computation involves taking apart and combining numbers using a variety of approaches.</p> <p>Flexible methods of computation involve grouping numbers in strategic ways.</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p> <p>SMP 4 - Model with mathematics.</p> <p>SMP 6 - Attend to precision.</p> <p>SMP 8 - Look for and express regularity in repeated reasoning.</p>	<p>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</p>	<p>K.OA.A.1 – Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expression or equations.</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 (e.g., <math>5 = 2 + 3</math> and <math>5 = 4 + 1</math>).</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>K.OA.A.5 – Demonstrate fluency for addition and subtraction within 5.</p>	<p>Identify join and take away situations</p> <p>Read and write expressions and number sentences using the symbols +, -, =.</p> <p>Use mental strategies to add and subtract numbers.</p> <p>Model numbers with manipulative.</p> <p>Add and represent “doubles” addition facts.</p>	<p>Represent and solve addition and subtraction number stories using number sentences.</p> <p>Show at least 3 combinations for numbers between 6 and 10.</p>		

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<p>How and why do we measure things?</p> <p>What types of problems are solved with measuring?</p> <p>What are the tools of measurement and how are they used?</p>	<p>Everyday objects have a variety of attributes, each of which can be measured in many ways.</p> <p>Measurements can be used to describe, compare, and make sense of objects.</p> <p>The size of an object does not always tell you its weight.</p>	<p>Measurement and Data</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p> <p>SMP 5 - Use appropriate tools strategically.</p> <p>SMP 6 - Attend to precision.</p>	<p>Describe and compare measurable attributes.</p> <p>Classify objects and count the number of objects in each category.</p>	<p>K.MD.1 - Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.2 - Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i></p> <p>K.MD.3 - Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p>	<p>Compare two objects using measurement vocabulary.</p> <p>Sort objects as heavier than/lighter than, or longer than/shorter than.</p>	<p>Student will compare two objects using vocabulary such as: longer, shorter, heavier, lighter, etc.</p> <p>Sort blocks by various attributes.</p>	<p>L.K.5a - Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.</p> <p><b>K-LS1-1.</b> Use observations to describe patterns of what plants and animals (including humans) need to survive.</p> <p>K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.</p>	
<p>How can spatial relationships be described by careful use of geometric language?</p> <p>How are geometric properties used to solve problems in everyday life?</p> <p>How are geometric figures constructed?</p> <p>How can patterns,</p>	<p>Geometric properties can be used to construct geometric figures.</p> <p>Objects can be compared and described using their geometric attributes.</p> <p>Transforming an object does not affect its attributes.</p>	<p>Geometry</p> <p>SMP 1 - Make sense of problems and persevere in solving them.</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 3 - Construct viable arguments and critique the reasoning of</p>	<p>Identify and describe shapes.</p> <p>Analyze, compare, create, and compose shapes.</p>	<p>K.G.1 - Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p> <p>K.G.2 - Correctly name shapes regardless of their orientations or overall size.</p> <p>K.G.3 – Identify shapes as two-dimensional (lying in a plane “flat”) or three-dimensional (“solid”).</p> <p>K.G.5 - Model shapes in the</p>	<p>Use geometric terms to describe and recreate designs.</p>	<p>Identify 2-dimensional and 3-dimensional shapes.</p> <p>Draw 2-dimensional shapes.</p> <p>Build a 3-dimensional shape.</p>	<p>L.K.5c - Identify real-life connections between words and their use (e.g., note places at school that are colorful).</p>	

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relations, and functions be used as tools to best describe and help explain real-life situations?		others.  SMP 4 - Model with mathematics.  SMP 6 - Attend to precision.		world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.  K.G.6 - Compose simple shapes to form larger shapes				
End-Year Assessment – 1 Day								