

Hillsborough Township Public Schools
 Mathematics Department
 Grade 1 Curriculum Map

Essential Questions	Enduring Understandings	Domain	Cluster	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 st Century Connections
Unit 1 – Counting Pacing – 20 days						Beginning of the Year Assessment Written Assessment Open Response Question		
How do mathematical ideas interconnect and build on one another to produce a coherent whole?	Computational fluency includes both the understanding of and the ability to appropriately use numbers.	Operations in Base Ten SMP 2 – Reason abstractly and quantitatively. SMP 3 – Construct viable arguments and critique the reasoning of others. SMP 6 – Attend to precision.	Add and subtract within 20. Extend the counting sequence.	1.NBT.1 - Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	Count by 1s.	Choral count 1 – 10 starting at 1. 1-25 starting at 1. Count as high as possible	SL 1.1B - Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups: Build on others’ talk in conversations by responding to the comments of others through multiple exchanges.	
					Estimate the number of objects in a collection.	Given a bag of objects describe how an estimation was derived		
					Review counting by 1s and 10s. Introduce counting by 5s.	Start at 1, count by 1s. Start at 10, count by 10s		
					Count objects and compare quantities.	Given two sets of counters, 5 and 10, count and compare the quantities		
How can we compare and contrast numbers?	A quantity can be represented numerically in various ways.	Number and Operations in Base Ten SMP 6 – Attend to precision.	Understand place value.	1.NBT.3 - Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.	Compare numbers Describe numbers using comparison vocabulary such as more	Give numbers to make the statements correct: ___ is smaller than 8, ___ is bigger than 25, ___ is less than 14, ___ is more		

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		SMP 7 – Look for and make use of structure.			than, smaller than, bigger than and less than.	than 3, ___ is before 20, and ___ is after 21.		
How can spatial relationships be described by careful use of geometric language?	Geometric properties can be used to construct geometric figures.	Geometry and Measurement SMP 1- Make sense of problems and persevere in solving them.	Reason with shapes and their attributes.	1.G.1 - Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes..	Find and discuss numbers and shapes. Review names and attributes of shapes. Use templates to draw shapes.	Draw a row of shapes (hexagon, triangle, rectangle, square, rhombus, circle, and trapezoid). Use a template to draw each shape.	SL.1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.	
How can spatial relationships be described by careful use of geometric language?	Geometric properties can be used to construct geometric figures.	SMP 5 – Use appropriate tools strategically. SMP 6 – Attend to precision.	Reason with shapes and their attributes.	1.G.2 - Compose two-dimensional shapes or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape.	Name and draw plane figures using the Pattern-Block Template.	Draw a row of shapes (hexagon, triangle, rectangle, square, rhombus, circle, trapezoid) and identify recognizable shapes.		
How do operations affect numbers?	Computational fluency includes understanding the meaning and the appropriate use of numerical operations.	Operations and Algebraic Thinking SMP 1 – Make sense of problems and persevere in solving them. SMP 2 – Reason abstractly and quantitatively. SMP 5 – Use appropriate	Represent and solve problems involving addition and subtraction.	1.OA.1 - Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.	Solve simple number stories using the number line.	Use the number line to solve: Lisa went to the bakery and bought 5 cookies. On the way home she ate 1 cookie. How many cookies did Lisa have when she got home?	RL 1.1 - Ask and answer questions about key details in a text.	9.1.4.A.5 - Apply critical thinking and problem-solving skills in classroom and family settings.

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		tools strategically.						
		SMP 6 – Attend to precision.						
How do mathematical ideas interconnect and build on one another to produce a coherent whole? How do mathematical ideas interconnect and build on one another to produce a coherent whole?	A quantity can be represented numerically in various ways. Problem solving depends upon choosing wise ways.	Operations and Algebraic Thinking SMP 1 – Make sense of problems and persevere in solving them.	Apply properties of operations as strategies to add and subtract.	1.OA.3 - Apply properties of operations as strategies to add and subtract.	Children make up and solve their own number stories.	Tell simple number story using up to 10 pennies. Record solution and show work.		
		Operations and Algebraic Thinking SMP 6 – Attend to precision.	Add and subtract within 20.	1.OA.5 - Relate counting to addition and subtraction.	Children count up and back on a number line.	Count up and back on a number line.		
					Identify numbers that come before and after given numbers.	Identify the numbers that come before and after: 10, 7, and 12.		
					Children navigate a number grid.	Use the number grid to count up and back.		
How do operations affect numbers?	Computational fluency includes understanding the meaning and the appropriate use of numerical operations.	Operations and Algebraic Thinking SMP 1- Make sense of problems and persevere in solving them. SMP 2 – Reason abstractly and quantitatively.	Add and subtract within 20.	1.OA.6 - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.	Children use a number line to solve one more and one less number stories. Model and solve number stories using various strategies.	What is 1 more than 5. What is 1 less than 10. Students demonstrate how to hop on a number line. Demonstrate with fingers, pictures or counters to solve. There are 7 lions in the zoo. There are 4 bears in the	SL.1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.	

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		SMP 3 – Construct viable arguments and critique the reasoning of others. SMP 6 – Attend to precision.				zoo. How many animals are there all together?		
How can experimental and theoretical probabilities be used to make predictions or draw conclusions? How can attributes be used to classify data/objects?	The message conveyed by the data depends on how the data is collected, represented, and summarized. Grouping by attributes (classification) can be used to answer mathematical questions.	Measurement and Data SMP 2 – Reason abstractly and quantitatively. SMP 3 – Construct viable arguments and critique the reasoning of others. SMP 4 – Model with Mathematics.	Represent and interpret data.	1.MD.4 - Organize, represent and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in other.	Create and interpret tally charts to organize data. Sort data into categories. Use a calendar to answer questions about days, weeks, months and dates.	Create a tally chart of The Pets We Own data using the categories: Cat, Dog, Other and No Pet . Number the current September calendar.		6.1.P.A.3 - Demonstrate appropriate behavior when collaborating with others. 6.1.P.A.1 - Demonstrate an understanding of rules by following most classroom routines.
Unit 2 – Addition Pacing – 20 days						Written Assessment Open Response Question		
How do mathematical ideas interconnect and build on one another to produce	Numeric fluency includes both the understanding	Number and Operations in Base Ten SMP 1 – Make	Extend the counting sequence	1.NBT.1 - Count to 120, starting at any number less than 120. In this range, read and write numerals and	Count up by 5s.	Follow whisper-shout routine to count by 5s starting 0, 30 and 65.	SL.1.1.A - Participate in collaborative conversations with	

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<p>a coherent whole?</p> <p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>of and the ability to appropriately use numbers.</p> <p>A quantity can be represented numerically in various ways.</p>	<p>sense of problems and persevere in solving them.</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>represent a number of objects with a written numeral.</p>	Count on to find sums.	Demonstrate an understanding of the counting sequence by using counters, fingers or drawings. Discuss.	<p>diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups: Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).</p>	
					Solve number stories illustrating the turn-around rule.	Solve: On Monday, Elle found 2 pennies. On Tuesday, Elle found 3 pennies. How many pennies did she find in all?		
					Count up on the number grid.	Start at 3, count up 5 where do you land? Start at 12, count up 9, where do you land?		
					Practice pairs of numbers that add to 10.	Record all pairs of numbers that add to 10.		
					Practice using a unit box to identify the objects being counted.	Identify what is being counted and write the word.		
<p>How can we compare and contrast numbers?</p>	<p>A quantity can be represented numerically in various ways.</p>	<p>Number and Operations in Base Ten</p> <p>SMP 2 – Reason abstractly and quantitatively.</p> <p>SMP 6 - Attend to precision.</p>	<p>Understanding place value.</p>	<p>1.NBT.3 - Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.</p>	Compare numbers	Use comparison number symbols: $<$, $>$, $=$ to compare numbers: 5 and 7, 9 and 3, 4 and 4.		
					Compare numbers represented on ten frames.	Share strategies for identifying a given number of dots.		
					Finding sums.	Find sums within 20.		

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<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p> <p>The magnitudes of numbers affect the outcome of operations on them.</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 1 – Make sense of problems and persevere in solving them.</p>	<p>Represent and solve problems involving addition and subtracting.</p>	<p>1.OA.1 - Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.</p>	<p>Discover and find the turn-around rule for addition.</p>	<p>Record turn around facts for number stories. Jake has 5 apples. He gets 2 more. How many apples does he have now?</p>	<p>SL.1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.</p> <p>RL.1.1 - Ask and answer questions about key details in a text.</p>	
		<p>SMP 2 – Reason abstractly and quantitatively.</p>			<p>Use subtraction to solve a number story.</p>	<p>Mary has 7 pumpkins. She carves 2 of them. How many aren't carved?</p>		
		<p>SMP 3 - Construct viable arguments and critique the reasoning of others.</p>			<p>Introduce Change to More diagrams, and Change to Less diagrams to solve number stories.</p>	<p>Solve: $7 + \underline{\quad} = 10$ $10 - \underline{\quad} = 5$</p>		
		<p>SMP 4 – Model with mathematics.</p> <p>SMP 6 – Attend to precision.</p>			<p>Use + and = signs to write number models for number stories.</p>	<p>Solve: Mya has 2 pencils. She buys 3 more. How many does she have now?</p>		
<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</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>Understand and apply properties of operations as strategies to add and subtract.</p>	<p>1.OA.4 - Understand subtraction as an unknown-addend problem.</p>	<p>Solve Change to Less number stories.</p>	<p>Use diagrams to solve number stories.</p> <p>John has 7 cups standing up. Sam knocks over 3 cups. How many cups are standing?</p>		

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		SMP 6 – Attend to precision.						
		Operations and Algebraic Thinking	Add and subtract within 20.	1.OA.5 - Relate counting to addition and subtraction.	Count on to find sums.	Start at 5. Add 7. Use pictures, fingers or counters.		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)
		SMP 1 – Make sense of problems and persevere in solving them.			Count on the number grid to solve problems.	Start at 5, add 8. Start at 12, add 3.		
		SMP 2 – Reason abstractly and quantitatively.		1.OA.6 - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making 10; using the relationship between addition and subtraction; and creating equivalent but easier known sums.	Represent and compare and numbers represented on ten frames.	Represent the numbers 3 and 8 on a ten frame. Compare those numbers using $<$, $>$, and $=$.		
		SMP 3 – Construct viable arguments and critique the reasoning of others.			Identify pairs of numbers that add to 10.	Use patterns to help find all the ways to have a total of 10 apples.		
		SMP 4 – Model with mathematics.			Use subtraction to solve a number story.	Solve: Jill has 10 pennies. She spends 6 pennies. How many pennies does she have left?		
		SMP 5 – Use appropriate tools strategically.			Use +, -, and = signs to write number models for Change to More and Change to Less number stories.	Solve: Sally played 5 songs in the morning. She played 3 songs in the afternoon. How many songs did she play in all?		
		SMP 6 – Attend to precision.						
		SMP 7 – Look for and make use of structure.						

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<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 2 – Reason abstractly and quantitatively.</p> <p>SMP 4 - Model with mathematics.</p> <p>SMP 6 - Attend to precision.</p>	<p>Work with addition and subtracting equations.</p>	<p>1.OA.7 - Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.</p>	<p>Use +, - and = signs to solve</p> <p>Change to More and Change to Less number stories.</p>	<p>Solve: Bella had 9 cookies. She ate 3 cookies. How many cookies did she have left?</p>			
				<p>1.OA.8 - Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.</p>	<p>Use +, - and = signs to solve</p> <p>Change to More and Change to Less number stories.</p>	<p>Solve number stories using number model symbols. Students write their own number story.</p>			
					<p>Write number models for number stories and solve.</p>	<p>Demonstrate a number model using a + or -.</p>			
<p>How can experimental and theoretical probabilities be used to make predictions or draw conclusions?</p>	<p>The message conveyed by the data depends on how the data is collected, represented, and summarized.</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 4 – Model with mathematics.</p> <p>SMP 6 – Attend to precision.</p> <p>SMP 7 – Look for and make use of structure.</p>	<p>Represent and interpret data.</p>	<p>1.MD.4 - Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.</p>	<p>Record data about their classroom on a tally chart and use the tally chart to answer questions.</p>	<p>Use tally charts to collect, record and interpret data from classroom environment.</p>	<p>SL.1.1.B - Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups: Build on others’ talk in conversations by responding to the comments of others through multiple exchanges.</p>		

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Unit 3 – Number Stories Pacing – 20 days						Written Assessment Open Response Question		
<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p> <p>How do mathematical representations reflect the needs of society across cultures?</p>	<p>A quantity can be represented numerically in various ways.</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>Number and Operations in Base Ten</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>SMP 8 – Look for and express regularity in repeated</p>	<p>Extend the counting sequence.</p>	<p>1.NBT.1 - Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.</p>	<p>Children count and skip count.</p>	<p>Skip count on a number line using hops that show counts by 2s, 5s and 10s.</p>	<p>SL 1.1B - Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups: Build on others' talk in conversations by responding to the comments of others through multiple exchanges.</p>	
					<p>Count up and back on a number grid.</p>	<p>Start at the number 25. Count up and back by 2s, 5s, and 10s. Ask: Where do you land?</p>		
					<p>Estimate and count a large amount of pennies.</p>	<p>Grab a handful of pennies. Make an estimate, count them up and record the amount.</p>		
					<p>Counting hops up and back on a number line.</p>	<p>Start at the number 15. Hop up and back by 2s, 5s, and 10s. Ask: Where do you land?</p>		
					<p>Count by 1s, 2s, 5s, and 10s.</p>	<p>Count by 1s, 2s, and 10s starting at different numbers.</p>		
					<p>Skip count on a number grid and discuss patterns.</p>	<p>On a grid, count by 1s, 2s, and 10s using a different color for each counting pattern.</p>		

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		reasoning.			Learn to use a rule to complete frames and arrows.	Show evidence of a strategy to complete a frame and arrow problem. Solve: Count back by 1s provide 16 and 17 as first frames. Count up by 5s using 5 and 10 as first frames.		
					Use a calculator to practice skip counting from a number and to learn how to program a calculator to skip count.	Use calculators to skip count. Start at 0, 3, 5, and 10.		
What makes a computational strategy both effective and efficient? How do operations affect numbers? How do mathematical representations reflect the needs of society across cultures?	Computational fluency includes understanding the meaning and the appropriate use of numerical operations. The magnitude of numbers affects the outcome of operations on them.	Operations and Algebraic Thinking 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.	Represent and solve problems involving addition and subtraction.	1.OA.1 - Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.	Write and solve number models. Represent and solve Parts and Total number stories. Solve number stories. Write number stories that match given number sentences.	Share solution strategies for solving number stories. Model Parts and Total, and Comparison number stories using pictures. Solve: Selena has 10 tickets. She gives away 4 tickets. How many does she have left? Use the number sentence $2 + 5 = 7$. Write a number story to match the number model.	SL.1.1.A - Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups: Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).	

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		SMP 4 – Model with mathematics. SMP 5 – Use appropriate tools strategically. SMP 6 – Attend to precision.			Use a picture or number model to represent a number story.	Cody has 3 stripes on each sock. How many stripes in all? Draw a picture of each sock and write a number model.		
<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p> <p>How do mathematical representations reflect the needs of society across cultures?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 1 – Make sense of problems and persevere in solving them.</p> <p>SMP 6 – Attend to precision.</p>	<p>Understand and apply properties of operations as strategies to add and subtract.</p>	<p>1.OA.3 - Apply properties of operations as strategies to add and subtract.</p>	Count hops up and back on a number line.	Demonstrate skip counting strategies for solving each problem. Start at 3. Count up 5. Add 2 more.		
					Use the number line to solve addition problems.	Use the number line to add: $4 + 7, 9 + 3$		
					Practice adding on a number grid.	Start at 15, count up 7. Where do you land? Start at 21, count up 10. Where do you land?		
<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p> <p>How do mathematical representations reflect the needs of society across cultures?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p> <p>The magnitude of numbers affects the</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 –</p>	<p>Add and subtract within 20.</p> <p>Work with addition and subtraction equations.</p>	<p>1.OA.5 - Relate counting to addition and subtraction.</p> <p>1.OA.8 - Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.</p>	Solve number stories and share solution strategies.	Solve and show evidence of a strategy: Sally had 8 pencils. She got 10 more pencils as the year went on. How many pencils does she have now?	<p>SL.1.1.A - Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups: Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a</p>	
					Count on to find sums.	Add $5 + 17$. Use the number grid or number line to show where you would start and		

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	<p>outcome of operations on them.</p> <p>In many cases, there are multiple algorithms for finding a mathematical solution, and those algorithms are frequently associated with different cultures.</p>	<p>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>where you would land.</p> <p>Use the number line to solve addition and subtraction problems.</p> <p>Use a number grid to add and subtract.</p> <p>Find the rule to complete Frames and Arrow problems.</p>	<p>Count hops on a number line and write a corresponding number sentence.</p> <p>Solve: 11 + 8 and 23 – 6.</p> <p>Provide the following frames 4, 6, 8, 10. 13, 12, 11, 10. Explain how you can find the rule.</p>	<p>time about the topics and texts under discussion).</p>	
<p>Unit 4 – Length and Addition Facts Pacing – 20 days</p>						<p>Written Assessment</p> <p>Open Response Question</p>			
<p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Numeric fluency includes both the understanding of and the ability to appropriately use numbers.</p>	<p>Number and Operations in Base Ten</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 4 – Model with mathematics.</p>	<p>Extend the counting sequence.</p>	<p>1.NBT.1 - Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.</p>	<p>Collect data in a tally chart and use the tally chart to answer questions.</p> <p>Practice adding three numbers.</p> <p>Subtract using a number grid.</p>	<p>Use the tally chart to answer questions.</p> <p>Find the sum of 4, 3 and 6. Share strategies.</p> <p>Using the number grid, find the difference between 29 and 19, 10 more than 36, 10 less than</p>			

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						41.		
		Number and Operations in Base Ten SMP 2 – Reason abstractly and quantitatively. SMP 4 – Model with mathematics. SMP 5 – Use appropriate tools strategically. SMP 6 – Attend to precision.	Understand Place Value.	1.NBT.2 - Understand that the two digits of a two-digit number represent amounts of tens and ones.	Compose shapes with base - 10 blocks.	Records how many flats, longs and cubes for each shape.		
How can we compare and contrast numbers? How do operations affect numbers?	A quantity can be represented numerically in various ways. Numeric fluency includes both the understanding of and the ability to appropriately use numbers.	Number and Operations in Base Ten SMP 2 – Reason abstractly and quantitatively. SMP 3 – Construct viable arguments and critique the reasoning of others. SMP 5 – Use appropriate tools strategically.	Understand Place Value.	1.NBT.3 - Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.	Find and compare sums. Write and compare numbers.	Demonstrate comparison of two digit numbers using the symbols: $<$, $>$, $=$ $3+1 = 2+2$ Compare and order numbers. Compare 13 and 19, 42 and 48, 34 and 34. Then order the numbers.		

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		SMP 6 – Attend to precision						
How do mathematical ideas interconnect and build on one another to produce a coherent whole? How can we compare and contrast numbers?	A quantity can be represented numerically in various ways. Problem solving depends upon choosing wise ways. Numeric fluency includes both the understanding of and the ability to appropriately use numbers.	Number and Operations in Base Ten SMP 3 – Construct viable arguments and critique the reasoning of others. SMP 4 – Model with mathematics. SMP 6 – Attend to precision. SMP 7 – Look for and make use of structure.	Use place value understanding and properties of operations to add and subtract.	1.NBT.5 - Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	Use the number grid to find numbers that are ten more or ten less than a given number.	Find ten more or ten less for a given number. Use the numbers 16, 25, 38.		
What makes a computational strategy both effective and efficient? How do operations affect numbers?	Computational fluency includes understanding the meaning and the appropriate use of numerical operations.	Operations and Algebraic Thinking SMP 1 – Make sense of problems and persevere in solving them. SMP 4 – Model with Mathematics.	Represent and solve problems involving addition and subtraction. Understand and apply properties of operations as strategies to add and subtract.	1.OA.1 - Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions. 1.OA.4 - Understand subtraction as an unknown-addend problem.	Solve a combination of ten number story.	Solve a number story, record the fact as a number model and explain thinking. Grant has 3 green markers and 7 yellow markers. How many markers does he have in all?	RL 1.1 - Ask and answer questions about key details in a text.	

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<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p> <p>The magnitude of numbers affects the outcome of operations on them.</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 6 – Attend to precision.</p>	<p>Represent and solve problems involving addition and subtraction.</p> <p>Understand and apply properties of operations as strategies to add and subtract.</p>	<p>1.OA.2 - Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.</p>	<p>Write three addend number stories to match given number sentences.</p>	<p>Write a story for the following number sentence: $2 + 8 + 4$</p>		
				<p>1.OA.3 - Apply properties of operations as strategies to add and subtract.</p>	<p>Group and add three numbers to make them easier to add.</p>	<p>Add three numbers in order from left to right and look for easier ways to add such as doubles, combinations of 10. Share solutions.</p>		
					<p>Practice adding three numbers.</p>	<p>Add: $3 + 2 + 6$ $4 + 7 + 3$</p>		
<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p> <p>In many cases, there are multiple algorithms for finding a mathematical solution, and those algorithms are frequently associated</p>	<p>Operations and Algebraic Thinking</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>Add and subtract within 20.</p>	<p>1.OA.6 - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by</p>	<p>Interpret data on a bar graph to show how many more and how many less.</p>	<p>Pose questions regarding data: Why are some bars taller than others? How many in all? How many more? How many less?</p>	<p>RL 1.1 - Ask and answer questions about key details in a text.</p>	
				<p>Solve number stories.</p>	<p>Solve: 10 marbles were on the table. 6 marbles rolled onto the floor. How many were left on the table?</p>			
				<p>Adding doubles.</p>	<p>Students record all doubles facts that they know. Students record facts that aren't doubles.</p>			

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	with different cultures			creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).	Total number of dots on ten frames.	Students use a ten frame to calculate doubles.		
How can measurements be used to solve problems?	Everyday objects have a variety of attributes, each of which can be measured in many ways.	Measurement and Data SMP 1 –Make sense of problems and persevere in solving them. SMP 3 – Construct viable arguments and critique the reasoning of others. SMP 6 – Attend to precision.	Measure lengths indirectly and by iterating length units.	1.MD.1 - Order three objects by length; compare the lengths of two objects indirectly by using a third object.	Discuss the different measurable attributes of a box and the meaning of length.	Measure objects using linking cubes or other objects and compare lengths. Share measurement strategies.		9.1.4.A.5 - Apply critical thinking and problem-solving skills in classroom and family settings.
					Directly and indirectly compare the lengths of objects.	Find items that are taller, shorter, or about the same size as specific students.		
				1.MD.2 - Express the length of an object as a whole number of length units; by laying multiple copies of a shorter object end to end; understand that the length measurement of an object is the number same-size length units that span it with no gaps or overlaps.	Estimate and measure the length of objects in non-standard units.	Students predict the length of their math journal and choose a non-standard unit to measure.		
					Estimate the length of objects and discuss the importance of using the same unit.	Students measure a marker and write the length of it as a whole number.		
					Explain why people might get different measurements for the same object.	Measure an object with a non-standard unit of measurement and explain the strategy.		

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					Measure the lengths of objects by moving one unit.	Use blocks to measure the length of a pencil and discuss how they did it.		
How can experimental and theoretical probabilities be used to make predictions or draw conclusions?	The message conveyed by the data depends on how the data is collected, represented, and summarized.	Measurement and Data SMP 2 – Reason abstractly and quantitatively. SMP 4 – Model with mathematics. SMP 5 – Use appropriate tools strategically. SMP 6 – Attend to precision.	Represent and interpret data	1.MD.4 - Organize, represent and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in other.	Students collect data and discuss what kinds of questions can be answered by collecting data. Create a tally chart. Create a tally chart.	Ask and answer questions about the data collected. Choose a small topic (3 responses) about which to survey the class. Create a tally chart to show results.	RL 1.1 - Ask and answer questions about key details in a text.	
How can spatial relationships be described by careful use of geometric language? How do geometric relationships help to solve problems and/or make sense of phenomena?	Geometric properties can be used to construct geometric figures. Geometric relationships provide a means to make sense of	Geometry SMP 2 – Reason abstractly and quantitatively. SMP 4 – Model with mathematics. SMP 6 – Attend to precision.	Reason with shapes and their attributes.	1.G.1 - Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.	Make shapes with specified attributes on geoboards.	Identify the shapes and record the number of blocks used.		

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	a variety of phenomena.			1.G.2 - Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.	Compose shapes with base 10 blocks and record the number of blocks used.	Create a shape and answer: How many flats, longs and cubes are in the shape?		
Unit 5 - Place Value and Comparisons Pacing 20 days						Written Assessment Open Response Question		
How do mathematical ideas interconnect and build on one another to produce a coherent whole? How can we compare and contrast numbers? What makes a computational strategy both effective and efficient?	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	Number and Operations in Base Ten SMP 2 – Reason abstractly and quantitatively. SMP 5 – Use appropriate tools strategically. SMP 6 – Attend to precision. SMP 7 – Look for and make use	Extend the counting sequence.	1.NBT.1 - Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	Exchange pennies for dimes in a banking activity. Relate pennies and dimes to 10s and 1s. Find numbers that are one less and one more than a given number.	Given 21 cents, record how many pennies and how many dimes. Demonstrate relationship between 10s and 1s using dimes and pennies. SW record what number comes after 9? After 39? Before 100?	SL.1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.	

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How do operations affect numbers?	in various ways.	of structure.			Name the numbers after 55, 100 and 500.	Assemble and use number scrolls with larger numbers.		
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 problem.	Number and Operations in Base Ten SMP 1 – Make sense of problems and persevere in solving them.	Understand place value.	1.NBT.2 - Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 1.NBT.2.a - 10 can be thought of as a bundle of ten ones-called a “ten.”	Practice comparing numbers using place value.	Demonstrate understanding and discuss the values and digits in different places in numbers.		8.1.4.A.1 - Demonstrate effective input of text and data using an input device.
How can we compare and contrast numbers?	A quantity can be represented numerically in various ways.	SMP 2 – Reason abstractly and quantitatively.		1.NBT.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.	How many cubes equal one long?	Determine the number of cubes and longs in given numbers.		
What makes a computational strategy both effective and efficient?		SMP 3 – Construct viable arguments and critique the reasoning of others.		1.NBT.2.c - The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, nine tens (and 0 ones).	Determine the values and digits in different places in numbers. Make place value changes.	Demonstrate the value of tens and ones in the following: 22, 54, 98, 112		
How do operations affect numbers?	Problem solving depends upon choosing wise ways.	SMP 4 – Model with mathematics.			Use base 10 blocks to show a number multiple ways.	Model these numbers using base-10 blocks in a variety of ways: 15, 34, 99, 25		
How do mathematical representations reflect the needs of society across cultures?	Numeric fluency includes both the	SMP 6 – Attend to precision. SMP 7 – Look for and make use			Explore the relationships between 10s and 1s.	Find whether 11 cents can be made with two coins.		

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	understanding of and the ability to appropriately use numbers.	of structure.			Show a number making all possible exchanges with base 10 blocks.	Given base-10 blocks write the number: two longs and sixteen cubes. Make exchanges.		
				1.NBT.3 - Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.	Compare numbers using place value.	Use $>$, $<$, $=$ to compare pairs of numbers.		
					Explain how they know which animal is heaviest and model number stories using relation symbols.	Compare the weights of animals by completing number models with comparison symbols.		
					Practice addition facts using relation symbols.	Solve number models using relations symbols: $3 + 6 = 4 + 5$		
					Evaluate the accuracy of number sentences.	Make a false number sentence true.		
What makes a computational strategy both effective and efficient? How do operations affect numbers?	Computational fluency includes understanding the meaning and the appropriate use of numerical operations.	Number and Operations SMP 1 – Make sense of problems and persevere in solving them. SMP 2 – Reason abstractly and	Use place value understanding and properties of operations to add and subtract.	1.NBT.4 - Add within 100, including adding a two-digit and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models, or drawings and strategies based on place value, properties of operations and/or	Learn a variety of strategies to find the total weights of pairs of animals. Practice adding and subtracting 2 digit numbers.	Use a variety of strategies to find total weights of pairs of animals. Demonstrate adding 2 digit numbers in multiples of 10.		9.1.4.A.5 - Apply critical thinking and problem-solving skills in classroom and family settings.

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		<p>quantitatively.</p> <p>SMP 5 – Use appropriate tools strategically.</p> <p>SMP 6 – Attend to precision.</p>		<p>the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</p>	<p>Count up on a number grid.</p>	<p>Demonstrate how they use the number grid as a tool to help them add.</p>		
				<p>1.NBT.5 - Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.</p>	<p>Find 10 more or 10 less than a 2-digit number.</p>	<p>Demonstrate strategies of finding 10 more and 10 less of a 2-digit number and discuss.</p>		
				<p>1.NBT.6 - Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p>	<p>Practice adding 2 digit numbers.</p>	<p>Demonstrate place value, counting up, composing a 10 or counting on to solve $23 + 14$ and $9 + 19$.</p>		
					<p>Learn a variety of strategies to find the difference in weights in pairs of animals.</p>	<p>Demonstrate using number grid and/or base 10 blocks to solve 2-digit number stories.</p>		

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<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p> <p>The magnitude of numbers affects the outcome of operations on them.</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>Represent and solve problems involving addition and subtraction.</p>	<p>1.OA.1 - Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</p>	<p>Solve comparison number stories using number models.</p>	<p>Students give thumbs up if the equation is true and thumbs down if the equation is false.</p>		
				<p>Finding who has more money and draw a picture.</p>	<p>Draw and compare rows of pennies to show how they know.</p>			
				<p>Calculate the total weight of animals.</p>	<p>Demonstrate the use of strategies like number grid pictures, base 10 blocks to add $13 + 9$.</p>			
				<p>Calculate the differences in weights in pairs of animals.</p>	<p>Demonstrate the use of diagrams to calculate $12 - 7 = ?$ and share strategies.</p>			
			<p>Understand and apply properties of operations as strategies to add and subtract.</p>	<p>1.OA.3 - Apply properties of operations as strategies to add and subtract.</p>	<p>Measure the total length of a crooked path.</p>	<p>Find the total length of a crooked path.</p>		
<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 1- Make sense of problems and persevere in solving them.</p> <p>SMP 6 – Attend</p>	<p>Understand and apply properties of operations as strategies to add and subtract.</p>	<p>1.OA.4 - Understand subtraction as an unknown-addend problem.</p>	<p>Practice finding differences.</p>	<p>Demonstrate the understanding of subtraction as the unknown addend.</p>		

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	The magnitude of numbers affects the outcome of operations on them.	to precision.						
<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p> <p>The magnitude of numbers affects the outcome of operations on them.</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 5 – Use appropriate tools strategically.</p> <p>SMP 6 – Attend to precision.</p> <p>SMP 7 – Look</p>	<p>Add and subtract within 20.</p>	<p>1.OA.5 - Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p>	<p>Count up on a number grid.</p>	<p>Start at 14, count to 18, What is the difference between 14 and 18?</p>		
					<p>Use a number grid to add and subtract.</p>	<p>Use number grid strategies to add and subtract: 25 + 20 21 - 7</p>		
				<p>1.OA.6 - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by</p>	<p>Use the = sign to determine whether a number sentence is true or false.</p>	<p>Record which number sentences are true: $3 + 1 = 2 + 2$ How do you know?</p>	<p>RL 1.1 - Ask and answer questions about key details in a text.</p>	
					<p>Make a false number sentence true.</p>	<p>Demonstrate knowledge of addition facts to change false equation to true.</p>		
	<p>Compare the weights of animals by completing the number model.</p>	<p>Choose two animal weights and compare them by using comparison symbols and a number model.</p>						

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		for and make use of structure.		creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).	Practice finding differences.	Solve comparison number stories. A beaver weighs 56 lbs. and an octopus weighs 20 lbs. How much more does the beaver weigh?		
What makes a computational strategy both effective and efficient? How do operations affect numbers?	Computational fluency includes understanding the meaning and the appropriate use of numerical operations. The magnitude of numbers affects the outcome of operations on them.	Operations and Algebraic Thinking 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.	Work with addition and subtraction equations.	1.OA.7 - Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 1.OA.8 - Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.	Use the relation symbols $<$ and $>$. Solve number stories using number models.	Compare the following: $9 > 7$ $20 > 10$ $18 < 27$ $5 < 15$ Owen read 8 sports stories and 5 dog stories. How many stories did Owen read in all?		
How can measurements be used to solve problems?	Everyday objects have a variety of attributes, each of which can be measured in many ways.	Measurement and Data SMP 1 – Make sense of problems and persevere in solving them.	Measure lengths indirectly and by iterating length units.	1.MD.1 - Order three objects by length; compare the lengths of two objects indirectly by using a third object. 1.MD.2 - Express the length of an object as a whole number of	Create crooked paths and measure using paper clips.	Express length of a path in whole numbers and demonstrate measurement of a path.		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).

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	<p>What we measure affects how we measure it.</p> <p>Measurements can be used to describe, compare, and make sense of phenomena.</p>	<p>SMP 2 – Reason abstractly and quantitatively.</p> <p>SMP 5 – Use appropriate tools strategically.</p> <p>SMP 6 – Attend to precision.</p>		<p>length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</p>	<p>Explore ways of measuring the height of two objects using a third object.</p>	<p>Students work in groups to make arguments about which object is taller citing evidence that goes beyond just looking, e.g., classroom tools.</p>		<p>9.1.4.A.5 - Apply critical thinking and problem-solving skills in classroom and family settings.</p>
District Mid-Year Assessment						Mid-Year Assessment		
Pacing: 1 Day								
Unit 6 – Addition Fact Strategies						Written Assessment		
Pacing – 20 days						Open Response Question		
<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>What makes a computational strategy both</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</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>Understand place value.</p>	<p>1.NBT.2 - Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:</p> <p>1.NBT.2.a - 10 can be thought of as a bundle of ten ones-called a “ten.”</p>	<p>Children show a number with base 10 blocks in two ways.</p>	<p>Students show the following numbers two different ways with base 10 blocks: 32, 57</p>	<p>SL.1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.</p>	
					<p>Introduce children to the flat.</p>	<p>Build using base ten blocks: 123, 245</p>		

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<p>effective and efficient?</p> <p>How do operations affect numbers?</p> <p>How do mathematical representations reflect the needs of society across cultures?</p>	<p>can be represented numerically in various ways.</p> <p>Numeric fluency includes both the understanding of and the ability to appropriately use numbers.</p>			<p>1.NBT.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>	<p>Exchange base 10 blocks and name the number.</p>	<p>Build and exchange using base ten blocks: 3 longs and 21 cubes, 2 longs and 18 cubes.</p>		
				<p>1.NBT.2.c - The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, nine tens (and 0 ones).</p>	<p>Compare two base 10 block representations</p>	<p>Display 37 and 49 in base 10 blocks. Students tell which one is larger and how do they know.</p>		
					<p>Quick looks with double ten frames, focusing on making 10s.</p>	<p>Construct the numbers 6, 14, and 21 using double ten frames.</p>		
					<p>Apply place value understanding to make money exchanges.</p>	<p>Practice exchanging pennies, dimes and dollars.</p>		
<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p>	<p>Number and Operations in Base Ten</p> <p>SMP 1 – Make sense of problems and persevere in solving them.</p> <p>SMP 5 – Use appropriate tools strategically.</p>	<p>Use place value understanding and properties of operations to add and subtract.</p>	<p>1.NBT.4 - Add within 100, including adding a two-digit and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models, or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit</p>	<p>Solve a variety of number stories and discuss strategies and tools.</p>	<p>Solve: A cat weighs 7 lbs. and a raccoon weighs 23 lbs. How much do they weigh together?</p>		
					<p>Use a number grid to solve addition and subtraction problems.</p>	<p>Students add: 15 + 7 58 + 10 11 + 75</p>		
					<p>Decide what the answer to a problem might look like.</p> <p>Discuss what it means to make sense of a</p>	<p>Find two numbers that add up to a number between 21 and 25.</p>		

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				numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	problem.			
<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</p>	<p>Number and Operations</p> <p>SMP 1 – Make sense of problems and persevere in solving them.</p> <p>SMP 2 – Reason abstractly and quantitatively.</p> <p>SMP 5 – Use appropriate tools strategically.</p> <p>SMP 6 – Attend to precision.</p>	<p>Use place value understanding and properties of operations to add and subtract.</p>	<p>1.NBT.6 - Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p>	<p>Solve a variety of number stories and discuss strategies and tools.</p>	<p>Solve: How much more does a 23 lb. raccoon weigh than a 7 lb. cat?</p>	<p>RL 1.1 - Ask and answer questions about key details in a text.</p>	
					<p>Use a number grid to solve addition and subtraction problems.</p>	<p>Solve: 70 - 40 = 100 - 20 =</p>		
<p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p>	<p>Computational fluency includes understanding the meaning and the appropriate use of numerical operations.</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 4 – Model with</p>	<p>Represent and solve problems involving addition and subtraction.</p>	<p>1.OA.1 - Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</p>	<p>Solve a comparison number story.</p>	<p>Solve: Cory has 12 pencils. He shares 9 with his friends. How many does he have now?</p>		
					<p>Make sense of and solve a multistep number story.</p>	<p>Children will use words, numbers or pictures to show how they know the answer.</p>		
					<p>Solve number stories by picturing ten frames.</p>	<p>Show 15 on a double ten frame and record their thinking.</p>		

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	operations on them.	<p>mathematics.</p> <p>SMP 5 – Use appropriate tools strategically.</p> <p>SMP 6 – Attend to precision.</p>	Understand and apply properties of operations as strategies to add and subtract.	1.OA.3 - Apply properties of operations as strategies to add and subtract.	<p>Explore the idea of equivalence using addition and subtraction facts.</p> <p>Represent the making-10 strategy.</p> <p>Learn about name collection boxes and write equivalent names in them.</p>	<p>Solve $4 + 2 = \underline{\quad}$ to make a true number sentence.</p> <p>A ten frame has 10 counters in it. You remove 5. How many counters are in it?</p> <p>Put at least two different names inside a “7” Name Collection Box.</p>		
What makes a computational strategy both effective and efficient?	Computational fluency includes understanding the meaning and the appropriate use of numerical operations.	<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</p>	Add and subtract within 20.	1.OA.6 - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making 10; using the relationship between addition and subtraction; and creating equivalent but easier known sums.	<p>Write and solve doubles facts.</p> <p>Write two doubles facts to help solve nearby facts.</p> <p>Solve a number story and explain the strategy with pictures, words and symbols.</p> <p>Record how to show numbers on a double ten frame.</p>	<p>Find the sums of double facts using egg cartons as random number generators.</p> <p>Students use doubles such as $8 + 8 = 16$ to help solve $8 + 9 = 17$.</p> <p>Solve: I have 5 pencils in my desk and 7 pencils in my backpack. How many pencils do I have altogether?</p> <p>Students represent the following numbers on a double ten frame: 98, 95</p>	SL.1.1.A - Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups: Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).	

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		mathematics. SMP 6 – Attend to precision.						
How can measurements be used to solve problems?	Everyday objects have a variety of attributes, each of which can be measured in many ways.	Measurement and Data SMP 5 – Use appropriate tools strategically. SMP 6 – Attend to precision.	Tell and write time	1.MD.3 - Tell and write time in hours and half hours using analog and digital clocks.	Tell time on an hour hand only clock.	Student’s show and tell the time using only the hour hand for 4:00, 6:00.		
Unit 7 – Subtraction Fact Strategies and Attributes of Shapes Pacing – 19 days						Written Assessment Open Response Question		
What makes a computational strategy both effective and efficient? How do operations affect numbers? How do mathematical representations reflect the needs of society across cultures?	Computational fluency includes understanding the meaning and the appropriate use of numerical operations. The magnitude of numbers affects the outcome of operations on them.	Number and Operations in Base Ten SMP 1 – Make sense of problems and persevere in solving them. SMP 7 – Look for and make use of structure. SMP 8 – Look for and express	Use Place Value understanding and properties of operations to add and subtract.	1.NBT.4 - Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain	Solve number stories. Practice adding and subtracting 2 digit numbers.	Solve: Sam read 14 books. His sister read 5 books. How many books did they read in all? Solve: A teacher has 25 red pens and 13 blue pens, how many more red pens does the teacher have? Share strategies. 14 + 1 35 – 18 Share strategies.	RL 1.1 - Ask and answer questions about key details in a text.	

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		regularity in repeated reasoning.		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.	Find a rule for a real world situation and use it to solve a problem.	Create 2 more and 2 less stories using objects in the room			
				1.NBT.5 - Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	Introduce function machines and find and apply rules, given inputs and outputs.	Solve “What’s my rule” problems where the missing rule will determine the missing output numbers.			
				1.NBT.6 - Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	Subtract multiples of 10 from multiples of 10.	Use a number grid or number line to solve: 10 less than 30 20 less than 40 30 less than 50			
How can patterns, relations, and functions be used as tools to best describe and help explain real-life situations? What makes an	Algebraic representation can be used to generalize patterns and relationships. Algebraic and numeric	Operations and Algebraic Thinking SMP 1 – Make sense of problems and persevere in solving them.	Represent and solve problems involving addition and subtraction.	1.OA.1 - Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all	Solve doubles number stories.	Demonstrate knowledge of doubles facts within in stories. Noah has 8 pennies. His father gave him enough to double the amount he	SL 1.1B - Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small		

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algebraic algorithm both effective and efficient?	procedures are interconnected and build on one another to produce a coherent whole. Reasoning and/or proof can be used to verify or refute conjectures or theorems in algebra.	SMP 2 – Reason abstractly and quantitatively. SMP 6 – Attend to precision. SMP 7 – Look for and make use of structure. SMP 8 – Look for and express regularity in repeated reasoning.		positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.		had. How many pennies does he have now?	and larger groups: Build on others' talk in conversations by responding to the comments of others through multiple exchanges.
			Understand and apply properties of operations as strategies to add and subtract.	1.OA.3 - Apply properties of operations as strategies to add and subtract.	Write fact families.	Write addition and subtraction facts for the various fact families.	
				1.OA.4 - Understand subtraction as an unknown-addend problem.	Solve related addition and subtraction facts.	Produce number sentences to match fact families.	
					Find sums of three numbers.	Solve. $3 + 7 + 6$ $12 + 8 + 1$ $21 + 3 + 9$	
					Add and subtract within 20.	1.OA.5 - Relate counting to addition and subtraction.	
			1.OA.6 - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.	Write fact families for numbers shown on dominoes.		Create addition and subtraction facts from a domino.	
				Think addition to solve subtraction facts.		Demonstrate $5 - 1$ is like $1 + \underline{\quad} = 5$ with a number model.	
				Count up and back to subtract.	Share strategies of how to use number line, number grid, fingers, etc. to count up and back to solve subtraction problems.		

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						5 + 6 = 11 11 – 6 = 5		
			Work with addition and subtraction equations.	1.OA.7 - Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.	Find addition and subtraction facts.	Solve facts within 20.		
					Solve number stories and determine a pattern.	Complete “What’s My Rule?” problems.		
How can spatial relationships be described by careful use of geometric language? How do geometric relationships help to solve problems and/or make sense of phenomena? What situations can be analyzed using transformations and symmetries?	Geometric properties can be used to construct geometric figures. Geometric relationships provide a means to make sense of a variety of phenomena. Shape and area can be conserved during mathematical transformations .	Geometry SMP 1 – Make sense of problems and persevere in solving them. SMP 6 – Attend to precision. SMP 7 – Look for and make use of structure.	Reason with shapes and their attributes.	1.G.1 - Distinguish between defining attributes verses non-defining attributes; build and draw shapes to possess defining attributes. 1.G.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 shares creates smaller shares.	List the attributes of an attribute block. Identify blocks differing in just one attribute. Compare and contrast two shapes. Discuss attributes of squares and triangles. Identify attributes of other polygons.	Sort and describe the attributes of given shapes. Sort in different ways: color, shape, size. Sort in different ways: color, shape, size. Describe number of sides, corners, points, vertices. Describe attributes of hexagon, rectangle, quadrangle, rhombus, and trapezoid.	SL1.4 - Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.	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).
How can measurements be used to solve problems?	Everyday objects have a variety of attributes, each	Measurement and Data SMP 1 – Make	Tell and write time.	1.MD.3 - Tell and write time in hours and half-hours using analog and digital	Discuss the length of a minute.	List things that would take a minute to do. Share answers.		

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	of which can be measured in many ways. What we measure affects how we measure it.	sense of problems and persevere in solving them. SMP 2 – Reason abstractly and quantitatively.		clocks.	Identify and discuss the minute hand on an analog clock. Introduce digital time notation. Practice telling time.	Describe appearance and function of the minute hand. Write hour times in digital time notation. Show various hour times in analog and digital notation.		
Unit 8 - Geometry Pacing – 19 days						Written Assessment Open Response Question		
How do mathematical ideas interconnect and build on one another to produce a coherent whole? How can we compare and contrast numbers? What makes a computational strategy both effective and efficient? How do operations affect numbers? How do mathematical	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. Problem solving depends upon choosing wise ways.	Number and Operations in Base Ten SMP 1 – Make sense of problems and persevere in solving them. SMP 6 – Attend to precision. SMP 7 – Look for and make use of structure.	Understand place value.	1.NBT.2 - Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 1.NBT.2.a - Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: Ten can be thought of as a bundle of ten ones-called a “ten.” 1.NBT.2.b -	Exchange pennies for a dime and dimes for a dollar. Find patterns on a number grid.	Using a coin Place-Value mat, players take turns rolling two dice and finding the sum. The player takes that number of pennies from the bank and places them on the mat in the pennies column. When ten pennies are accumulated, an exchange is made for one dime. Use patterns on the number grid to help identify hidden numbers on a number grid.		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).

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representations reflect the needs of society across cultures?	Numeric fluency includes both the understanding of and the ability to appropriately use numbers.			Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. 1.NBT.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).	Review place-value patterns shown on the number grid.	Color code patterns on a number grid.		
					Write numbers and identify the tens digit.	Circle the tens digit in a two and three digit number.		
					Discuss patterns as add and subtract 1 and 10.	Find number grid patterns and identify +1, -1, +10, -10 and the movement directions.		
What makes a computational strategy both effective and efficient? How do operations affect numbers?	Computational fluency includes understanding the meaning and the appropriate use of numerical operations. The magnitude of numbers affects the outcome of operations on them.	Number and Operations in Base Ten SMP 1 – Make sense of problems and persevere in solving them. SMP 6 – Attend to precision. SMP 7 – Look for and make use of structure.	Use place value understanding and properties of operations to add and subtract.	1.NBT.4 - Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds	Use place value to mentally add and subtract 10. Solve number stories involving 2-digit numbers.	Solve What’s My Rule and Frames and Arrows problems. Create, solve and discuss the solution strategies from problems such as: You buy a pencil for 28 cents and an eraser for 17 cents. How much did you spend? You purchase a tennis ball that costs 10 cents less than a baseball	SL 1.1B - Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups: Build on others’ talk in conversations by responding to the comments of others through multiple exchanges.	9.1.4.A.1 - Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.

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				<p>tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</p> <p>1.NBT.5 - Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.</p> <p>1.NBT.6 - Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p>		<p>which costs 35 cents. How much does the tennis ball cost?</p>		
<p>How can patterns, relations, and functions be used as tools to best describe and help explain real-life</p>	<p>Algebraic representation can be used to generalize patterns and relationships.</p>	<p>Operations and Algebraic Thinking</p> <p>SMP 1 – Make sense</p>	<p>Add and subtract within 20.</p>	<p>1.OA.6 - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as</p>	<p>Complete a survey and use the class results to create a bar graph.</p>	<p>Answer questions about data in a tally chart.</p>		<p>9.1.4.C.1 - Practice collaborative skills in groups, and explain how these skills assist in completing tasks in</p>

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<p>situations?</p> <p>What makes an algebraic algorithm both effective and efficient?</p>	<p>Algebraic and numeric procedures are interconnected and build on one another to produce a coherent whole.</p> <p>Reasoning and/or proof can be used to verify or refute conjectures or theorems in algebra.</p>	<p>of problems and persevere in solving.</p> <p>SMP 2 – Reason abstractly and quantitatively.</p> <p>SMP 4 – Model with mathematics.</p> <p>SMP 7 – Look for and make use of structure.</p>		<p>counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).</p>				<p>different settings (at home, in school, and during play).</p>
<p>How can spatial relationships be described by careful use of geometric language?</p> <p>How do geometric relationships help to solve problems and/or make sense of phenomena?</p> <p>What situations can be analyzed using transformations and symmetries?</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>Shape and area can be conserved during mathematical transformations.</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 others.</p> <p>SMP 4 – Model with</p>	<p>Reason with shapes and their attributes.</p>	<p>1.G.1 - Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.</p> <p>1.G.2 - Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms,</p>	<p>Use descriptions of attributes to draw shapes.</p> <p>Use triangles, circles, and fractions of circles to create composite shapes.</p> <p>Identify and compare 3-dimensional objects.</p> <p>Draw shapes, partition them into shares, and name the parts.</p>	<p>Practice describing and identifying shapes.</p> <p>Describe using appropriate mathematical language.</p> <p>Distinguish defining and non-defining attributes of 3-dimensional shapes.</p> <p>Name the fraction of the parts.</p>	<p>RL.1.2 - Ask and answer questions about key details in a text read aloud or information presented orally or through other media.</p> <p>SL.1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and</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>mathematics.</p> <p>SMP 6 – Attend to precision.</p> <p>SMP 7 – Look for and make use of structure.</p>		<p>right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.</p> <p>1.G. 3 - Partition circles and rectangles into two and four equal shares, describe the shares using the words 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 shares creates smaller shares.</p>	<p>Discuss the idea that the size of an equal share is dependent on the size of the whole.</p> <p>Divide shapes into 2 and 4 equal shares and name the parts.</p> <p>Discuss the idea that increasing the number of shares results in smaller shares.</p>	<p>Is $\frac{1}{2}$ of a grape the same as $\frac{1}{2}$ of an apple?</p> <p>Students show the fractional parts of folded cracker paper.</p> <p>If you share a pizza with 20 of your friends or 3 of your friends, which slices are smaller? Why?</p>	feelings.	
How can measurements be used to solve problems?	<p>Everyday objects have a variety of attributes, each of which can be measured in many ways.</p> <p>What we measure affects how we measure it.</p>	<p>Measurement and Data</p> <p>SMP 2 - Reason abstractly and quantitatively.</p> <p>SMP 6 – Attend to precision.</p>	<p>Tell and write time.</p> <p>Represent and interpret data.</p>	<p>1.MD.3 - Tell and write time in hours and half-hours using analog and digital clocks.</p>	<p>Read, tell and show and record time on an analog clock and</p> <p>Record digitally times on an analog clock.</p> <p>Introduce the time half-past an hour.</p>	<p>Practice telling and showing time.</p> <p>Practice writing time.</p> <p>Shade half of a clock face.</p>	<p>RL.1.2 - Ask and answer questions about key details in a text read aloud or information presented orally or through other media.</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>

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Unit 9 – Two – Digit Addition and Subtraction and Review Pacing – 20 days						Written Assessment Open Response Question		
<p>How do mathematical ideas interconnect and build on one another to produce a coherent whole?</p> <p>What makes a computational strategy both effective and efficient?</p> <p>How do operations affect numbers?</p> <p>How do mathematical representations reflect the needs of society across cultures?</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.</p> <p>Numeric fluency includes both the understanding of and the ability to appropriately use numbers.</p>	<p>Number and Operations in Base Ten</p> <p>SMP 1 – Make sense of problems and persevere in solving them.</p> <p>SMP 2 – Reason abstractly and quantitatively.</p> <p>SMP 5 – Use appropriate tools strategically.</p> <p>SMP 7 – Look for and make use of structure.</p>	<p>Understand place value.</p>	<p>1.NBT.2 - Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:</p> <p>1.NBT.2.a - 10 can be thought of as a bundle of ten ones-called a “ten.”</p> <p>1.NBT.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> <p>1.NBT.2.c - The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, nine tens (and 0 ones).</p>	<p>Mentally find 10 more and 10 less than a given number and identify tens and ones digits.</p> <p>Write the largest possible numbers with given digits.</p> <p>Use place-value understanding to create and solve number-grid puzzles.</p> <p>Write the number represented by base-10 blocks.</p>	<p>Solve 10 more and 10 less than 35, 56, and 82 Circle the digit in the tens place. Underline the digit in the ones place.</p> <p>1, 2, 4, 5 9, 7, 0, 2</p> <p>Solve number grid puzzles given one number.</p> <p>6 longs and 15 cubes. 1 long and 17 cubes.</p>	<p>SL.1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.</p>	
<p>How can we compare and</p>	<p>A quantity can be represented</p>	<p>Number and Operations in</p>	<p>Understand place value.</p>	<p>1.NBT.3 - Compare two two-digit numbers</p>	<p>Write relation models for</p>	<p>Use comparison symbols to</p>		<p>9.1.4.A.1 - Recognize a</p>

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contrast numbers?	numerically in various ways.	Base Ten SMP 4 – Model with mathematics. SMP 5 – Use appropriate tools strategically.		based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.	sums.	compare sums of two digit numbers.		problem and brainstorm ways to solve the problem individually or collaboratively.
What makes a computational strategy both effective and efficient? How do operations affect numbers?	Computational fluency includes understanding the meaning and the appropriate use of numerical operations. The magnitude of numbers affects the outcome of operations on them.	Number and Operations in Base Ten SMP 1 – Make sense of problems and persevere in solving them. SMP 3 – Construct viable arguments and critique the reasoning of others. SMP 4 – Model with mathematics. SMP 6 – Attend to precision.	Use place value understanding and properties of operations to add and subtract.	1.NBT.4 - Add within 100, including adding a two-digit and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models, or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	Estimate the solution to and solve a number story. Write and solve a number story using a money context.	Solve: If you have 35 cents can you buy two bags of pretzels for 17 cents each? How do you decide? Discuss strategies. Given a menu: Choose three items to buy, find the total cost, and show or explain the strategy for solving.	RL 1.1 - Ask and answer questions about key details in a text.	9.1.4.A.5 - Apply critical thinking and problem-solving skills in classroom and family settings.
What makes a computational strategy both effective and efficient?	Computational fluency includes understanding the meaning and the	Number and Operations in Base Ten SMP 1 – Make sense of	Use place value understanding and properties of operations to	1.NBT.6 - Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences),	Add three numbers to solve number stories.	Sarah read 3 books on Monday, 5 books on Tuesday, and 7 books on Wednesday. How	RL 1.1 - Ask and answer questions about key details in a text.	

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How do operations affect numbers?	appropriate use of numerical operations.	problems and persevere in solving them.	add and subtract.	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.		many books did she read in all?		
	The magnitude of numbers affects the outcome of operations on them.	SMP 3 – Construct viable arguments and critique the reasoning of others.			Write and solve vending machine number stories.	Create number stories and models using prices from food snacks.		
		SMP 6 – Attend to precision.			Practice adding and subtracting 2-digit numbers.	12 + 42 30 + 56 62 – 32 75 - 14		
How can patterns, relations, and functions be used as tools to best describe and help explain real-life situations? What makes an algebraic algorithm both effective and efficient?	Algebraic representation can be used to generalize patterns and relationships. Algebraic and numeric procedures are interconnected and build on one another to produce a coherent whole.	Operations and Algebraic Thinking	Understand and apply properties of operations as strategies to add and subtract.	1.OA3 - Apply properties of operations as strategies to add and subtract.	Write equivalent names for numbers.	Show different ways of making 13.		
		SMP 1 – Make sense of problems and persevere in solving them.				Identify true and false equations.	Evaluate whether or not a given number model is correct. 13 = 1 + 3 + 4 (false)	
		SMP 4 – Model with mathematics.	Add and subtract within 20.	1.OA.6 - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 =	Record ways to get the number 12 on a calculator.	Show 6 + 6 Show 4 + 8 Show 10 + 2 Show 14 - 2		
		SMP 5 – Use appropriate tools strategically.				Use name collection boxes to write equations.	Show various addition and subtraction equations to represent the number 12.	
		SMP 6 – Attend to precision.						

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				12, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).				
How can measurements be used to solve problems?	Everyday objects have a variety of attributes, each of which can be measured in many ways. What we measure affects how we measure it. Measurements can be used to describe, compare, and make sense of phenomena.	Measurement and Data SMP 5 – Use appropriate tools strategically. SMP 6 – Attend to precision.	Measure lengths indirectly and by iterating length units.	1.MD.2 - Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.	Discuss how a ruler can be made with any unit.	Make and use a paper clip ruler to measure the heights of desks.	SL.1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.	
					Find lengths with paper clip rulers.	Select classroom items to measure that are longer than the paper clip ruler and discuss strategies used.		
How can spatial relationships be described by careful use of geometric language? How do geometric relationships help to solve problems and/or make sense of phenomena?	Geometric properties can be used to construct geometric figures. Geometric relationships provide a means to make sense of a	Geometry SMP 1 – Make sense of problems and persevere in solving them. SMP 2 – Reason abstractly and quantitatively. SMP 6 – Attend	Reason with shapes and their attributes.	1.G.1 - Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.	Rearrange composite shapes to create new ones.	Use flat representations of 3D shapes to form composite shapes.	SL 1.1B - Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups: Build on others' talk in conversations by responding to the	
					Find classroom objects that are similar in shape to a cylinder, cube, and sphere.	List 3D shapes found in the classroom.		

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<p>What situations can be analyzed using transformations and symmetries?</p>	<p>variety of phenomena. Shape and area can be conserved during mathematical transformations .</p>	<p>to precision. SMP 7 – Look for and make use of structure.</p>		<p>1.G.2 - Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.</p>	<p>Review the attributes of 3-dimensional shapes.</p>	<p>Describe the characteristics of all the 3D shapes in classroom. Faces, vertices, edges.</p>	<p>comments of others through multiple exchanges.</p>	
				<p>1.G. 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 shares creates smaller shares.</p>	<p>Show different ways to share a granola square with a friend.</p>	<p>Describe ways to share.</p>		
					<p>Share a circle among 2 or 4 people. Discuss ways to name the shares and compare the sizes of the shares.</p>	<p>Describe how to share a circle and share strategies to compare the sizes of the shares.</p>		
<p>District End-Year Assessment Pacing: 1 Day</p>						<p>End-Year Assessment</p>		