

**New Paltz Central School District
Mathematics
First Grade**

Time	Essential Questions/Content	Skills	Assessments
September – October	<p><u>Unit 1: Part -Part-Whole</u></p> <ul style="list-style-type: none"> • What is the whole? • What are the parts? • What parts equal the whole? <p>-----</p> <ul style="list-style-type: none"> • Represent and solve problems involving addition and subtraction • Understand and apply properties of operations and the relationship between addition and subtraction • One to one correspondence • Number relationships • Use of the equal sign • Use of the plus sign • Use of the minus sign • Inequalities - less than, greater than • Visualizing dot configurations 1-10 	<ul style="list-style-type: none"> • 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. • Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. • Apply properties of operations as strategies to add and subtract. Examples: If $8+3=11$ is known, then $3+8=11$ is also known. (Commutative property of addition.) To add $2+6+4$, the second two numbers can be added to make a ten, so $2+6+4 = 2+10+4$. (Associative property of addition.) • Understand subtraction as an unknown addend problem. For example, subtract $10-8$ by finding the number that makes 10 when added to 8. Add and subtract within 20. 	<ul style="list-style-type: none"> • Pre and post assessments • Teacher observation

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November – December	<p><u>Unit 2: Combinations of Ten</u></p> <ul style="list-style-type: none"> • What is ten? • What are the parts of ten? • How do parts combine to make a whole? <p>-----</p> <ul style="list-style-type: none"> • Place value concepts • Fluency with combinations of ten 	<ul style="list-style-type: none"> • Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$). • Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$.</i> 	<ul style="list-style-type: none"> • Record all combinations of ten • Name all the 10s pairs • Choose two 10 pairs and write the fact families • Teacher observation

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December	<p><u>Unit 3: Geometry</u></p> <ul style="list-style-type: none"> • What are the defining attributes of a shape? • What is a two dimensional shape? • What is a three dimensional shape? • How can I compose a larger shape using smaller shapes? • How can I partition circles and rectangles into halves, fourths, and quarters? • How can I decompose and describe breaking a whole into smaller, equal parts? <p>-----</p> <ul style="list-style-type: none"> • Reason with shapes and their attributes • Comparing and describing two and three dimensional shapes • Composing and decomposing shapes using two and three dimensional shapes • Making halves, fourths, and quarters 	<ul style="list-style-type: none"> • 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. • Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names such as “right rectangular prism.”) • Partition circles and rectangles into two and four equal shares, describe the shares using the words <i>halves</i>, <i>fourths</i>, and <i>quarters</i>, and use the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares. 	<ul style="list-style-type: none"> • Teacher observation • Fill the hexagon assessment - attached • Name the defining attributes assessment - attached • Make and name a half, quarter, fourth - attached
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January – February	<p><u>Unit 4: Understanding and Solving Word Problems</u></p> <ul style="list-style-type: none"> • What is a problem? • How can I use my math thinking to solve problems? • What are some ways I can show my math thinking? <p>-----</p> <ul style="list-style-type: none"> • Represent and solve problems involving addition and subtraction. • Using the concept of part-part-whole • Strategies to understand word problems, e.g., visualizing • Strategies to solve problems • Composing and decomposing word problems • Writing equations • Using objects, drawings, and equations with a symbol for the unknown number to represent the problem 	<ul style="list-style-type: none"> • 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. • Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. 	<ul style="list-style-type: none"> • Pre and post assessments • Teacher observation
March - April	<p><u>Unit 5: Understanding Place Value</u></p> <ul style="list-style-type: none"> • How do I think about my combinations to 10 to solve equations to 20? • How does a digit’s/numeral’s placement in a given number effect its value? • What is a ten? What is a one? • What is a unit? <p>-----</p> <ul style="list-style-type: none"> • Add and subtract within 20 • Understand place value 	<ul style="list-style-type: none"> • Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). • 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 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 	<ul style="list-style-type: none"> • Unit assessment • Teacher observation

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	<ul style="list-style-type: none"> • Visualize dot configurations to 20 	<p>creating equivalent but easier or known sums (e.g, adding $6+7$ by creating the known equivalent $6+6+1 = 12+1=13$).</p> <ul style="list-style-type: none"> • Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: <ol style="list-style-type: none"> a. 10 can be thought of as a bundle of ten ones - called a “ten.” b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). • Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$. 	

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May - June	<p><u>Unit 6: Measurement and Data</u></p> <ul style="list-style-type: none"> • What is length? • What is unit? • How can I use a unit to measure? • How can I compare two lengths? • How do I tell time? • How do I represent and interpret data? <p>-----</p> <ul style="list-style-type: none"> • Measure lengths indirectly and by iterating length units. • Tell and write time and money. • Represent and interpret data. 	<ul style="list-style-type: none"> • Order three objects by length; compare the lengths of two objects indirectly by using a third object. • Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i> • Tell and write time in hours and half-hours using analog and digital clocks. • Recognize and identify coins, their names, and their value. • 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. 	<ul style="list-style-type: none"> • How long is this fish? • Coin assessment • Time assessment