



Mohawk Local Schools 1st Grade Math

Quarter 1 Curriculum Guide

- Mathematical Practices
1. Make Sense of Problems and Persevere in Solving them
 2. Reasoning Abstractly & Quantitatively
 3. Construct Viable Arguments and Critique the Reasoning of Others
 4. Model with Mathematics
 5. Use Appropriate Tools Strategically
 6. Attend to Precision
 7. Look for and Make use of Structure
 8. Look for and Express Regularity in Repeated Reasoning

Critical Areas of Focus Being Addressed:

- Ratios and Proportions

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| Content Statements Addressed and Whether they are Knowledge, Reasoning, Performance Skill, or Product: (DOK1) (DOK2) (DOK3) (DOK4) | Underpinning Targets Corresponding with Standards and Whether they are Knowledge, Reasoning, Performance Skill, or Product: "I can.....", "Students Will Be Able To....." |
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| <i>Topics 1-3</i> | |
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| 1.OA.1 (DOK2) 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 | I can use a symbol for an unknown number in an addition or subtraction problem within 20. (K) I can solve word problems using addition and subtraction within 20. (R) I can interpret situations to solve word problems with |
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| represent the problem. See Glossary, Table 1. | <p>unknowns in all positions within 20 using addition and subtraction. (R)</p> <p>I can determine appropriate representations for solving word problems involving different situations using addition and subtraction. (R)</p> |
| 1.OA.3 (DOK2) Apply properties of operations as strategies to add and subtract. For example, if $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known (Commutative Property of Addition); to add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$ (Associative Property of Addition). Students need not use formal terms for these properties. | <p>I can explain how properties of operation strategies work. (K)</p> <p>I can apply strategies using properties of operations to solve addition and subtraction problems. (R)</p> |
| 1.OA.7 (DOK2) 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? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$. | <p>I can explain the meaning of an equal sign (the quantity on each side of the equality symbol is the same). (K)</p> <p>I can compare the values on each side of an equal sign. (R)</p> <p>I can determine if the equation is true or false. (R)</p> |
| 1.OA.8 (DOK2) Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + \square = 11$, $5 = \square - 3$, $6 + 6 = \square$. | <p>I can recognize part-part-whole relationships of three whole numbers. Example: $_ + 5 = 8$ $5 = _ - 3$ In each instance the 3 and 5 represent the parts and the 8 would be representative of the whole. (K)</p> <p>I can determine the missing value in an addition or subtraction equation by using a variety of strategies. (R)</p> |
| 1.OA.4 (DOK2) Understand subtraction as an unknown addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8. | <p>I can identify the unknown in a subtraction problem. (K)</p> <p>Solve subtraction problems to find the missing addend. (R)</p> <p>Explain the relationship of addition and subtraction. (R)</p> |
| 1.OA.6 (DOK2) Add and subtract within 20, demonstrating fluency with various strategies for addition and subtraction within 10. Strategies may include 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 | <p>I can add fluently within 10. (K)</p> <p>I can subtract fluently within 10. (K)</p> <p>I can apply strategies to add and subtract within 20. (R)</p> |

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| <p>known equivalent $6 + 6 + 1 = 12 + 1 = 13$.</p> | |
| <p>1.OA.7 (DOK2) 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? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.</p> | <p>I can explain the meaning of an equal sign (the quantity on each side of the equality symbol is the same). (K) I can compare the values on each side of an equal sign. (R) I can determine if the equation is true or false. (R)</p> |
| <p>1.OA.5 (DOK2) Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p> | <p>I can know how to count on and count back. (K) I can explain how counting on and counting back relate to addition and subtraction. (R)</p> |



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Mohawk Local Schools 1st Grade Math

Quarter 2 Curriculum Guide

Mathematical Practices

1. Make Sense of Problems and Persevere in Solving them
2. Reasoning Abstractly & Quantitatively
3. Construct Viable Arguments and Critique the Reasoning of Others
4. Model with Mathematics
5. Use Appropriate Tools Strategically
6. Attend to Precision
7. Look for and Make use of Structure
8. Look for and Express Regularity in Repeated Reasoning

Critical Areas of Focus Being Addressed:

- o Ratios and Proportions

Content Statements Addressed and Whether they are Knowledge, Reasoning, Performance Skill, or Product:
 (DOK1) (DOK2) (DOK3) (DOK4)

Underpinning Targets Corresponding with Standards and Whether they are Knowledge, Reasoning, Performance Skill, or Product: "I can.....", "Students Will Be Able To....."

Topic 7, 8, 9, 4

1.NBT.1 (DOK 3) 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.

I can write numerals up to 120. (K)
 I can represent a number of objects up to 120 with a written numeral. (R)
 I can count (saying the number sequence) to 120, starting at any number less than 120. Read the numerals up to 120. (PS)

1.NBT.2abc (DOK 2) Understand that the two digits of a two-

I can explain what each digit of a two-digit number represents

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| <p>digit number represent amounts of tens and ones. Understand the following as special cases:</p> <p>a. 10 can be thought of as a bundle of ten ones — called a “ten.”</p> <p>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>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).</p> | <p>Identify a bundle of 10 ones as a “ten”. (K)</p> <p>I can represent numbers 11 to 19 as composed of a ten and correct number of ones. Represent the numbers 20, 30, 40, 50, 60, 70, 80, and 90 as composed of the correct number of tens. (R)</p> |
| <p>1.NBT.3 (DOK 2) Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and</p> | <p>I can identify the value of each digit represented in the two-digit number. I can tell what each symbol represents $>$, $<$, and $=$. (K)</p> <p>I can compare two two-digit numbers based on meanings of the tens and ones digits. Use $>$, $=$, and $<$ symbols to record the results of comparisons. (R)</p> |
| <p>1.NBT.4 (DOK 2) Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</p> | <p>I can identify the value of each digit of a number within 100. Decompose any number within one hundred into ten(s) and one(s). (K)</p> <p>I can choose an appropriate strategy for solving an addition or subtraction problem within 100. Relate the chosen strategy (using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction) to a written method (equation) and explain the reasoning used. Use composition and decomposition of tens when necessary to add and subtract within 100. (R)</p> |
| <p>1.NBT.5 (DOK 2) 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>I can, identify the value of each digit in a number within 100. (K)</p> <p>I can apply knowledge of place value to mentally add or subtract 10 to/from a given two digit number. (R)</p> <p>I can explain how to mentally find 10 more or 10 less than the given two-digit number. (R)</p> |
| <p>1.OA.1 (DOK 2) Use addition and subtraction within 20 to solve word problems involving situations of adding to,</p> | <p>I can use a symbol for an unknown number in an addition or subtraction problem within 20. (K)</p> |

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| <p>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 word problems using addition and subtraction within 20. (R) Interprets situations to solve word problems with unknowns in all positions within 20 using addition and subtraction (R)</p> |
| <p>1.OA.3 (DOK 2) Apply properties of operations as strategies to add and subtract.3 Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.) 3 Students need not use formal terms for these properties.</p> | <p>I can explain how properties of operation strategies work. (K) I can apply strategies using properties of operations to solve addition and subtraction problems. (R)</p> |
| <p>1.OA.4 (DOK 2) Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8</p> | <p>I can identify the unknown in a subtraction problem. (K) I can solve subtraction problems to find the missing addend. (R) I can explain the relationship of addition and subtraction. (R)</p> |
| <p>1.OA.5 (DOK 2) Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p> | <p>I can count on and count back. (K)</p> |
| <p>1.OA.6 (DOK 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 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>I can add fluently within 10. (K) I can subtract fluently within 10. (K) I can apply strategies to add and subtract within 20. (R)</p> |
| <p>1.OA.7 (DOK 2) 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? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.</p> | <p>I can explain the meaning of an equal sign (the quantity on each side of the equality symbol is the same). (K) I can compare the values on each side of an equal sign. (R) I can determine if the equation is true or false. (R)</p> |
| <p>1.OA.8 (DOK 2) Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. For example, determine the unknown number that</p> | <p>I can recognize part-part-whole relationships of three whole numbers. (K) I can determine the missing value in an addition or subtraction</p> |

makes the equation true in each of the equations $8 + ? = 11$, 5

$$= \diamond - 3, 6 + 6 = \diamond .$$

equation by using a variety of strategies. (R)



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Quarter 3 Curriculum Guide

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Critical Areas of Focus Being Addressed:

- Ratios and Proportions

Content Statements Addressed and Whether they are Knowledge, Reasoning, Performance Skill, or Product:
 (DOK1) (DOK2) (DOK3) (DOK4)

Underpinning Targets Corresponding with Standards and Whether they are Knowledge, Reasoning, Performance Skill, or Product: "I can.....", "Students Will Be Able To....."

Topics 12, 13, 5, 6

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

I can identify the measurement known as the length of an object. (K)
 I can directly compare the length of three objects. (K)
 I can order three objects by length. (R)
 I can compare the lengths of two objects indirectly by using a third object to compare them (e.g., if the length of object A is

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| | <p>greater than the length of object B, and the length of object B is greater than the length of object C, then the length of object A is greater than the length of object C.) (R)</p> |
| <p>1.MD.2 (DOK 3) Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</p> | <p>I can use the same size non-standard objects as iterated (repeating) units. (K) I can know that length can be measured with various units. (K) I can compare a smaller unit of measurement to a larger object. (R) I can determine the length of the measured object to be the number of smaller iterated (repeated) objects that equal its length. (R) I can demonstrate the measurement of an object using non-standard units (e.g. paper clips, unifix cubes, etc.) by laying the units of measurement end to end with no gaps or overlaps. (PS)</p> |
| <p>1.MD.3 (DOK 3) Work with time and money. a. Tell and write time in hours and half-hours using analog and digital clocks. b. Identify pennies and dimes by name and value.</p> | <p>I can recognize that analog and digital clocks are objects that measure time. (K) I can identify hour hand and minute hand and distinguish between the two. (K) I can identify and recognize the value of dimes and pennies. (K) I can determine where the minute hand must be when the time is to the hour (o'clock). (R) I can determine where the minute hand must be when the time is to the half hour (thirty). (R) I can tell/write the time to the hour and half hour correctly using analog and digital clocks – for instance when it is 3:30 the hour hand is between the 3 and the 4; the minute hand is on the 6. (PS)</p> |
| <p>1.OA.1 (DOK2) 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. See Glossary, Table 1.</p> | <p>I can use a symbol for an unknown number in an addition or subtraction problem within 20. (K) I can solve word problems using addition and subtraction within 20. (R) I can interpret situations to solve word problems with unknowns in all positions within 20 using addition and subtraction. (R) I can determine appropriate representations for solving word</p> |

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| | problems involving different situations using addition and subtraction. (R) |
| 1.OA.2 (DOK 2) Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings and equations with a symbol for the unknown number to represent the problem. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.) | I can add three whole numbers whose sum is less than or equal to 20. (K) I can solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. (R) |
| 1.OA.3 (DOK 2) Apply properties of operations as strategies to add and subtract. For example, if $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known (Commutative Property of Addition); to add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$ (Associative Property of Addition). Students need not use formal terms for these properties. | I can explain how properties of operation strategies work. (K) Apply strategies using properties of operations to solve addition and subtraction problems. (R) |
| 1.OA.4 (DOK 2) Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8. | I can identify the unknown in a subtraction problem. (K) I can solve subtraction problems to find the missing addend. (R) I can explain the relationship of addition and subtraction. (R) |
| 1.OA.6 (DOK 2) Add and subtract within 20, demonstrating fluency with various strategies for addition and subtraction within 10. Strategies may include 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 $6 + 6 + 1 = 12 + 1 = 13$. | I can add fluently within 10. (K) I can subtract fluently within 10. (K) I can apply strategies to add and subtract within 20. (R) |
| 1.OA.8 (DOK 2) Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + \square = 11$, $5 = \square - 3$, $6 + 6 = \square$ | I can recognize part-part-whole relationships of three whole numbers. Example: $\square + 5 = 8$; $5 = \square - 3$. In each instance the 3 and 5 represent the parts and the 8 would be representative of the whole. (K) I can determine the missing value in an addition or subtraction |

equation by using a variety of strategies. (R)



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Quarter 4 Curriculum Guide

Mathematical Practices

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Critical Areas of Focus Being Addressed:

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Underpinning Targets Corresponding with Standards and Whether they are Knowledge, Reasoning, Performance Skill, or Product: "I can.....", "Students Will Be Able To....."

Topic 15, 16, 10, 11, 14

1.G.1 (DOK 4) Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus nondefining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.

I can identify defining attributes of shapes. (K)
 I can identify non-defining attributes of shapes. (K)
 I can distinguish between (compare/contrast) defining and non-defining attributes of shapes. (R)
 I can build shapes to show defining attributes. (P)
 I can draw shapes to show defining attributes. (P)

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| <p>1.G.2 (DOK) Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quartercircles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. Students do not need to learn formal names such as "right rectangular prism."</p> | <p>I can know that shapes can be composed and decomposed to make new shapes. (K) I can describe properties of original and composite shapes. (K) I can determine how the original and created composite shapes are alike and different (R) I can create composite shapes. (P) I can compose new shapes from a composite shape. (P)</p> |
| <p>1.G.3 (DOK 2) 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 in real-world contexts. Understand for these examples that decomposing into more equal shares creates smaller shares.</p> | <p>I can identify when shares are equal. (K) I can identify two and four equal shares. (K) Describe equal shares using vocabulary: halves, fourths and quarters, half of, fourth of, and quarter of. (K) Describe the whole as two of two or four of four equal shares. (K) I can justify why dividing, (decomposing) a circle or rectangle into more equal shares creates smaller pieces. (R)</p> |
| <p>1.NBT.4 (DOK 2) 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; record the strategy with a written numerical method (drawing, and when appropriate equations) and explain the reasoning used. Understand that when adding two-digit numbers, tens are added to tens, ones are added to ones; and sometimes it is necessary to compose a ten.</p> | <p>I can identify the value of each digit of a number within 100. (K) I can decompose any number within one hundred into ten(s) and one(s). (K) I can choose an appropriate strategy for solving an addition or subtraction problem within 100. (R) I can relate the chosen strategy (using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction) to a written method (equation) and explain the reasoning used. (R) I can use composition and decomposition of tens when necessary to add and subtract within 100. (R)</p> |
| <p>1.NBT.5 (DOK 2) 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>I can identify the value of each digit in a number within 100. (K) I can apply knowledge of place value to mentally add or subtract 10 to/from a given two digit number. (R) I can explain how to mentally find 10 more or 10 less than the given two-digit number. (R)</p> |
| <p>1.NBT.6 (DOK 2) Use place value understanding and properties of operations to add and subtract. Subtract</p> | <p>I can identify the value of each digit of a number within 100. (K) I can subtract multiples of 10 in the range of 10-90 from</p> |

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| <p>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>multiples of 10 in the range of 10-90 (positive or zero differences). (R) I can choose appropriate strategy (concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction) for solving subtraction problems with multiples of 10. Relate the chosen strategy to a written method (equation) and explain the reasoning used. (R)</p> |
| <p>1.MD.4 (DOK 2) 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>I can recognize different methods to organize data. (K) I can recognize different methods to represent data. (K) I can organize data with up to three categories. (R) I can represent data with up to three categories. (R) I can interpret data representation by asking and answering questions about the data. (R)</p> |