

Midfield City Schools
MES 2nd Grade
Math Pacing Guide
Year 2017-2018

Operations and Algebraic Thinking [OA]

- Represent and solve problems involving addition and subtraction.
- Add and subtract within 20.
- Work with equal groups of objects to gain foundations for multiplication.

Number and Operations in Base Ten [NBT]

- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

Measurement and Data [MD]

- Measure and estimate lengths in standard units.
- Relate addition and subtraction to length.
- Work with time and money.
- Represent and interpret data.

Geometry [G]

- Reason with shapes and their attributes.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and 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.

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Month Introduced	AL COS Standard	Resources	Vocabulary	I Can	DOK Level
Operations and Algebraic Thinking					
November	Represent and solve problems involving addition and subtraction. 1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. [2-OA1]	Go Math- Ch3-Less8-9, Ch4- Less9-10, Ch5- Less9and11, In- U1- 2.1-2.8, 4.1-4.9	Addends, difference, sums, regroup	I can add and subtract to solve word problems.	DOK 2
October	Add and subtract within 20. 2. Fluently add and subtract within 20 using mental strategies. 2 By end of Grade 2, know from memory all sums of two one-digit numbers. [2-OA2]	Go Math- Ch3-Less 1-7 In- U1-1.1-1.5, 4.1-4.9, U3-U1-1.1-1.6	Addends, difference, sums	I can fluently add and subtract I can within 20 in my head. I can recall basic math facts from memory.	DOK 1
August	Work with equal groups of objects to gain foundations for multiplication. 3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends. [2-OA3]	Go Math- Ch1-Less1-2 In- U3-3.1-3.3	Compare, digit, even, hundred, add, thousand	I can tell whether a group of objects is odd or even I can write an equation which shows adding the same two numbers will result in an even number.	DOK 2

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October	4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. [2-OA4]	Go Math- Ch3-Less10-11 In- U1-3.2-3.4, 4.5-4.9, U3-1.2, 1.3	Addends, difference, sums	I can use addition to find the total of an array. I can write an equation that represents an array.	DOK 2
Number and Operations in Base Ten					
September	Understand place value. 5. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: [2-NBT1]	Go Math- Ch2-Less 1-5, In- U6-5a.3	Compare, digit, even, hundred, add, thousand	I can explain three-digit numbers using hundreds, tens, and ones.	DOK 2
September	5.a. 100 can be thought of as a bundle of ten tens — called a “hundred.” [2-NBT1a]	Go Math- Ch2-Less1-5 In-U6-2.4	Compare, digit, even, hundred, add, thousand	I can explain 100 is a bundle of ten tens.	DOK 2
September	5.b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). [2-NBT1b]	Go Math- Ch2-Less1.5 In-U6- 5a.2, 5a.5	Compare, digit, even, hundred, add, thousand	I can explain how many hundreds are in multiples of 100.	DOK 2
September	6. Count within 1000; skip-count by 5s, 10s, and 100s. [2-NBT2]	Go Math-Ch1-Less8-9		I can skip-count by 5's within 1000. I can skip-count by 10's within 1000. I can skip-count by 100's within 1000.	DOK 1

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September	7. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. [2-NBT3]	Go Math- Ch1-Less3.7, Ch2-Less6-8, In- U6 5a.2-5a.5	Compare, digit, even, hundred, add, thousand	I can read numbers to 1000. I can write numbers to 1000 in different forms.	DOK 1
September	8. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons. [2-NBT4]	Go Math- Ch2 In-U6 5a.1-5a.4	Is equal to, $=$, is greater than $>$, is less than, $<$	I can compare three-digit numbers using symbols.	DOK 2
December	Use place value understanding and properties of operations to add. 9. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. [2-NBT5]	Go Math- Ch4Less6-8, Ch5 Less3-8, In- U6-1.1-4-4, U8-1.1-4.4		I can fluently add within 100. I can fluently subtract within 100.	DOK 2
November	10. Add up to four two-digit numbers using strategies based on place value and properties of operations. [2-NBT6]	Go Math- Ch5, Ch6 1-10, In- U6-3.1-3.6		I can add up to four two-digit numbers.	DOK 2

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January	11. Add and subtract within 1000, 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. Understand that in adding or subtracting three digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. [2-NBT7]	Go Math- Ch5, Ch6-Less1-10, In- U4-5a.1-5a.5	Addends, difference, sums	I can add within 1000 using strategies I can explain. I can subtract within 1000 using strategies I can explain. I can relate addition and subtraction strategies to written methods.	DOK 2
September	12. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. [2-NBT8]	Go Math-Ch2 In-U6-5a.1-5a.5		I can add 10 to numbers in my head. I can add 100 to numbers in my head. I can subtract 10 from numbers in my head. I can subtract 100 from numbers in my head.	DOK 2
December	13. Explain why addition and subtraction strategies work, using place value and the properties of operations. [2-NBT9]	Go Math- Ch4, Ch5-Less3 In- U8-3.1-4.4		I can explain why addition strategies work. I can explain why subtraction strategies work.	DOK 2
Measurement and Data					

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March	Measure and estimate lengths in standard units. 14. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. [2-MD1]	Go Math-Ch8-Less1-2, 4, 8 Ch9-Less1, 3 In-U9-1.1-3.5	Centimeter, foot, line, plot, measuring tape, meter, yard stick	I can select appropriate tools for measuring length. I can measure the length of an object.	DOK 2
April	15. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen. [2-MD2]	Go Math- Ch8-Less6, Ch9-Less5, In-U9-1.2-1.6, 3.1-3.6a	Centimeter, foot, line, plot, measuring tape, meter, yard stick	I can measure the length of objects using different length units. I can describe the relationship of different length units.	DOK 2
March	16. Estimate lengths using units of inches, feet, centimeters, and meters. [2-MD3]	Go Math- Ch8-Less3, 7 Ch9-Less 2, 7	Centimeter, foot, line, plot, measuring tape, meter, yard stick	I can estimate lengths.	DOK 2
April	17. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. [2-MD4]	Go Math-Ch9-Less7, In-U9-1.4-1.6, 2.2-3.4	Centimeter, foot, line, plot, measuring tape, meter, yard stick	I can find the difference in length of two objects.	DOK 2
March	Relate addition and subtraction to length. 18. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. [2-MD5]	Go Math- Ch8-Less5, Ch9-Less4 In-U9-1.5, 1.6, 2.2, 2.3, 3.2, 3.5	Centimeter, foot, line, plot, measuring tape, meter, yard stick	I can add to solve word problems that involve length. I can subtract to solve word problems that involve length.	DOK 2

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March	19. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram. [2-MD6]	Go Math- Ch8-Less5, Ch9-Less4, In- U1-1.3-1.5, 2.1, 2.4, 3.2, 3.3	Centimeter, foot, line, plot, measuring tape, meter, yard stick	I can add using a number line. I can subtract using a number line.	DOK 2
February	Work with time and money. 20. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. [2-MD7]	Go Math- Ch7- Less8-11 In-U1-1.1-4.3	a.m. cent sign, decimal point, dime, dollar, dollar sign, inch, minutes, nickel, noon, penny, p.m., quarter past	I can tell time to the nearest five minutes. I can write time to the nearest five minutes.	DOK 1
February	21. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. [2-MD8] <i>Example: If you have 2 dimes and 3 pennies, how many cents do you have?</i>	Go Math-Ch7-Less1-7 In- U6-1.3, 2.3, 2.4, 3.2-3.6, 4.1-4.4	a.m. cent sign, decimal point, dime, dollar, dollar sign, inch, minutes, nickel, noon, penny, p.m., quarter past	I can solve word problems involving money. I can use the \$ and ¢ symbols.	DOK 1
March	Represent and interpret data. 22. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units. [2-MD9]	Go Math- Ch8-Less9 In- U9-1.5		I can collect data by measuring lengths. I can make a line plot to show data.	DOK 2

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April	23. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph. [2-MD10] (See Appendix A, Table 1.)	Go Math- Ch10-Less1-6, In-U4-1.4a, 1.7, 2.3, 2.5, 2.6	Bar graph, data, picture graph, survey	I can draw a picture graph. I can draw a bar graph. I can solve problems using a bar graph.	DOK 2

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Geometry					
August- April (ongoing)	Reason with shapes and their attributes. 24. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.5 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. [2-G1]	Go Math-Ch11 Less1-5 In- U2-1.1-1.5, 2.1-2.9	Angle, cone, cylinder, edge, face, fourths, halves, half of, hexagon, pentagon, quadrilateral , rectangular prism, side, sphere, third of, thirds, vertex, vertices		DOK 2

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August- April	25. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. [2-G2]	Go Math- Ch11-Less6, In-U2-2.3, 2.4, 2.6, 2.8	Angle, cone, cylinder, edge, face, fourths, halves, half of, hexagon, pentagon, quadrilateral , rectangular prism, side, sphere, third of, thirds, vertex, vertices	I can partition a rectangle into rows and columns of same-size squares and count the total number.	DOK 1
August-April	26. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words <i>halves</i> , <i>thirds</i> , <i>half of</i> , <i>a third of</i> , etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. [2-G3] 4See Glossary, Table 1. 5Sizes are compared directly or visually, not compared by measuring	Go Math- Ch11-Less7-10, In- U7-1.1-2.6	Angle, cone, cylinder, edge, face, fourths, halves, half of, hexagon, pentagon, quadrilateral , rectangular prism, side, sphere, third of, thirds, vertex, vertices	I can divide circles and rectangles into equal parts. I can describe equal parts as part of a whole. I can recognize equal shares of identical shapes do not have to be the same shape.	DOK 2
May	Pre-requisite and foundational skills for 3rd Grade- 3.2 Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. [3-OA2] 3.10 Use place value understanding to round whole numbers to the nearest 10 or 100. [3-NBT1]			System Initiative to bridge the gap between grade levels. Standards identified as weak standards during pacing session	

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Assessment Schedule

1st Quarter	2nd Quarter/3rd Quarter	4th Quarter
Standards Tested	Standards Tested	Standards Tested
BM1 Assessment- All Standards (Week of August 28, 2017)	Formative Assessment- November, 2017 (Projected Testing Timeframe; waiting on new contract) Standards- 3, 2, 1, 4, 5, 5a, 5b, 6, 7, 8, 10, 12	BM2 Assessment- All Standards (Projected Testing Timeframe- Week of February 5 th or 12 th - pending new contract)

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