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Operations & Algebraic Thinking	
Represent and solve problems involving addition and subtraction. (2.OA.A) **2.OA.A.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.	▪ I can choose when to use addition and/or subtraction in a word problem. ▪ I can represent addition and subtraction word problems using objects, drawings, and equations with unknown in all positions. ▪ I can solve addition and subtraction word problems that involve two steps (doing one computation, and using that answer to perform a second computation that leads to the solution of the problem). ▪ I can solve word problems with unknown numbers in different positions (e.g., 5 + __ = 13, __ + 8 = 13, 5 + 8 = __).
Add and subtract within 20. (2.OA.B) **2.OA.B.2:** Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.	▪ I can use mental strategies (e.g., count on, make a ten0 to add or subtract numbers within 20 with ease. ▪ I can recall from memory all sums of two one-digit numbers.
Work with equal groups of objects to gain foundations for multiplication. (2.OA.C) **2.OA.C.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.OA.C.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.	▪ I can identify a group of objects as being even or odd using different strategies. ▪ I can write an equation to show an even sum has the same addends (e.g., 5 = 5 = 10, 6 + 6 = 12) ▪ I can use addition to find the total number of objects in an array. ▪ I can write an addition equation (e.g., 3 + 3 + 3 = 9) to express the total as a sum of equal addends. ▪ I can represent the total number of objects arranged in a rectangular array as an expression with the repeated addition of number of objects in each row (or column). For example if there are 3 rows with 4 objects in each row, I can write the expression 4 + 4 + 4.
Numbers & Operations in Base Ten	
Understand place value. (2.NBT.A) **2.NBT.A.1:** Understand that the three	▪ I can represent a hundred as ten groups of ten. ▪ I can represent each digit in a three

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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: **a.** 100 can be thought of as a bundle of ten tens — called a "hundred." **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.NBT.A.2:** Count within 1000; skip-count by 5s, 10s, and 100s. **2.NBT.A.3:** Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. **2.NBT.A.4:** Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	digit numbers using hundreds, tens, and ones. ▪ I can explain the value of each digit in a three-digit number (place value). ▪ I can explain the value of the zeros in a given hundred as zero tens and zero ones. ▪ I can skip count to 1000 by 5's. ▪ I can skip count to 1000 by 10's. ▪ I can skip count to 1000 by 100's. ▪ I can read and write numbers up to 1000 sin base-ten numerals (e.g., 234) ▪ I can read and write numbers using expanded form (e.g., 200 + 30 + 4) ▪ I can read and write numbers up to 1000 using number names (e.g., two hundred thirty four). ▪ I can explain a process for determining whether a three-digit number is greater than, less than, or equal to another three-digit number. ▪ I can determine when a three-digit number is greater than, less than, or equal to another three-digit number, and record the comparison using the symbols >, <, and =.
Use place value understanding and properties of operations to add and subtract. (2.NBT.B) **2.NBT.B.5:** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. **2.NBT.B.6:** Add up to four two-digit numbers using strategies based on place value and properties of operations. **2.NBT.B.7:** Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the	▪ I can add and subtract numbers within 100 with ease by applying strategies (e.g., decomposing numbers into tens and ones, using commutative and associative properties, using mental strategies) based on the numbers being added or subtracted. ▪ I can add up to four two-digit numbers by applying strategies (e.g., decomposing numbers, rearranging the order of the numbers, making tens or multiples of tens) based on the numbers being added. ▪ I can use concrete models or drawings to show how to add within 1000 using a strategy based on place value (collecting the hundreds, collecting the tens, and collecting the ones, and when necessary, composing ten ones to make a ten or composing ten tens to make a

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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.NBT.B.8:** Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. **2.NBT.B.9:** Explain why addition and subtraction strategies work, using place value and the properties of operations.	hundred). ▪ I can use concrete models or drawings to show how to subtract within 1000 using a strategy based on place value (subtracting hundred from hundreds, tens from tens, and ones from ones, and when necessary, decomposing a hundred into ten tens or decomposing a ten into ten ones). ▪ I can use concrete models or drawings to show other strategies (such as applying the commutative or associative property, adding on to solve a subtraction problem) for adding and subtracting within 1000. ▪ I can write down and explain the steps that I followed as I used concrete models or drawings to show how I added or subtracted. ▪ I can mentally add 10 to a given number from 100-900. ▪ I can mentally subtract 10 from given number from 100-900. ▪ I can mentally add 100 to a given number from 100-900. ▪ I can mentally subtract 100 from a given number from 100-900. ▪ I can explain addition and subtraction using place value. ▪ I can explain addition and subtraction using the properties of operations (commutative, associative, identity).
Measurement & Data	
Measure and estimate lengths in standard units. (2.MD.A) **2.MD.A.1:** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. **2.MD.A.2:** Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two	▪ I can select an appropriate tool (e.g., ruler, yardstick, meter stick, measuring tape) to measure an object. ▪ I can measure the length of an object using a tool. ▪ I can select several appropriate units of length (e.g., inches, feet, centimeter, meter) to measure an object. ▪ I can accurately measure an object with two different unit lengths. ▪ I can compare the measurement using the shorter unit length to the measurement using the longer unit

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measurements relate to the size of the unit chosen. **2.MD.A.3:** Estimate lengths using units of inches, feet, centimeters, and meters. **2.MD.A.4:** Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	length, and explain how the size of the unit length affects the measurement. ▪ I can estimate the length of a given object in inches and feet. ▪ I can estimate the length of a given object in centimeters and meters. ▪ I can measure the length of any object in a given unit. ▪ I can find the difference in length between two objects using standard units.
Relate addition and subtraction to length. (2.MD.B) **2.MD.B.5:** 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.MD.B.6:** 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.	▪ I can add and subtract lengths of the same unit within 100. ▪ I can represent addition and subtraction word problems involving lengths of the same unit by using drawings and equations with a symbol (e.g., a blank or empty box) for the unknown length. ▪ I can solve for the unknown number in an equation from a word problem. ▪ I can create a number line with whole number intervals (equal spacing). ▪ I can represent whole numbers on a number line. ▪ I can find sums and differences within 100 using a number line.
Work with time and money. (2.MD.C) **2.MD.C.7:** Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. **2.MD.C.IA.1:** Describe the relationship among standard units of time: minutes, hours, days, weeks, months and years. **2.MD.C.8:** Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do*	▪ I can explain the difference between a.m. (midnight to 11:59 a.m.) and p.m. (noon to 11:59 p.m.). ▪ I can look at the time on an analog clock (when the hour hand is pointing to any of the numbers 1-12), say what time it is, and write the time as it would appear on a digital clock. ▪ I can look at the time on a digital clock (when the minutes are displayed as a multiple of 5), say what time it is, and draw in the hands on an analog clock. ▪ I can write the time and draw in the hands on an analog clock when someone tells me what time it is to the nearest 5 minutes. ▪ I can understand and use special terms

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you have?	such as: half past___, quarter after/past ___, quarter to ___, __minutes after/past ___, __minutes to ___. ▪ I can identify and give the value of dollar bills, quarters, dimes, nickels, and pennies. ▪ I can use $ (dollar) and ¢ (cents) symbols appropriately. ▪ I can solve a word problem with dollar bills, quarters, dimes, nickels, and pennies.
Represent and interpret data. (2.MD.D) **2.MD.D.9:** 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.MD.D.IA.2:** Use interviews, surveys, and observations to collect data that answer questions about students' interests and/or their environment. **2.MD.D.10:** 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[1] using information presented in a bar graph.	▪ I can measure and record lengths of several objects to the nearest whole-number. ▪ I can create a line plot with a horizontal scale marked off in whole-number units. ▪ I can record length measurements on a line plot. ▪ I can make a picture or bar graph with up to four categories to represent data. ▪ I can compare data on a bar graph. ▪ I can solve addition and subtraction problems using data from a picture or bar graph.
Geometry	
Reason with shapes and their attributes. (2.G.A)	▪ I can identify the defining attributes of a shape. ▪ I can use defining attributes (e.g., number of sides, faces, angles) to name

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2.G.A.1: Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.[2] Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. **2.G.A.2:** Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. **2.G.A.3:** Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves, thirds, half of, a third of, 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.	shapes (triangles, quadrilaterals, pentagons, hexagons, and cubes) ▪ I can draw a given shape when given defining attributes. ▪ I can draw rows and columns of equal size in a rectangle. ▪ I can count the equal size squares in a rectangle. ▪ I can partition (divide) a circle and rectangle into two, three, or four equal parts. ▪ I can describe the equal shares with words (e.g., halves, thirds, fourths). ▪ I can describe a whole by the number of equal parts (e.g., two halves make a whole). ▪ I can explain and give examples to show that halves, thirds, and fourths of an identical whole need not be the same shape (e.g., half of a rectangle can be shown horizontally or vertically).

The Standards for Mathematical Practice

The standards for mathematical practice are really about teaching students to think and act like mathematicians and problem solvers:

1. Make sense of problems and persevere in solving them.
   What it means: Understand the problem, find a way to attack it, and work until it is done. Basically, you will find practice standard #1 in every math problem, every day. The hardest part is pushing students to solve tough problems by applying what they already know and to monitor themselves when problem-solving.

2. Reason abstractly and quantitatively
   What it means: Get ready for the words *contextualize* and *decontextualize*. If students have a problem, they should be able to break it apart and show it symbolically, with pictures, or in any way other than the standard algorithm. Conversely, if students are working a problem, they should be able to apply the "math work" to the situation.

3. Construct viable arguments and critique the reasoning of others.
   What it means: Be able to talk about math, using mathematical language, to support or oppose the work of others.

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4. Model with mathematics.
   What it means: Use math to solve real-world problems, organize data, and understand the world around you.

5. Use appropriate tools strategically.
   What it means: Students can select the appropriate math tool to use and use it correctly to solve problems. In the real world, no one tells you that it is time to use the meter stick instead of the protractor.

6. Attend to precision
   What it means: Students speak and solve mathematics with exactness and meticulousness.

7. Look for and make use of structure
   What it means: Find patterns and repeated reasoning that can help solve more complex problems. For young students this might be recognizing fact families, inverses, or the distributive property. As students get older, they can break apart problems and numbers into familiar relationships.

8. Look for and express regularity in repeated reasoning.
   What it means: Keep an eye on the big picture while working out the details of the problem. You don't want kids that can solve the one problem you've given them; you want students who can generalize their thinking.

   To hear an explanation of the importance of these standards for mathematical practices, watch this video from the Hunt Institute:
   https://www.youtube.com/watch?v=m1rxkW8ucAI&list=PLD7F4C7DE7CB3D2E6