Common Core Math Curriculum – Grade 2

ESSENTIAL QUESTIONS	DOMAINS AND CLUSTERS	GRADE 2 SKILL	VOCABULARY	MATHEMATICAL PRACTICES & RESOURCES	ASSESSMENT
What is place value? How can numbers be compared?	*Number & Operations in Base Ten 2.NBT* Understand place value	☐ Explain and show one hundred as 10 tens using drawing or base ten blocks 2.NBT.1.a ☐ Explain and show one thousand as 10 hundreds using drawings or base ten blocks2.NBT.1.a ☐ Explain and show one ten as 10 ones using drawing or base ten blocks2.NBT.1.a ☐ Draw or show a representation of a given three digit number ☐ Write a spoken number (up to three digits) 2.NBT.1.a ☐ Write a number that corresponds to a visual representation of a number (up to three digits). 2.NBT.1.a ☐ Name the value of any digit in a three digit number (i.e. In the number 576, the 7 = 70) 2.NBT.1.a ☐ State the place value of any digit in a three digit number (i.e. In the number 764, the 7 is in the hundreds place.) 2.NBT.1.a ☐ Explain the relationship between each digit of a given number and its place value 2.NBT.1.b ☐ Name the value of any digit in a three digit number (i.e. In the number 576, the 7 = 70) 2.NBT.1.b ☐ State the place value of any digit in a three digit number (i.e. In the number 764, the 7 is in the hundreds place.) 2.NBT.1.b ☐ Write and explain the expanded form of a three digit number2.NBT.1.b ☐ Write and explain the expanded form of a three digit number that is a multiple of one hundred2.NBT.1.b ☐ Skip count by 5s to 1000 and explain the numeric pattern developed 2.NBT.2 ☐ Skip count by 10s to 1000 and explain the numeric pattern developed 2.NBT.2 ☐ Skip count by 100s to 1000 and explain the numeric pattern developed 2.NBT.2	▪ One(s) ▪ Ten(s) ▪ Hundred(s) ▪ Thousand(s) ▪ Place value ▪ Value ▪ Three digit ▪ Digit ▪ Model ▪ Base ten ▪ Skip count ▪ Place value ▪ Expanded notation ▪ Word form ▪ Base-ten ▪ Numeral ▪ Digit	Make sense of problems and persevere in solving them. Use pictures Tables Graph Pictures Reason abstractly and quantitatively. Draw pictures Construct viable arguments and critique the reasoning of others. Be able to explain, verbally or in written form, the reason for conclusions. Model with mathematics. Write a number sentence to describe a situation.	Math Journaling Performance Tasks Pencil and paper Presentations Pictorial Representations Demonstration Teacher Observation
	Understand place value	☐ Write a spoken number up 1000 2.NBT.3 ☐ Read a printed numeral up to 1000 2.NBT.3 ☐ Read the word form of a number and write the numeric representation up to 1000 2.NBT.3 ☐ Explain the relationship between each digit of a given number and its place value 2.NBT.3 ☐ Name the value of any digit in a three digit number 2.NBT.3 ☐ State the place value of any digit in a three digit number 2.NBT.3 ☐ Write and explain the expanded form of a three digit number 2.NBT.3 ☐ Compare two 3-digit numbers using the terms and symbols > (greater than), < (less than) and = (equal to) 2.NBT.4 ☐ Explain why a 3-digit number is greater than or less than another 2 or 3-digit number,	▪ Compare ▪ Greater than > ▪ Less than < ▪ More ▪ Less ▪ Equal ▪ Worth ▪ Group ▪ Regroup ▪ Add ▪ Subtract ▪ Strategy	Use appropriate tools strategically. Paper Pencil Ruler Clock Cubes Shapes Attend to precision.	

What are the strategies we can use to add and subtract numbers?		based on place value (i.e. 433 > 298 because the 4 in 433 is worth 400 and the 2 in 298 is worth 200, so 433 is larger than 298 since 400 is larger than 200.) 2.NBT.4 ❑ Draw a visual representation(or manipulate place value blocks) to show why a 3-digit number is larger or smaller than another 2 or 3-digit number 2.NBT.4 ❑ Name the value of any digit in a 3- digit number (i.e. In the number 4<u>7</u>6, the 7 = 70) 2.NBT.4 ❑ State the place value of any digit in a three digit number (i.e. In the number 4<u>7</u>6, the 7 is in the tens place.) 2.NBT.4 ❑ Explain how one number is greater than or less than another 2.NBT.4 ❑ Match the symbol (>) with the phrase 'greater than' and the symbol (<) with the phrase 'less than' 2.NBT.4		Use clear definitions, specify units of measure, label answers, and calculate accurately. Look for and make use of structure. Sort shapes by attribute Properties of addition & subtraction
	Use place value understanding and properties of operations to add and subtract.	❑ Add and subtract within 100 using fluency within 20 (with quick recall and without any visual aids) 2.NBT.5 ❑ Show and explain related addition and subtraction facts 2.NBT.5 ❑ Explain addition and subtraction strategies used 2.NBT.5 ❑ Explain the relationship between addition and subtraction and prove this relationship through inverse operations (checking work) 2.NBT.5 ❑ Add up to four 2-digit numbers 2.NBT.6 ❑ Explain the meaning of regrouping when adding (also to include written explanation) 2.NBT.6 ❑ Explain and show why, through expanded form, when adding, the digits must be lined up in the correct place value (ex. 22 + 23+ 13= 58 because (20 + 2) + (20 + 3) + (10 + 3) = (20+20 + 10) + (2+3+3) = 50+ 8= 58 2.NBT.6 ❑ Show why the commutative property[A+B = B+A] and associative property[A+B+C = (A+B) +C = A + (B+C)] of addition holds true, when adding up to four 2-digit numbers 2.NBT.6 ❑ Add a three-digit number to a one, two and three-digit number with and without regrouping, using a variety of strategies and explain the strategy used 2.NBT.7 ❑ Subtract a three-digit number from a one, two and three-digit number with and without regrouping, using a variety of strategies and explain the strategy used 2.NBT.7 ❑ Draw pictures and use place value blocks to show why, when subtracting, it might be necessary to decompose a ten or hundred (regroup) 2.NBT.7 ❑ Draw pictures and use place value blocks to show why when adding, it might be necessary to compose a ten or hundred (regroup) 2.NBT.7 ❑ Name the value of any digit in a three digit number (i.e. In the number 7<u>7</u>6, the 7 = 70) when adding two numbers 2.NBT.7 ❑ State the place value of any digit in a three digit number (i.e. In the number 7<u>7</u>6, the 7 is in the tens place.) when adding two numbers 2.NBT.7 ❑ Explain the meaning of regrouping when adding (also to include written explanation) 2.NBT.7	▪ Inverse operation ▪ Associative property ▪ Commutative property ▪ Two-digit numbers ▪ Mentally ▪ Sum ▪ Difference ▪ Place value ▪ Two-digit number ▪ Expanded form	Look for and express regularity in repeated reasoning. Look for general methods and short cuts.
What are the steps to solving word problems?				

| Why are number patterns important in math? | Use place value understanding and properties of operations to add and subtract. | ❑ Explain the meaning of regrouping when subtracting (also to include written explanation) 2.NBT.7
❑ Explain/ write the relationship between addition and subtraction 2.NBT.7
❑ Solve addition and subtraction one and two-step word problems and evaluate the solution in the context of the word problem 2.NBT.7
❑ Add 10 or 100 more to a given number (up to 3-digits) with quick recall (without the use of visual aids or counting strategies) and explain reasoning used 2.NBT.8
❑ Subtract 10or 100 from a given number (up to 3-digits) with quick recall (without the use of visual aids or counting strategies) and explain reasoning used 2.NBT.8
❑ Skip count by tens and hundreds from any given number (to include counting forwards and backwards) 2.NBT.8
❑ Write a sequence of numbers with the rule "add ten", "subtract ten", "add one hundred" or "subtract one hundred" starting with any number 2.NBT.8
❑ Explain how ten more, ten less, one hundred more, or one hundred less is related to place value 2.NBT.8
❑ Draw pictures and use place value blocks to show why when adding, it might be necessary to compose a ten or hundred (regroup) 2.NBT.9
❑ Draw pictures and use place value blocks to show why, when subtracting, it might be necessary to decompose a ten or hundred (regroup) 2.NBT.9
❑ Explain the meaning of regrouping when adding (also to include written explanation) 2.NBT.9
❑ Explain the meaning of regrouping when subtracting (also to include written explanation) 2.NBT.9
❑ Explain/ write the relationship between addition and subtraction
❑ Explain and show why, through expanded form, when adding or subtracting, the digits must be lined up in the correct place value (ex. $324 + 245= 569$ because $(300 + 20 + 4) + (200+40 + 5)= (300 + 200) + (20+40) + (4 + 5) = 500+60 + 9= 569$ 2.NBT.9
❑ Evaluate an addition or subtraction equation for the validity of the sum or difference as true or false and show why it is true or false 2.NBT.9

❑ Solve addition one- and two-step word problems within 100 and explain reasoning used 2.OA.1
❑ Solve subtraction one- and two-step word problems within 100 and explain reasoning used 2.OA.1
❑ Read addition and subtraction word problems to select the operation needed for solving 2.OA.1
❑ Draw visual representations of addition and subtraction word problems within 100 2.OA.1
❑ Write an addition or subtraction equation to match a word problem 2.OA.1
❑ Create a word problem that matches a given equation 2.OA.1
❑ Solve a word problem for an unknown in all positions of addition and subtraction | ▪ Addend
▪ Sum
▪ Equal
▪ Difference
▪ Part
▪ Whole
▪ In all
▪ Altogether
▪ Left
▪ Word problem
▪ Question
▪ Unknown
▪ Symbol
▪ Equation
▪ Solve
▪ Count on
▪ Count back
▪ Subtract
▪ Even
▪ Odd
▪ Equal groups
▪ Unequal groups
▪ Pairing
▪ Skip count
▪ Array
▪ Multiplication
▪ Total
▪ Skip count
▪ Row(s)
▪ Column(s)
▪ Repeated addition
▪ Factor
▪ Product | | |
| | ***Operations & Algebraic Thinking 2.OA***

Represent and solve problems involving addition and subtraction. | | | | |

		equations (by writing an equation with a symbol for the unknown) 2.OA.1		
	Add and subtract within 20.	❑ Add and subtract fluently within 20 (with quick recall and without any visual aids) 2.OA.2 ❑ Show and explain related addition and subtraction facts 2.OA.2 ❑ Create a known fact to help with another fact (i.e. composing a five, composing a ten, doubles, doubles plus one, etc.) 2.OA.2 ❑ Explain addition and subtraction strategies used 2.OA.2		
	Work with equal groups of objects to gain foundations for multiplication.	❑ Prove whether or not a group of objects is even or odd by pairing up objects from each group to either form two equal groups or two unequal groups 2.OA.3 ❑ Describe the difference between even and odd 2.OA.3 ❑ Draw an array to represent an equation for multiplication 2.OA.4 ❑ Explain the parts of a multiplication equation in reference to an array, using the terms factor(s) and product 2.OA.4 ❑ Draw two or more arrays to show multiple ways to represent the same multiplication equation 2.OA.4 ❑ Skip count by 2s, 5s and 10s to count the total number of objects shown in an array2.OA.4 ❑ Add repeatedly, to find the total number of objects shown in an array 2.OA.4 ❑ Write a multiplication equation to show a given array 2.OA.4	- Length - Measure - Measurement - Ruler - Yardstick - Meter stick - Tape measure - Units - Estimate - Meter(s)	
	Measurement & Data 2.MD	❑ Write an addition equation (repeated addition) to show a given array 2.OA.4	- Feet/ Foot - Inches/ Inch - Yard(s)	
What tools do we use length?	Measure and Estimate Length in standard units.	❑ Measure the length of a given object, using a variety of measurement tools (rulers, yardstick, meter stick, and measuring tape) 2.MD.1 ❑ Compare and contrast between ruler, yardsticks, meter sticks and measuring tapes 2.MD.1 ❑ Describe measurement situations for a variety of tools 2.MD.1 ❑ Estimate the length of an object based on knowledge of tools 2.MD.1 ❑ Measure the length of a given object, using a two different units (ex feet & inches) and compare between the two measurements 2.MD.2 ❑ Explain & show why when measuring with a larger unit the measurement will be a smaller number than when measuring with a smaller unit 2.MD.2 ❑ Measure an object in inches, feet, centimeters and meters to compare actual measurements with estimates 2.MD.3 ❑ Estimate measurements in inches, feet, centimeters and meters 2.MD.3	- Centimeter(s) - Longer - Shorter - Longer than - Shorter than	
How do we measure length?		❑ Show inches, feet, centimeters and meters on ruler, yardstick, meter stick or tape measure2.MD.3 ❑ Compare and contrast between inches, feet, centimeters and meters. 2.MD.3 ❑ Compare the length of two objects measured to determine which object has the longer or shorter length 2.MD.4	- Width - Measurement - Solve - Compare - Difference	

		❑ Subtract the length of two object to determine how much longer or shorter one object is in comparison to another 2.MD.4	▪ Total
		❑ Measure on object in feet, inches, centimeters or meters 2.MD.4	▪ In all
		❑ Compare and contrast between inches, feet, centimeters and meters. 2.MD.4	▪ Inch/ inches
			▪ Feet/ foot
			▪ Centimeter(s)
	Relate Addition and Subtraction to Length	❑ Add & subtract measurements within 100 2.MD.5	▪ Equation
		❑ Solve addition and subtraction word problems involving measurements (with regrouping) 2.MD.5	▪ Whole number
		❑ Write an equation to match a given word problem, with a symbol written for the unknown number 2.MD.5	▪ Number line
		❑ Draw pictures to represent a word problem involving measurements 2.MD.5	
		❑ Explain whole numbers as lengths/ distance from 0 on a ruler or number line 2.MD.6	
		❑ Show a given number as a length/ distance from 0 on a number line 2.MD.6	
		❑ Show whole number sums and differences within 100 on a number line 2.MD.6	
		❑ Explain the addition of whole numbers as the addition of lengths on the number line (distances added) 2.MD.6	
		❑ Explain the subtraction of whole numbers as the subtraction of lengths on the number line (distances subtracted) 2.MD.6	▪ Analog clock
			▪ Digital clock
			▪ A.M.
	Work with time and money.	❑ Write and read the time shown on an analog clock to the nearest five minutes 2.MD.7	▪ P.M.
		❑ Read the time shown on a digital clock 2.MD.7	▪ Minutes
		❑ Match the time shown on an analog clock to a corresponding digital time to the nearest five minutes 2.MD.7	▪ Time
			▪ Hour(s)
		❑ Label time A.M. or P.M. based on the time of day 2.MD.7	▪ Dollar
How do we write and count money?		❑ Skip count by 5s to 60 2.MD.7	▪ Cent(s)
		❑ Compare and contrast between the hour hand and minute hand 2.MD.7	▪ Penny
		❑ Count a collection of coins and dollars 2.MD.8	▪ Nickel
		❑ Write an amount shown using decimal notation and $ 2.MD.8	▪ Dime
		❑ Label coins and their values 2.MD.8	▪ Quarter
How do write and tell time?		❑ Solve word problems involving dollar bills, quarters, nickels, dimes and pennies, using & and ¢ symbols 2.MD.8	
		❑ Add and subtract decimals numbers in the context of money 2.MD.8	
	Represent and interpret data.	❑ Create a line plot from measurement data collected by measuring several objects 2.MD.9	
			▪ Line plot
		❑ Measure an object multiple times for accuracy 2.MD.9	▪ Measurement
		❑ Measure the length of several object to the nearest whole unit 2.MD.9	▪ Data
What do we do with data?		❑ Order several measurements from least to greatest 2.MD.9	▪ Whole units
		❑ Create a picture graph and bar graph with up to four categories 2.MD.10	▪ Inch/ inches
		❑ Compare and contrast between picture and bar graphs 2.MD.10	▪ Centimeter
		❑ Solve simple 'put together' and 'take apart' word problems involving graphed data	▪ Foot/ feet

How do we name shapes?	**Geometry 2.G** Reason with Shapes and their Attributes	2.MD.10 ❑ Read the data presented in a bar graph and picture graph 2.MD.10 ❑ Name & draw shapes (triangles, quadrilaterals, pentagons, hexagons and cubes) based on specified attributes (number of faces, number of angles) 2.G.1 ❑ Describe and show (through drawings or manipulatives) faces and vertices on three dimensional shapes 2.G.1 ❑ Describe and show (through drawings or manipulatives) sides and angles on two-dimensional shapes 2.G.1 ❑ Describe the attributes of triangles, pentagons, hexagons, and cubes 2.G.1 ❑ Compare and contrast between two- and three- dimensional shapes 2.G.1 ❑ Divide a rectangle into rows and columns of equal size and count to find the area of the rectangle 2.G.2 ❑ Match a repeated addition equation to a corresponding picture/ drawing of an array 2.G.2 ❑ Match a multiplication equation to a corresponding picture/ drawing of an array 2.G.2 ❑ Divide a rectangle multiple ways (rows & columns) to show the same area 2.G.2 ❑ Write different multiplication equations for the same area 2.G.2 ❑ Explain area in terms of factors (rows and columns) and product (area) 2.G.2 ❑ Draw lines to equally divide circles and rectangles into thirds, halves and fourths (quarters) 2.G.3 ❑ Explain the effects of dividing a shape in terms of the size of the divided pieces 2.G.3 ❑ Name and label the divided pieces of a shape using the terms halve, third, fourth (quarter) 2.G.3 ❑ Describe shares of a divided figure in terms of third of, fourth of, half of and quarter of 2.G.3 ❑ Explain division of a figure in terms of part and whole 2.G.3 ❑ Show how equal shares of a figure do not need to be the same shape 2.G.3 ❑ Show equivalent fractions for 1/3, ¼ and ½ using geometric figures 2.G.3	▪ Attribute ▪ Shape ▪ Closed ▪ Side(s) ▪ Angle(s) ▪ Face(s) ▪ Two-dimensional ▪ Three-dimensional ▪ Triangle ▪ Quadrilateral ▪ Pentagon ▪ Hexagon ▪ Cube ▪ Vertex ▪ Array ▪ Multiplication ▪ Rows ▪ Columns ▪ Factor ▪ Area model ▪ Divide ▪ Half ▪ Half of ▪ Quarter ▪ Fourth ▪ Divide ▪ Equal shares ▪ Whole ▪ Part ▪ Fraction	
How do we find out how much space shapes take up?				
How do we divide shapes into equal shares?				