Common Core Math Curriculum – Grade 1

ESSENTIAL QUESTIONS	DOMAINS AND CLUSTERS	GRADE 1 SKILL	VOCABULARY	MATHEMATICAL PRACTICES & RESOURCES	ASSESSMENT
What are the different ways to solve addition and subtraction word problems? How do we apply different properties of operations to add or subtract? What are different strategies for addition and subtraction within 20?	***Operations and Algebraic Thinking 1.OA*** Represent and solve problems involving addition and subtraction	☐ Solve addition and subtraction word problems within 20 1.OA.1 ☐ Read addition and subtraction word problems to select the operation needed for solving 1.OA.1 ☐ Draw visual representations of addition and subtraction word problems within 20 1.OA.1 ☐ Manipulate object to explain what operations is needed to solve addition and subtraction word problems within 20 1.OA.1 ☐ Write an addition or subtraction equation to match a word problem 1.OA.1 ☐ Explain the meaning of the symbols in an addition and subtraction equation 1.OA.1 ☐ Read an equation (number sentence), using the term 'plus' for (+), 'minus' for (-) and 'equals' for (=)1.OA.1 ☐ Create word problem (number stories) that match a given number sentence 1.OA.1 ☐ Solve a word problem for an unknown in all positions of addition and subtraction equations (by writing an equation with a symbol for the unknown) 1.OA.1 ☐ Solve addition word problems with three addends, for sums up to 20. 1.OA.2 ☐ Read addition word problems to select the operation needed for solving 1.OA.2 ☐ Draw visual representations of addition word problems three addends, for sums up to 20 1.OA.2 ☐ Manipulate object to explain what operations is needed to solve addition word problems with three addends, for sums up to 20 1.OA.2 ☐ Write an addition equation to match a word problem 1.OA.2 ☐ Explain the meaning of the symbols in an addition equation1.OA.2 ☐ Read an addition equation (number sentence), using the term 'plus' for (+) and 'equals' for (=)]1.OA.2 ☐ Solve a word problem for an unknown in all positions of an addition equations (by writing an equation with a symbol for the unknown) 1.OA.2 ☐ Create word problem (number stories) that match a given addition equation with three addends. 1.OA.2	• Add • Addend • Sum • Equal • Difference • Part • Whole • In all • Altogether • Left • Unknown • Symbol • Equation • Solve	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 Resources for Implementation:	Math Journaling Chapter Tests Performance Tasks Teacher Observation Rubric Checklists http://palm.sri.com/
	Understand and apply properties of operations and the relationship between addition and subtraction	☐ Explain or show the commutative property of addition (by switching the addends to get the same sum) 1.OA.3 ☐ Explain or show the associative property of addition with three addends 1.OA.3 ☐ Explain the meaning of the symbols in an addition equation 1.OA.3 ☐ Read an addition equation (number sentence), using the term 'plus' for (+) and 'equals' for (=)1.OA.3 ☐ Create different addition equations for the same sum 1.OA.3 ☐ Add and subtract, using properties of operations1.OA.3 ☐ Describe addition and subtraction relationships 1.OA.4	• Addend(s) • Sum • Difference • Commutative Property • Associative Property • Symbol • Equation	Literature: http://www.mathcats.com/grownupcats/ideabankmathandliterature.html Math Centers: Variety of manipulatives Geometric shapes- 　　　2 & 3 dimensional	

What is an example of an addition and subtraction equation that is true?		Write a fact family given 3 different numbers and explain how they are related1.OA.4	Addend	Pattern blocks
		Read an equation (number sentence), using the term 'plus' for (+), 'minus' for (-) and 'equals' for (=)1.OA.4	Unknown	Connecting cubes
		Solve for an unknown addend using subtraction 1.OA.4	Equation	Counting bears
			Fact family	Base ten logs
	Add and subtract within 20		Addition	Numbers chart/cubes
		Add within 20 using counting or counting on to solve 1.0A.5	Subtraction	Objects of varying size
		Subtract within 20 using count back or counting on (addition) to solve1.0A.5	Related fact	Calendar
		Explain the effect of addition and subtraction (subtraction will result in a smaller number & addition will result in a larger number) 1.0A.5	Solve	Analog and digital clocks
				Coins
		Read an equation (number sentence), using the term 'plus' for (+), 'minus' for (-) and 'equals' for (=)1.0A.5		Number lines
		Write an addition or subtraction equation 1.0A.5		
		Add and subtract fluently within 10 (with quick recall and without any visual aids) 1.OA.6		www.time-for-time.com/lesson1.htm
		Show and explain related addition and subtraction facts 1.0A.6		
		Create a known fact to help with another fact (i.e. composing a five, composing a ten, doubles, etc.) 1.OA.6		http://www.mathsolutions.com/index.cfm?page=wp9&crid=56
		Explain addition and subtraction strategies used 1.OA.6		
	Work with addition and subtraction equations		Count on	http://illuminations.nctm.org/Lessons.aspx
		Explain the meaning of the symbols in an addition and subtraction equation 1.OA.7	Count back	
		Read an equation (number sentence), using the term 'plus' for (+), 'minus' for (-) and 'equals' for (=) 1.OA.7	Solve	
		Evaluate an equation for given value (Example: 3 + ? = 8. Is this question true if ? = 6? Why or why not?) 1.OA.7	Equation / Double	www.commoncore.org.
		Manipulate objects, draw pictures or balance a scale to prove an equation (number sentence) true or false for different values. 1.OA.7	Group of 5	www.corestandards.org.
		Explain the meaning of the symbols in an addition and subtraction equation 1.OA.8	Group of 10 / Related fact	www.illustrativemathematics.org.
		Read an equation (number sentence), using the term 'plus' for (+), 'minus' for (-) and 'equals' for (=) 1.OA.8	Equation / Equal	
		Calculate the missing value in a given equation.(Example: 3 +? = 8. What value of ? will make this equation true?) 1.OA.8	Balanced	www.mctm.org.
			Addition	
		Manipulate objects, draw pictures or balance a scale to prove an equation (number sentence) true for a value found. 1.OA.8	Subtract	http://www.kidzone.ws/math/
	Numbers and Operations in Base Ten (NBT) 1.NBT			http://www.lessonplanspage.com
				http://www.theteacherscorner.net/
	Extend the counting sequence	Count to 120, starting from any number 1.NBT.1		
		Read numerals from 0 to 120 1.NBT.1	Number	
		Write numerals 0 to 120, starting from any number 1.NBT.1	Before	
		Label a given set of objects with a written numeral 1.NBT.1	After	
		Sequence a set of consecutive numbers in order from least to greatest, within 120. 1.NBT.1	Between	
			Least	

		❑ Explain how each successive number is one more than the previous 1.NBT.1	▪ Greatest
		❑ Count objects and sort them into groups of ten 1.NBT.2.a	▪ Order
		❑ Draw groups of ten(s) to represent multiples of ten 1NBT.2.a	▪ Digit
		❑ Explain and show 1 'ten' as ten ones 1.NBT.2.a	▪ Ten(s)
		❑ Write the expanded form of a number 11-19 1.NBT.2.b	▪ One(s)
What are the different ways that you can count to 120 starting at any number less than 120? .		❑ Explain the value of a teen number in terms of tens and ones (i.e. 12 is one group of ten and two ones) 1.NBT. 2.b	▪ Place value
		❑ Manipulate objects or draw groups of tens and ones to represent a two digit number 1.NBT. 2.b	▪ Value
			▪ Group
		❑ Manipulate objects or draw picture to show that 1 ten is equal to 10 ones. 1.NBT. 2.b	▪ Bundle
			▪ Skip count
		❑ Name the value of any digit in a two digit number (i.e. In the number 18, the 1 = 10) 1.NBT. 2.b	▪ Compare
			▪ Greater than >
		❑ State the place value of any digit in a two digit number (i.e. In the number 18, the 8 is in the tens place.) 1.NBT. 2.b	▪ Less than <
			▪ More
		❑ Skip count by tens 1.NBT.2.c	▪ Less
		❑ Explain the value numbers that are multiples of 10 in terms of tens and ones (i.e. 40 is 4 groups of ten and 0 ones) 1.NBT. 2.c	▪ Equal
		❑ Draw groups of tens to represent numbers that are multiples of 10 1.NBT. 2.c	
What is place value?		❑ Manipulate objects or draw picture to show that 1 ten is equal to 10 ones. 1.NBT. 2.c	
	Extend the counting sequence	❑ Compare 2 two-digit numbers using the terms and symbols > (greater than), < (less than) and = (equal to) 1.NBT.3	
		❑ Explain why a 2-digit number is greater than or less than another 2-digit number, based on place value 1.NBT.3	
		❑ Draw a visual representation(or manipulate place value blocks) to show why a two-digit number is larger or smaller than another two-digit number 1.NBT.3	
What is an example of 10 more or 10 less than a number without having to count?		❑ Name the value of any digit in a two digit number (i.e. In the number 76, the 7 = 70) 1.NBT.3	
		❑ State the place value of any digit in a two digit number (i.e. In the number 76, the 7 is in the tens place.) 1.NBT.3	▪ Place value
			▪ Two-digit number
		❑ Explain how one number is greater than or less than another 1.NBT.3	▪ Ten(s)
		❑ Match the symbol (>) with the phrase 'greater than' and the symbol (<) with the phrase 'less than' 1.NBT.3	▪ Ones(s)
			▪ Group
	Use place value understanding and properties of operations to add and subtract.	❑ Add a two-digit number to a one-digit number, using a variety of strategies and explain the strategy used 1.NBT.4	▪ Regroup
			▪ Add
		❑ Add a two-digit number to a two-digit number with and without regrouping and explain the strategy used 1.NBT.4	▪ Strategy
			▪ Ten more

Why do we need mental math?		❑ Draw pictures and use place value blocks to show why when adding, it might be necessary to compose a ten (regroup) 1.NBT.4 ❑ Name the value of any digit in a two digit number when adding two numbers 1.NBT.4 ❑ State the place value of any digit in a two digit number when adding two numbers 1.NBT.4 ❑ Explain the meaning of regrouping when adding 1.NBT.4 ❑ Explain/ write the relationship between addition and subtraction 1.NBT.4 ❑ Add 10 more to a given number with quick recall and explain reasoning used 1.NBT.5 ❑ Subtract 10 from a given number with quick recall and explain reasoning used 1.NBT.5 ❑ Skip count by tens from any given number 1.NBT.5 ❑ Write a sequence of numbers with the rule "add ten" or "subtract ten" starting with any number 1.NBT.5 ❑ Explain how ten more or ten less is related to place value 1.NBT.5 ❑ Subtract 10 from a given number that is a multiple of 10 and explain the reasoning used 1.NBT.6	▪ Ten less ▪ Skip counting ▪ Add ▪ Subtract
How do you compare two objects by using a third object?	*Measurement and Data (MD) 1.MD* Measure lengths indirectly and by iterating length units	❑ Explain, show using manipulatives or drawing and write about how ten less is related to place value 1.NBT.6 ❑ Explain/ write how addition and subtraction are related 1.NBT.6 ❑ Order three objects by length 1.MD.1 ❑ Describe the lengths of three objects in terms of measurement 1.MD.1 ❑ Compare the length of a two object indirectly using a third and explain how this conclusion can be made 1.MD.1	▪ Length ▪ Longer than ▪ Shorter than ▪ Taller than ▪ Measure ▪ Measurement ▪ Order ▪ Width ▪ Inch(es) ▪ Centimeter(s) ▪ Ruler
How do you read a clock?		❑ Measure the length of an object using shorter, non-standard units, end-to-end with no gaps or overlaps 1.MD.2 ❑ Write/ record the length of an object measured using non-standard units (could also introduce inches and centimeters) 1.MD.2 ❑ Compare and contrast between standard and non-standard units 1.MD.2	▪ Time ▪ Clock ▪ Hour(s) ▪ Minute(s) ▪ Digital ▪ O'Clock ▪ Hour hand ▪ Minute hand ▪ Analog ▪ Second hand
What is the difference between an analog and a digital clock?	Tell and write time	❑ Read & write the time shown on a digital & analog clock to the hour and half-hour 1.MD.3.a ❑ Draw the minute and hour hands on an analog clock to show a given time to the hour and half-hour 1.MD.3.a ❑ Manipulate the hands on an analog clock to show directionality 1.MD.3.a ❑ Match time shown on a digital clock with an analog clock to the hour and half-hour (and vice versa) 1.MD.3.a	▪ Penny ▪ Nickel ▪ Dime ▪ Quarter ▪ Coin ▪ Cent(s) ▪ Money ▪ Value ▪ Decimal Point
What are the names of coins?	Recognize and identify coins, their names and values	❑ Name the coins: penny, nickel, dime and quarter 1.MD.3.b	▪ Data ▪ Graph

How do we interpret data?	Represent and interpret data	❑ State the value of the coins: penny, nickel, dime and quarter 1.MD.3.b ❑ Calculate the total value of a group of coins, up to $1.00. 1.MD.3.b ❑ Read and write coin amounts using decimal notation 1.MD.3.b ❑ Compare information provided in charts and graphs using the terms most, least, greater than, less than or equal to 1.MD.4 ❑ Read data in a graph, chart or table1.MD.4 ❑ Calculate how many more or less of a quantity is displayed in a graph 1.MD.4 ❑ Calculate the total number of data points and answer how many is shown in a specific category 1.MD.4 ❑ Display a given set of data with up to three categories 1.MD.4 ❑ Explain the summative results of a collection of data or survey results1.MD.4	▪ Chart ▪ Table ▪ Attribute ▪ Shape ▪ Closed ▪ Side(s) ▪ Angle(s) ▪ Two-dimensional ▪ Triangle ▪ Circle ▪ Square ▪ Rectangle ▪ Trapezoid
How can you define a shape? How do we use shapes to create new shapes? How would you divide shapes into equal shares?	*Geometry (G)* *1.G* Reason with shapes and their attributes	❑ Name the defining attributes of two dimensional shapes (closed, number or sides, number of angles, etc) 1.G.1 ❑ Name non-defining attributes of two-dimensional shapes (color, orientation, size, etc.) 1.G.1 ❑ Build and draw shapes with specified attributes 1.G.1 ❑ Explain/ define a closed shape1.G.1 ❑ Compare and contrast between two and three dimensional figures 1.G.2 ❑ Create two dimensional shapes using triangles, squares, rectangles, trapezoids, half-circles and quarter-circles and explain the composition created1.G.2 ❑ Create three dimensional shapes using triangles, squares, rectangles, and circles and explain the composition created 1.G.2 ❑ Name the faces of three dimensional shapes in terms of two dimensional shapes 1.G.2 ❑ Draw and explain two dimensional figures in terms of sides and angles 1.G.2 ❑ Draw lines to equally divide circles and rectangles into halves and fourths (quarters) 1.G.3 ❑ Explain the effects of dividing a shape in terms of the size of the divided pieces (ex. The more pieces a shape divided into (the more equal shares formed), the smaller the pieces (the smaller the shares) 1.G.3 ❑ Name and label the divided pieces of a shape using the terms halve, fourth (quarter) 1.G.3 ❑ Describe shares of a divided figure in terms of fourth of, half of and quarter of 1.G.3 ❑ Explain division of a figure in terms of part and whole 1.G.3	▪ Hexagon ▪ Three-dimensional ▪ Cube ▪ Prism ▪ Cone ▪ Cylinder ▪ Half ▪ Half of ▪ Quarter ▪ Quarter of ▪ Fourth ▪ Fourth of ▪ Divide ▪ Equal shares ▪ Whole ▪ Part ▪ Fraction