Standards Based Map

First Grade Math

Timeline	NxG Standard(s)	Student I Can Statement(s) / Learning Target(s)	Essential Questions	Academic Vocabulary	Strategies / Activities	Resources / Materials	Assessments	Notes / Self - Reflection
Month 1 and 2	**M.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 count to 120. I can read my numbers to 120. I can write my numbers to 120. I can show any given number to 120 with or without objects.	What does a numeral represent? How can I write how many objects are in a set?	count number numeral model represent manipulatives digit/s number words	*Count objects in the room/school. *Count days of school. *Use math journals to show given numbers. *Use quick image cards/dot cards.	-number line -hundred chart -number grid -Number Talks -journals -dot cards -tallies -manipulatives -websites -apps	*personal communication *written *journals *observation *formal *checklist	

Month 1 and 2	M.1.NBT.2 understand the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones — called a "ten." b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight or nine ones. 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)	I can tell how many tens and how many ones are in a number. I can show that I know what a "ten" is. I can show any number between 11 and 19 is a group of "ten" and a certain number of ones I can show that I understand the numbers I use when I count by tens, have a certain number of tens and 0 ones.	How can I group objects to help tell how many? Why does grouping objects by ten help me tell how many?	tens ones bundle left-overs singles groups greater/less than equal to compare	*Use ten frames to compose numbers. *Make cube trains. *Calendar activities: tally marks, place value, number of the day, odd/even, etc.	-number line -hundred chart -number grid -Number Talks -journals -dot cards -tallies -manipulatives (straws, base ten blocks, sticks) -ten frames -websites -apps	*personal communication *written *journals *observation *formal *checklist	
Month 1 and 2	M.1.NBT.3 compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	I can compare two digit numbers using <, +, and > because I understand tens and ones.	How can the digits in a two digit number help me tell which number is greater than, less than, or equal to?	tens ones bundle left-overs singles groups greater/less than equal to compare	*Order numbers using cards. *Write numbers in order. *Compare groups of counters. *Create pictures to show numbers.	-number line -hundred chart -number grid -Number Talks -journals -dot cards -tallies -manipulatives (straws, base ten blocks, sticks) -ten frames -balance scales -websites -apps	*personal communication *written *journals *observation *formal *checklist	

Month 3	M.1.OA.7 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? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.	I can tell if addition or subtraction number sentences are true because I understand what an equal sign means.	How can numbers be equal?	equal sign equations true false	*Use cards, die, and/or technology to play partner games. *Weigh base ten blocks on scales. *Show various ways to make certain numbers.	-balance scales -card games -partner games -websites -apps	*personal communication *written *journals *observation *formal *checklist	
Month 3	M.1.OA.1 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.	I can use different strategies to solve addition word problems. I can use different strategies to solve subtraction word problems.	What strategy will help me best to solve this problem? Why would another strategy not help me best solve this problem?	addition subtraction story/word problem adding to taking from putting together taking apart solve compare unknown symbol object/s drawings equation	*Role play stories. *Use story boards to solve problems. *Write own story problems in journals. Then partner, pair, share. *Use manipulatives to show/act the story problem.	-journals -story boards -manipulatives -double ten frame -Rekenrek -calculators -websites -apps	*personal communication *written *journals *observation *formal *checklist	

Month 3	M.1.OA.3 apply properties of operations as strategies to add and subtract. 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.) (Students need not use formal terms for these properties.)	I can use fact families to help me solve addition problems. (commutative property) I can use addition facts I know well to help me solve problems where there are more than two numbers. (associative property)	How can solving a problem a different way make it easier to do?	apply properties strategies add subtract commutative property associate property fact family/triangle	*Use dominoes to represent numbers in fact family. *Use paper plates for part-part-whole. *Use fact families/triangles. *Use math drills—mad minute.	-flash cards -dominoes -fact triangles -paper plates -number cards -websites -apps	*personal communication *written *journals *observation *formal *checklist	
Month 4	M.1.OA.6 add and subtract within 20, demonstrating fluency for addition and subtraction within 10 and 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).	I can add facts within 20. I can subtract facts within 20.	How can math facts help me solve problems? Which strategy will help me solve the problem the best?	add subtract counting on making ten decompose equivalent sum difference relation fluency equations equal same amount quantity as true false	*Use math drills-mad minute math. *Play partner and whole group math games. *Play Math Facts BINGO. *Count on a number line. *TouchMath Programs *Interactive Whiteboard Activities	-Number line -Reproducibles -Flash Cards -Touch math cards -BINGO cards -Number Wraps -websites -apps	*personal communication *written *journals *observation *formal *checklist	

Month 4	M.1.NBT.5 given a two-digit number, mentally find 10 more or 10 less than the number, without having to count and explain the reasoning used.	I can find 10 more or 10 less in my head.	How can finding 10 more or 10 less quickly help me solve problems?	two-digit number mentally reasoning more less	*Use a number grid to find ten more/ten less. *Use ten frames to show a number. *Use base ten blocks to show a number. *Use journals to explain how they got the final number.	-number grid -ten frames -base ten blocks -journals -websites -apps	*personal communication *written *journals *observation *formal *checklist	
Month 4	M.1.OA.5 relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	I can understand how counting up is like adding. I can understand how counting down is like subtracting.	How does counting help me add and subtract?	relate counting up counting back forward backward skip counting patterns	*Use fact families to relate addition/subtraction. *Skip count on a number line/grid. *Use tally marks to count to 100. *Use money to skip count to 100. *Play addition war with cards. *Play addition games with die/dice.	-dice -number line -number grid -money -cards -counters -highlighters -websites -apps	*personal communication *written *journals *observation *formal *checklist	

Month 5	M.1.OA.4 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 use what I know about addition facts to help me answer subtraction fact problems.		difference addend sum unknown solve	*Use fact families to relate addition/subtraction. *Skip count on a number line/grid. *Use tally marks to count to 100. *Use money to skip count to 100. *Play addition war with cards. *Play addition games with die/dice.	-dice -number line -number grid -money -cards -counters -highlighters -websites -apps	*personal communication *written *journals *observation *formal *checklist	
Month 5	M.1.OA.8 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 +? = 11, 5 = □ – 3, 6 + 6 = □.	I can figure out what a missing number is in addition or subtraction problems.	How are two numbers related? How can fact families help me solve problems?	whole number addition relating equation subtraction fact families commutative property	*Use manipulatives to discover unknown in addition and subtraction equations containing three whole numbers. *Use number line to count forward or backward to find the missing number.	-number line -counting manipulatives -websites -apps	*personal communication *written *journals *observation *formal *checklist	

Month 6	M.1.NBT.4 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 and understand that in adding two-digit numbers, one adds tens and tens, ones and ones and sometimes it is necessary to compose a ten.	I can use manipulatives and pictures to help me solve problems within 100. I can use math strategies to help me solve problems within 100. I can add two-digit numbers and understand that I add the ones and then the tens.	How can grouping objects help me add and subtract?	place value ones tens regroup bundle exchange strategies property of operations hundreds	*Use place value mats, tens rods, and ones units to solve displayed addition problems. *Add ones in the ones columns and tens in the tens column, exchanging ten units for a ten rod as needed. *Make pictorial representations of two numbers using tens and ones. *Write addition problems represented by the pictures and explain the steps to the solutions.	-place value mats -base ten blocks -paper/pencil -websites -apps	*personal communication *written *journals *observation *formal *checklist	
Month 6	M.1.NBT.6 subtract 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 and relate the strategy to a written method and explain the reasoning used.	I can subtract groups of ten from larger groups of ten using objects. I can subtracts groups of ten from larger groups of ten using a hundreds chart. I can subtract groups of ten using larger groups of ten in my head.	How can I easily show a subtraction problem that has only tens?	mentally hundreds chart subtraction number grid	*Use place value mats and tens rods to solve subtraction problems. *Count back on number lines to subtract 10.	-place value mats -number lines -hundreds charts -base ten blocks -number grids -websites -apps	*personal communication *written *journals *observation *formal *checklist	

Month 7	M.1.OA.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.	I can solve word problems by adding three whole numbers.		solve story/word problems whole number sum less than symbol unknown equation	*Solve given task cards using three sets of objects. *Explain reasoning skills both written and verbally.	-task cards -manipulatives -journals -websites -apps	*personal communication *written *journals *observation *formal *checklist	
Month 8	M.1.G.1 distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size), build and draw shapes to possess defining attributes.	I can identify, build, and draw shapes according to sides, vertices, and defining attributes	What makes a shape its shape?	shape closed open side attribute vertices non-defining attribute	*Draw pictures using shapes and label the shapes that are used. *Sort shapes by attributes. *Build shapes on geoboards. *Construct shapes out of items.	-geoboards -rubber bands -drawing materials -pattern blocks -attribute blocks -websites -apps	*personal communication *written *journals *observation *formal *checklist	

| Month 8 | M.1.G.2 compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles and quarter-circles) 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.") | I can make two and three dimensional shapes.

I can create new shapes from two and three dimensional shapes. | *How can smaller shapes make a larger shape? | two-dimensional three-dimensional rectangle square triangle trapezoid half quarter cubes prism cone cylinder compose composite | *Combine shapes to create a new shape and identify the attributes.

*Identify three dimensional shapes in the environment.

*Explain how a group of objects were sorted.

*Using grouping circles, sort and classify a group of objects.

*Create a two or three dimensional shape according to a set of attributes.

*Predict the shape when combining two or more two or three dimensional shapes. | -geoboards -rubber bands -drawing materials -pattern blocks -attribute blocks -3-D Shapes -websites -apps | *personal communication *written *journals *observation *formal *checklist | |

| Month 8 | M.1.G.3
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 and understand for these examples that decomposing into more equal shares creates smaller shares. | I can divide circles and rectangles into two or four equal parts.

I can describe the parts of a whole as halves, fourths, and quarters.

I can describe the parts of a whole as half of, fourth of, and quarter of.

I can describe the parts as two of, or four of the parts of a whole. | How can I describe the equal shares of this shape?

What happens to equal shares as more equal shares are made within a shape? | halves
fourths
quarters
whole
shares | *Color a given fractional part of a whole.

*Connect snap cubes to illustrate given fractions.

*Use real life examples to describe fractional parts of whole objects.

*Identify equal and unequal parts. | -printable sheets
-crayons
-snap cubes
-real life examples
-websites
-apps | *personal communication
*written
*journals
*observation
*formal
*checklist | |
| Month 9 | M.1.MD.3
tell and write time in hours and half-hours using analog and digital clocks. | I can tell time to the hour and half-hour using analog and digital clocks.

I can write time to the hour and half-hour using analog and digital clocks. | How do the hands on a clock help tell time? | time
hour
minute
half hour
o'clock
analog
digital | *Tell the time on a digital and analog clock to the nearest half hour.

*Create a timeline of daily activities.

*Illustrate activities that take a minute, an hour, and a day. | -analog clocks
-digital clocks
-websites
-apps | *personal communication
*written
*journals
*observation
*formal
*checklist | |

Month 9	**M.1.MD.1** order three objects by length and compare the lengths of two objects indirectly by using a third object.	I can order three objects by length. I can compare the lengths of two or three objects	How do I know if an object is longer or shorter than another object?	length order compare	*Estimate the length of given objects using standard and nonstandard units of measurement.	-cubes -yarn -paper clips -other objects -websites -apps	*personal communication *written *journals *observation *formal *checklist	
Month 9	**M.1.MD.2** 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 and 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.*	I can determine the length of an object as a whole number. I can measure the length of an object with no gaps or overlaps.	What does measuring an object tell about its length? How can you represent an object's length?	units overlaps length whole number end to end gaps	*Measure the lengths of given objects. *Compare the lengths of two or more objects. *Order three objects by length.	-cubes -yarn -paper clips -other objects -websites -apps	*personal communication *written *journals *observation *formal *checklist	

| Month 9 | M.1.MD.4 organize, represent, 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 | I can organize, show, and explain data with up to three categories.

I can ask and answer questions about data with or without a graph.

I can tell how many more or less are in a category. | Why is it important to organize data? | data
more
most
less
least
same
different
category
question
collect
analyze
organize
represent
interpret | *Make a prediction or hypothesis about a real situation.

Collect data over time.

Evaluate a prediction or hypothesis after data has been collected.

*Construct a pictograph or a bar graph to represent collected data.

*Record the number of times an event occurs using tally marks.

*Journal the results of a graph.

*Compare categories of a graph. | -graphs
-recording sheets
-post it notes
-websites
-apps | *personal communication
*written
*journals
*observation
*formal
*checklist | |

Website Resources:

Operations and Algebraic Thinking

-Fun Brain http://www.funbrain.com/

-Fun 4 the Brain http://fun4thebrain.com/

-Flash Card Maker http://www.kitzkikz.com/flashcards/

-Flash Cards http://www.havefunteaching.com/

-K-5 Math Teaching Resources http://www.k-5mathteachingresources.com/1st-grade-number-activities.html

-Hooda Math http://www.hoodamath.com/games/first-grade.html

Numbers and Operations in Base Ten

-ABCya http://www.abcya.com/first_grade_computers.htm

-Count Us In http://www.abc.net.au/countusin/

-Learn 21 http://wvde.state.wv.us/learn21/1/2/

-K-5 Math Teaching Resources http://www.k-5mathteachingresources.com/1st-grade-number-activities.html

Measurement and Data

-ABCya http://www.abcya.com/telling_time.htm

-Fun Brain http://www.funbrain.com/measure/

-Starfall Time http://more2.starfall.com/m/math/measure-content/load.htm?d=demo&n=match-clocks&y=1&www=clocksummer

Geometry

-Starfall Pizza http://more2.starfall.com/m/math2/divide-pizza/load.htm?f&d=demo&filter=first

-Interactive Resources (Global Classroom) http://www.globalclassroom.org/ecell00/javamath.html

-IXL Math Practice http://www.ixl.com/math/grade-1 (membership)

-ODYSSEY (Compass Learning) https://www.thelearningodyssey.com/ (requires a site license)

iPad App Resources:

Operations and Algebraic Thinking
-TODO Math Practice
-Sushi Monster
-Math Slide 100
-Math Fun 1st Grade Lite
-Mathmateer Free (Even Numbers)
-Garfield's Mental Math Games K2
-Splash Math: Grade 1 Math
-Splash Math 2: Grade 2 Math

Numbers and Operations in Base Ten
-Number Line Math K2
-Garfield's Mental Math Games K2
-Quick Images
-10 Frame Fill
-Frames
-Magic 10

Measurement and Data
-TODO Time
-Mathmateer Free (Time/Money)

Geometry
-Tangrams
-Dragon Shapes: Geometry Challenge
-Geoboard (The Math Learning Center)
-Mathmateer Free (3D Shaapes)

Book Resources:

Operations and Algebraic Thinking
-Adding Alligators by Betsy Franco
-Ten Bears in my Bed by Stan Mack
-Cats Add Up by Diane Ochiltree
-Elevator Magic by Stuart J. Murphy

Numbers and Operations in Base Ten
-Wake Up City by Alvin Tresselt
-Mike's Kite by Elizabeth MacDonald
-A Fair Bear Share by Stuart J. Murphy
-Shark Swimathon by Stuart J. Murphy
-One Hundred Hungry Ants by Ellinor Pinczes

Measurement and Data
-Inch by Inch by Leo Leonni
-The Foot Book by Dr. Suess
-It's About Time by Stuart J. Murphy
-This Book is About Time by Marilyn Burns

Geometry
-The Wing on a Flea by Ed Emberley
-Give Me Half by Stuart J. Murphy
-Captain Invisible and the Space Shapes by Stuart J. Murphy
-The Shape of Things by Dayle Ann Dodds
-The Greedy Triangle by Gordon Burns

Additional Math Resource Books on www.mathstart.net/books