Grade Curriculum Map
Instructional Plan for Math 2
Hope Loersch
St. Paul's Lutheran School
Revised: February 2021

Grade 2 Curriculum
Instructional Plans for Math
Submitted by Hope R. Loersch
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	Content Type	Objectives	Standards	Assessment	Materials
AUGUST & SEPTEMBER	• 24 Lessons 1-22	• SWBAT o Addition families: 1–18 o Horizontal and vertical form o Add doubles o Addition terminology o Addition "twins" (concept of commutative principle) o Timed mastery o Word problems: oral, written o calculate addition families o identify before/after numbers by ones o differentiate between even/odd numbers o distinguish between horizontal and vertical addition sentences o interpret clocks to tell time to the hour o understand calendar/time concepts o analyze bar graph o distinguish between ones, tens, hundreds o determine monetary place values o write sums for shown flashcards o determine number patterns/predicting numbers by analyzing given number groups	• 2.OA.1: **Represent and solve problems involving addition and subtraction.** • 2.OA.2: **Add and subtract within 20.** • 2.NBT.1,2,3,4: **Understand place value.** • 2.NBT.5,6: **Use place value understanding and properties of operations to add and subtract.** • **2.MD.1,3,4: Measure and estimate lengths in standard units.** • **2.MD.7: Work with time and money.** • **2.MD.9,10: Represent and interpret data.** • **2.G.1: Reason with shapes and their attributes.** • **M.2.OA.B.2 Flexibly and efficiently add and subtract within 20 using multiple mental strategies which may include counting on; making ten; decomposing a number leading to a ten; 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).**	Daily speed tests (probably not during math instruction time) Classwork and student work #1-22	Addition flash cards, blank paper, speed drills, money chips, counters, combination dot cards (look at lessons for specific numbers), thermometer, yellow clocks (and teacher clock)
OCTOBER	• 20 Lessons 23-42	• SWBAT o Mental arithmetic: o Problems with up to 5 single-digit numbers h Estimate sums o Carrying:	• M.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	Daily speed tests (probably not during math instruction time) Classwork and student work #23-42	Addition flash cards, blank paper, speed drills, money chips, counters, combination dot cards (look at lessons for specific numbers), thermometer, yellow

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		o To tens and hundreds places in 2- and 3-digit problems o To ten-thousands place in 3- and 4-digit problems h Horizontal problems with carrying o Money: add dollars and cents o record survey results using tally marks o identify twins for 1-7 families o read thermometers to the nearest 2 degrees o solve 3-addend addition problems o analyze pictograph to solve story problems o identify missing addends o demonstrate value of money by writing answers o identify one dozen/one half dozen o demonstrate use of a ruler o apply given times to draw hour hand on clocks o solve 4 addend combinations o identify ¼ of a whole			clocks (and teacher clock)

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NOVEMBER	• 19 Lessons 43-61	• SWBAT o Subtraction families: o 1–13 o 14–18 o Vertical and horizontal form o Subtract: 0, 1, 2; all of a number o Half of a number o Subtraction terminology o Timed mastery o Word problems: oral, written o distinguish thousands place value o solve 2 digit addition with carrying to tens place o demonstrate concept of coins by giving value of various coin combinations o solve 2 digit subtraction problems o apply addition/subtraction concepts to write related facts o solve 4 digit mixed addition/subtraction combinations o From thousands place in 4-digit problems o With zeros in the minuend o Money: subtract dollars and cents	• **M.2.NBT.A.1 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: 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).**	Daily speed tests (probably not during math instruction time) Classwork and student work #43-61	Addition flash cards, blank paper, speed drills, money chips, counters, combination dot cards (look at lessons for specific numbers), thermometer, yellow clocks (and teacher clock)
DECEMBER	• 15 Lessons 62-76	• Mental arithmetic: • Problems with up to 5 single digit numbers combining subtraction and addition • Subtraction with borrowing: • 2 and 3 digits • 4 digits • Borrowing: • From tens place in 2-, 3-, and 4-digit problems • From hundreds place in 3- and 4-digit problems interpret clocks to write times to nearest 5 minutes	• M.2.NBT.B.5 Flexibly and efficiently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. In Grade 2, subtraction with decomposition is an exception and may include drawings/representations. • M.2.NBT.B.6 Add up to four two-digit numbers using strategies based on place value and properties of operations. • M.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 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	Daily speed tests (probably not during math instruction time) Classwork and student work #62-76	Addition flash cards, blank paper, speed drills, money chips, counters, combination dot cards (look at lessons for specific numbers), thermometer, yellow clocks (and teacher clock)

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		• identify before/after numbers by 2s, 5s, 10s
		• calculate addition families up to 15
		• solve 3 digit addition problems with carrying to tens/hundreds places
		• identify missing addends/subtrahends for 14 family
		• identify measures of capacity
		• relate value to half-dollars
		• identify boiling point of water/normal body temperature
		• distinguish between/up to ten thousands place value
		• solve addition problems with carrying to thousands place
		• Time/Clock Skills:
		  o Hour and minute hands
		  o a.m. and p.m.
		  o o'clock (:00); half past (:30)Quarter past; quarter till; three-quarters past
		  o Five-minute intervals
		  o One-minute intervals
		• Table of time:
		  o Seconds, minutes, hours
		  o Days, months, year
		• Calendar:
		  o Months of year, days of week
		  o Days in year, weeks in year
		• Date
		  o Time lapse
		  o Dates as digits
			and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
			• M.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.
			• M.2.NBT.B.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. These explanations may be supported by drawings or objects.
			• M.2.MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.		

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JANUARY	• 21
	
	Lessons 77-97
		• Multiplication Building blocks:
		• Counting by twos, threes, fives, and tens
		• Counting by fours
		• Word problems: oral, written
		• Graphs to show multiplication facts
		• Terms: factor, product
		• Multiply: By 1, 0 h
		• Tables, 0, 1, 2, 3, 5, 10
		• Find missing factor
		• Multiple combinations
		• Multiplication "twins" (concept of commutative principle)
		• Recognize and understand numbers:
		  ○ 1,000
		  ○ 1,001–100,000
		• Counting:
		  ○ By ones, twos, fives, and tens to 100
		  ○ By threes to 36
		  ○ By fours to 48
		  ○ By twenty-fives to 300
		• Continue counting patterns
		• Tally marks
		• Using Graphs to Represent Data
		• Writing numbers:
		  ○ By ones, twos, fives, and tens to 1,000
		  ○ By threes to 36 h By fours to 48 h Dictation to hundred thousands
			• M.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
			• M.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.
			• M.2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.
			• M.2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
			• M.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 number lines) and equations with a symbol for the unknown number to represent the problem.
			• M.2.MD.B.6 Represent whole numbers as lengths from 0 on a number line with equally spaced points corresponding to the numbers 0, 1, 2 ... and represent whole-number sums and differences within 100 on a number line.
			• M.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 using information presented in a bar graph.
				• Daily speed tests (probably not during math instruction time)
				• Classwork and student work #77-97
					Addition flash cards, blank paper, speed drills, money chips, counters, combination dot cards (look at lessons for specific numbers), thermometer, yellow clocks (and teacher clock)

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FEBRUARY	• 18
	
	Lessons 98-115
		• Comparing before and after:
		  ○ By ones, twos, fives, tens
		  ○ By twenty-fives and hundreds
		• Number words:
		  o Use of one to twelve
		  o Use of thirteen to twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, one hundred
		• Place value:
		  o Ones, tens, hundreds
		  o Thousands, ten thousands, hundred thousands
			• M.2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, and describe the result of the comparison using words and symbols (>, =, and <).	• Daily speed tests (probably not during math instruction time)
				• Classwork and student work #98-115
					Addition flash cards, blank paper, speed drills, money chips, counters, combination dot cards (look at lessons for specific numbers), thermometer, yellow clocks (and teacher clock)

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MARCH	• 17
	
	Lessons 116-132
		• Division -- Concept of division
		• Building blocks: dividing groups of objects
		• Recognize symbols: ÷ and (division house)
		• Word problems: oral, written
		• Terms: dividend, divisor, quotient
		• Divide By 1
		• Tables 2, 3, 5, 10
		• Division combinations
		• Money:
		  ○ round to nearest dollar
		  ○ to nearest ten
		• Roman numerals:
		  ○ Counting and value:
		  ○ 1–12
		  ○ 13–30; 50; 100; 500; 1,000
		  ○ Reading clock using Roman numerals
		• Basic rules for Roman numerals:
		  ○ Add repeated Roman numerals
		  ○ Add when lesser numeral follows greater one
		  ○ Subtract when lesser numeral comes before greater one
			• M.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 you have?
			• M.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.
				• Daily speed tests (probably not during math instruction time)
				• Classwork and student work #116-132
					Addition flash cards, blank paper, speed drills, money chips, counters, combination dot cards (look at lessons for specific numbers), thermometer, yellow clocks (and teacher clock)

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APRIL	• 20
	
	Lessons 133-151
		• Fractions
		  ○ Parts of a whole and group: one half, one third, one fourth
		  ○ Finding the fractional part of a whole number
		  ○ Comparing fractions
		  ○ Word problems: oral, written
		• Mixed numbers Decimals
		  ○ Money: use of dollar sign ($) and decimal point (.) in addition
		  ○ Align decimal points when adding and subtracting dollars and cents
		• Building blocks: oral word problems
		• Word problems: Addition, subtraction, Multiplication, division
		• Money
		• Fractions
		  o Carrying, borrowing
		  o Steps of problem-solving process
		• Applications for broader and deeper understanding of concepts:Time, length, temperature, Graphs, weight, money, Fractions, recipes
			• M.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.
			• M.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.
				• Daily speed tests (probably not during math instruction time)
				• Classwork and student work #133-151
					Addition flash cards, blank paper, speed drills, money chips, counters, combination dot cards (look at lessons for specific numbers), thermometer, yellow clocks (and teacher clock)

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MAY	• 24
	
	Lessons 152-170
		• Plane figures: oval, hexagon, trapezoid
		• Solid figures: sphere, cube, pyramid
		• Vertex: identify number of vertexes in plane and solid shapes
		• Edge and face: identify number of edges and faces in plane and solid shapes
		• Measure, draw, and compare lines
		• Scale drawings
		  o Symmetry
		• Locations on a coordinate plane
		• Perimeter: Rectangle, Square, Sided Geometric Shapes
		• Measures
		  o Word problems: oral, written
		• Temperature:
		  o Degrees: reading, writing h Introduced to: Celsius scale
		  o Freezing and boiling point of water
		  o Body temperature on Fahrenheit scale
		• Length:
		  o Quarter-inch
		  o Inch, foot, yard, centimeter
		  o Meter Abbreviations
		  o Smallest to longest
		  o Comparing lengths
		• Applications: measuring, drawing
		• Weight: Ounce, pound, kilogram , Gram Applications: Dozen, half dozen
		• Capacity: cup, pint, quart, gallon
			• M.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.
			• M.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 measurements relate to the size of the unit chosen.
			• M.2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.
			• M.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.
			• M.2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
			• M.2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe and count the shares using the words halves, thirds, and fourths, and use phrases half of, a third of, and a fourth of the whole. Describe the whole as composed of two halves, three thirds, and four fourths. Recognize that equal shares of identical wholes need not have the same shape.
				• Daily speed tests (probably not during math instruction time)
				• Classwork and student work #152-170
					Addition flash cards, blank paper, speed drills, money chips, counters, combination dot cards (look at lessons for specific numbers), thermometer, yellow clocks (and teacher clock)