Prairie-Hills Elementary School District 144
2ND Grade ~ MATH Curriculum Map
Quarter 1

Month: August, September, October

<u>**Domain(s)**</u>:

- **Number –Base Ten (NBT)**
- **Operations & Algebraic Thinking (OA)**
- **Measurement & Data (MD <u>Cluster(s)</u>:**
- **Understand place value.**
- **Use place value understanding and properties of operations to add and subtract.**
- **Represent and solve problems involving addition and subtraction**
- **Add and subtraction within 20**
- **Relate addition and subtraction length**

<u>**Standard(s)**</u>:

Understand place value:
2.NBT.2 **Count within 1000; skip-count by 5s, 10s, and 100s. *(Mastered)**

Use place value understanding and properties of operations to add and subtract:
2.NBT.5 **Fluently add and subtract within 100. *(Mastered)**

2.NBT.9 **Explain why addition and subtraction strategies work, using place value and the properties of operations.   *(Mastered)**

Represent and solve problems involving addition and subtraction
2.OA.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. *(Mastered)**

Add and subtraction within 20:

2.OA.2 **Fluently add & subtract w/in 20 using mental strategies. By end of 2nd know from memory sums of all two one-digit numbers.**
            ***(Mastered)**

Relate addition and subtraction length :

2.MD.6 **Represent whole numbers as lengths from 0 on number line diagram with equally spaced points corresponding to the number 0, 1, 2,... and represent whole-number sums & differences within 100 on a number line diagram. *(Mastered)**

Targeted Skills:

- Relate addition and subtraction
- Use 10 to add and subtract 7,8,9
- Use fact families to add and subtract
- Understand place value to 200
- Compare value and order numbers to 1000
- Skip count by 2,5 and 10 up to 1000
- Understand even and odd numbers
- Add facts up to 20
- Add 3 1- digit numbers
- Subtraction facts up to 20
- Regrouping to the tens
- Compose or decompose numbers when regrouping
- Addition with sums to 20
- Addition with sums greater than 20

Mathematical Practices Standards

- ☐ 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 an express regularity in repeated reasoning

Key Vocabulary:

Critical Terms:
diagram number line
difference
sum
unit equal

Supplemental Terms:
zero
compare

Critical Terms:
Equation
Quantity
Symbol
Unknown
Operation
Place Value
Properties of
Addition
Key
Column

Supplemental Terms:
Addition
Subtraction
Remainder
Compare
Sum
Difference
Unknown

Quarter 2

Month: October, November, December

Domain(s):

- Number and Operations in Base Ten
- **Operations & Algebraic Thinking (OA)**
- **Measurement & Data (MD)**

Cluster(s):

- Understand place value.
- **Use place value understanding and properties of operations to add and subtract.**
- **Represent and solve problems involving addition and subtraction**
- **Add and subtraction within 20**
- **Relate addition and subtraction length ☐ Represent and interpret data ☐ Work with time and money.**
- **Use place value understanding and properties of operations to add and subtract. Standard(s):**

Understand place value

2.NBT.2   Count within 1000; skip-count by 5s, 10s, and 100s.   *(Mastered)

Use place value understanding and properties of operations to add and subtract.
2.NBT.5   Fluently add and subtract within 100. *(Mastered)
2.NBT.6   Add up to four 2-digit numbers. *(Mastered)

2.NBT.9   Explain why addition and subtraction strategies work, using place value and the properties of operations. *(Mastered)

Represent and solve problems involving addition and subtraction
2.OA.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. *(Mastered)

Use place value understanding and properties of operations to add and subtract.

2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. *(Mastered)
2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. *(Mastered)
2.MD.10 *Draw picture graphs and bar graphs to represent data sets and solve put together, take apart and compare problems about the graphs.* **(Introduce and Support)

Targeted Skills:
- Regrouping to the tens
- Compose or decompose　　　　Numbers when regrouping
- Addition with sums to 20
- Addition with sums greater　　　than 20
- Add and Subtract tens
- Counting tens and ones to　　　add
- Deciding when to regroup　　　with addition and subtraction
- Adding a 1- digit number　　　to a 2-digit number
- Use place value to rewrite　　　a number sentence in vertical form
- Solve 2 digit addition　　　blems with
- Estimate differences and　　　regrouping
- Compare numbers as greater　　　sums
- Add 3- addends　　　　　　than, equal to, or less than

- Counting back tens and ones
- Subtract 2-digit numbers, with or without regrouping ● Subtracting 1- digit numbers from 2- digit numbers.
- Check subtraction using mental math

Mathematical Practices Standards

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 an express regularity in repeated reasoning

Key Vocabulary:

Critical Terms:	Supplemental Terms:
Unit	Solve
Skip-count	Remainder
	Place value
	Value

Quarter 3

Month: December, January, February, March

Domain(s):
- **Number – Base Ten (NBT)**
- **Measurement & Data (MD)**
-

Cluster(s):
- **Understand place value.**
- **Use place value understanding and properties of operations to add and subtract. ● Measure and estimate lengths in standard units.**
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Standard(s):
Understand place value.

2.NBT.2 Count within 1000; skip-count by 5s, 10s, and 100s. *(Mastered)
2.NBT.4 Compare two 3-digit numbers based on the meaning of the hundreds, tens and ones digits, using <, > and = symbols. *(Mastered)

Use place value understanding and properties of operations to add and subtract.
2.NBT.7 Add and subtract within 1000 using manipulatives, pictures and words based on place value, properties of operations and/or the relationship between addition and subtraction. *(Mastered)
2.NBT.8 Mentally add 10 or 100 to a given number between 100-900 and subtract 10 or 100 from a number 100-900. *(Mastered)

Domain(s):

- **Operations & Algebraic Thinking (OA)**
- **Number –Base Ten (NBT)**

Cluster(s):

- **Measure and estimate lengths in standard units.**
- **Relate addition and subtraction to length**
- **Represent and interpret data <u>Standard(s)</u>:**

Measure and estimate lengths in standard units.

2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. ***(Mastered)**

2.MD.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. ***(Mastered)**

2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters. ***(Mastered)**

2.MD.4 Measure to determine how much longer one object is than another, expressing length difference in terms of standard length unit. ***(Mastered)**

Relate addition and subtraction to length

2.MD.6 Represent whole numbers as lengths from 0 on number line diagram with equally spaced points corresponding to the number 0, 1, 2,… and represent whole-number sums & differences within 100 on a number line diagram. ***(Mastered)**

Represent and interpret data

2.MD.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.* ****(Introduce & Support)**

Work with money.

2.MD.8 *Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢symbols appropriately.* ****(Introduce & Support)**
Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Measure and estimate lengths in standard units.

2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit (on a number line). ***(Mastered)**

2.MD.6 Represent whole numbers as lengths from zero on a number line diagram and whole number sums & differences on the number line diagram - within 100 using manipulatives. ***(Mastered)**

2.MD.5 Add and subtract within 100 to solve word problems involving length. ***(Mastered)**

2.MD. 7 *Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.* ****(Introduce & Support)**

Reason with shapes and their attributes.

2.G.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.* *****(Additional Standard)**

Targeted Skills:
- Counting back tens and ones
- Subtract 2-digit numbers, with or without regrouping ● Subtracting 1- digit numbers from 2- digit numbers.
- Check subtraction using mental math
- Identify coins and their values
- Find the value of a set of coins
- Create groups of coins with equal value
- Identify a dollar and its value
- Count and write amounts of money using dollars and cents
- Compare the value of mixed groups of dollar bills and coins
- Make change
- Problem solve using coins
- Read a calendar
- Three digit addition and subtraction
- Tell time to the hour
- Tell time to half hour
- Tell time to the quarter hour
- Tell time in five minute increments
- Tell time before and after the hour
- Distinguish the difference between AM and PM
- Measure Elapsed time

decimal point   compare   minute hand   hour   half hour   minute hand   quarter hour
hour hand   minutes

quarter hour   A.M/P.M   calendar   month   week   year   minute   day
Measure   Ruler   dollar (bill)   Cent   Penny   Nickel   Dime   Quarter   Money
meter stick   Currency   Change   Coin
measuring tapes
number
inch foot
centimeter
meter
customary system
metric system
linear
 line plot
linear
shorter
 longer
taller
wider
Length
Distance
Bar graph
Picture Graph
Data
Title
Label

Mathematical Practices Standards

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Vocabulary:

Critical Terms:	Supplemental Terms:
Digit	Addition
Quantity	Subtraction
Solve	Remainder
Symbol	Compare
Operation	Sum
Place Value	Difference
Properties of Addition	Represent
Commutative	Mental math
Associative	
Identity	
Base ten	
Ones	
Tens	
Hundreds	

Quarter 4

Month: March, April, May, June

Domain(s):

- **Number – Base Ten (NBT)**
- **Measurement & Data (MD)**
- **Geometry (G)**
- **Operations & Algebraic Thinking (OA)**

Cluster(s):
- Measure and estimate lengths in standard units
- **Work with time and money ● Understand place value.**
- **Reason with shapes and their attributes.**
- **Work with equal groups of objects to gain foundations for multiplication.**
- **Reason with shapes and their attributes.**
- **Reason with shapes and their attributes.**

Standard(s):

Understand place value.

2.NBT. 2 Count within 1000; skip-count by 5s, 10s, and 100s. *(Mastered)

Work with equal groups of objects to gain foundations for multiplication:

2.OA.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*. **(Introduce & Support)**

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Standard(s)

2.OA.4 **Use addition to find total number of objects in rectangular arrays & write addition equation with equal addends**. *****(Mastered)**

Reason with shapes and their attributes.
2.G.2 *Partition a rectangle into rows and columns and count to find the total*. ******(Additional)**

Reason with   shapes and their attributes.
2.G.1 *Recognize & draw shapes with given # of angles and sides. Identify triangles, quadrilaterals, pentagons, hexagons and cubes.*
    ******(Additional)**

Mathematical Practices Standards

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VOCABULARY:

Critical Terms:
odd even
remainder
equal groups
pair equal
addend
row
column
doubles
Supplemental Terms:
equation

Critical Terms:
attribute triangle
quadrilateral
pentagons hexagon
cubes side angle
straight flat solid
corner edge
Supplemental Terms:
2-dimensional 3-dimensional
polygon
circle square
rectangle rhombus
trapezoid septagon
octagon plane
vertices

Targeted Skills:

- Picture and Bar graphs
- Surveys
- Line plots
- Measure length in customary and metric units (inches, feet, yards)
- Identify 3 dimensional figures and their attributes
- Identify 2 dimensional shapes and their attributes
- Identify and translate shape patterns
- Identify congruent and symmetrical shapes
- Identify slides, flips, and turns
- Find the perimeter and area of a shape
- Multiplication through repeated addition
- Build arrays
- Multiplication in any order