First Grade Math Skills

Add and subtract within 20:
- Relate counting to addition and subtraction (counting on and counting back)
- Add and subtract within 20, demonstrating fluency for addition and subtraction within 10 using strategies (complements of 10, fact families, doubles, doubles +1)

Work with addition and subtraction equations:
- Understanding the meaning of the equal sign and determine if equations involving addition and subtraction are true or false (6=6, 7=8-1, 5+2=2+5, 4+1=5+2)
- Determine the unknown whole number in an addition or subtraction equation relating three whole numbers (8+?=11, 5=?-3, 6+6=?)

Represent and solve problems involving addition and subtraction:
- Use addition and subtraction within 20 to solve word problems with unknowns in all positions (result, change and start)
- Solve word problems that call for the addition of 3 whole numbers whose sum is less than or equal to 20

Understand and apply properties of operations and the relationship between addition and subtraction:
- Apply properties of operations as strategies to add and subtract
  - Commutative Property of Addition (8+3=11 and 3+8=11); fact families
  - Associative Property of Addition (2+6+4=2+10=12)
  - Understand subtraction as an unknown addend problem (Solve 10-8=2 by counting up)

Extend the Counting Sequence:
- Count to 120 starting at any number less than 120
- Read and write numerals to 120 to represent objects
Understand Place Value

• Understand that the two digits of a two-digit number represent amounts of tens and ones.
  o 10 can be thought of as a bundle of 10 ones
  o The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
  o The numbers 10, 20, 30, 40, 50, 60, 70 , 80, and 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones)
• Compare two digit numbers based on meanings of tens and ones digits, recording the results of comparisons with symbols >, =, <

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

• Add within 100 using concrete models or drawings and strategies based on place value
  o Add a 2-digit number and a 1-digit number (46 + 3)
  o Add a 2-digit number and a multiple of 10 (34 + 20)
  o Communicate the strategy used through numbers, pictures, symbols, and/or words
• Given a 2-digit number, mentally find 10 more or 10 less than the number without having to count; explain the reasoning used
• Subtract multiples of 10, in the range 10 to 90, from other multiples of 10 from 10 to 90 (60 - 20 = 40) using concrete models or drawings and strategies based on place value
  o Communicate the strategy used through numbers, pictures, symbols, and/or words

Measure lengths indirectly and by repeating length units:

• Order three objects by length and compare them using a third object
• Express the length of an object as a whole number of length units by laying multiple copies of a shorter object end to end with no overlaps or gaps

Tell and write time:
• Tell and write time in hours and half-hours using analog and digital clocks

Represent and interpret data:
• Organize, represent and interpret data with up to three categories
• Ask and answer questions about the total number of data points
  o How many in each category?
  o How many more or less are in one category than in another?

Reason with shapes and their attributes:

• Distinguish between defining attributes (triangles are closed and 3-sided) versus non-defining attributes (color, orientation, size)
• Build and draw shapes to possess defining attributes
• Compose (build) and decompose (take-apart) a 2 or 3-dimensional shape by using 2 or more shapes
• Divide circles and rectangles into two and four equal shares
  o Describe the shares using the words halves, fourths and quarters
  o Use the phrases half-of, fourth-of, and quarter-of the whole
  o Understand that more equal shares create smaller shares

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