

## First Grade Math

- I. Unit 1: Numbers 1 – 10
  - a. Count within 10
  - b. Read and write the number symbols (numerals) 0 to 10 and the corresponding number-words
  - c. Compare numbers within 10
  - d. Understand “more” and “less”
  - e. Sequence numbers from 0 to 10
- II. Unit 2: Number Bonds
  - a. Identify parts in a whole
  - b. Make up number stories to illustrate number bonds within 10
  - c. Divide a set of objects into two parts, in different ways
  - d. Write number-bonds for a given number within 10
  - e. Find number-pairs that make 2,3,4, 5, 6, 7, 8, 9 ,10
  - f. Find missing part of number-bond
- III. Unit 3: Addition
  - a. Part 1: Making Addition Stories
    - i. Understand the meaning of addition
    - ii. Associate addition with part-whole concept
    - iii. Write the addition sentences using “+” and “=”
    - iv. Relate number-bonds to addition-sentences to number-stories
  - b. Part 2: Addition with Number Bonds
    - i. Write two addition facts for a given number-bond
    - ii. Relate addition facts within 10 to number-bonds
    - iii. Explore number-bonds with addition facts
    - iv. Practice addition facts
  - c. Part 3: Other Methods of Addition
    - i. Use “count on” strategy to add two numbers within 10, one of which is 1, 2, or 3
    - ii. Practice counting on from 1, 2, or 3
    - iii. Review number-pairs that make 10
- IV. Unit 4: Subtraction
  - a. Part 1: Making Subtraction Stories
    - i. Understand the meaning of subtraction
    - ii. Associate subtraction with the part-whole concept
    - iii. Make number-stories for subtraction
    - iv. Compare addition to subtraction

- v. Write subtraction sentences using “-“ and “=“
    - vi. Make number-stories for subtraction
    - vii. Find missing part of a set using subtraction
  - b. Part 2: Methods of Subtraction
    - i. Use “take-away” as a method of subtraction
    - ii. Relate subtraction facts within 10 to number-bonds
    - iii. Write a family of 4 addition and subtraction facts for give number bonds
    - iv. Write a family of 4 addition and subtraction facts for given number-bonds
    - v. Recall subtraction facts within 5
    - vi. Use the “count-back” strategy to subtract 1, 2, or 3 from a number within 10
    - vii. Practice counting back 1, 2, or 3
    - viii. Recognize numbers that differ by 1 or 2
- V. Unit 5: Ordinal Numbers
  - a. Name a position using ordinal numbers 1<sup>st</sup> through 10<sup>th</sup>
  - b. Compare ordinal numbers to numbers
  - c. Find an ordinal position from left or from the right
- VI. Unit 6: Numbers to 20
  - a. Part 1: Counting and Comparing
    - i. Count to 20 by building up from 10
    - ii. Relate numbers 11 to 20 to a ten + ones
    - iii. Read and write numerals and number-words for 11 to 20
    - iv. Count back from 20
    - v. Compare numbers within 20
    - vi. Order numbers within 20
  - b. Part 2: Addition and Subtraction
    - i. Add two 1-digit numbers, using the “make 10” strategy
    - ii. Add 2-digit number within 20 and a 1-digit number
    - iii. Subtract a 1-digit number from a 2-digit number within 20 (no remaining)
    - iv. Subtract a 1-digit number form a 2-digit number within 20 (with remaining)
    - v. Add 1, 2, or 3 to a number within 20 by counting on
    - vi. Subtract 1,2, or 3 from a number within 20 by counting back
- VII. Unit 7: Shapes
  - a. Recognize and name the four basic shapes: circle, triangle, square, and rectangle
  - b. Sort and classify 2-dimensional shapes according to shape, size, or color
  - c. Describe or continue a pattern according to one or two attributes such as shape, size, or color

- d. Fit matching pieces together to form a basic shape
- VIII. Unit 8: Length
  - a. Compare the lengths of two or more objects
  - b. Estimate and measure length in non-standard units
- IX. Unit 9: Weight
  - a. Compare the weights of two or more objects
  - b. Estimate and measure weight in non-standard units
- X. Unit 10: Comparing Numbers
  - a. Comparing numbers
    - i. Use the language of “more than” and “less than”
    - ii. Compare two numbers that differ by one, within 10
  - b. Comparison by subtraction
    - i. Compare two numbers by subtractions
    - ii. Solve picture problems involving comparison by subtraction
    - iii. Use the language of “more than” and “less than”
- XI. Unit 11: Graphs
  - a. Picture graphs
    - i. Make simple picture graphs using one-to-one representation
    - ii. Read and interpret data presented as a picture graph
- XII. Unit 12: Numbers to 40
  - a. Counting
    - i. Count within 29
    - ii. Read and write numerals 21-29 and the corresponding number-words
    - iii. Count within 40 by making tens
    - iv. Read and write the numerals 30-40 and the corresponding number-words
    - v. Interpret numbers within 40 as tens and ones
    - vi. Count on or count back 1, 2, or 3
    - vii. Compare or order numbers up to 10
  - b. Tens and ones
    - i. Interpret a 2-digit number in terms of tens and ones
    - ii. Find out what number is 1 more or 1 less a given number
    - iii. Find out what number is 10 more or 10 less than a given number
  - c. Addition and subtraction
    - i. Add a 1-digit number to a 2-digit number, without renaming
    - ii. Subtract a 1-digit number from a 2-digit number, without renaming
    - iii. Add a ten and subtract a ten

- iv. Use the “count-on” strategy to add two numbers within 40, one of which is 1, 2, or 3
- v. Use the “count-back” strategy to subtract 1, 2, or 3 from a number within 40
- vi. Add a 2-digit number and a 1-digit number, using the “make-10” strategy
- vii. Subtract a 1-digit number from a 2-digit number, using the “subtract-from-ten” strategy
- d. Adding three numbers
  - i. Add three single-digit numbers

XIII. Unit 13: Multiplication

- a. Adding equal groups
  - i. Recognize equal groups
  - ii. Find the total number in a collection of groups by repeated addition
  - iii. Use mathematical language such as “4 threes” and “2 groups of 5” to describe equal groups
- b. Making multiplication stories
  - i. Use picture cutouts (or manipulatives) to illustrate the meaning of multiplication
  - ii. Write number-sentences for given situations involving multiplication
  - iii. Make up number-stories for given multiplication sentences
  - iv. Understand the concept of equal groups
- c. Multiplication within 40
  - i. Work out multiplication facts within 40 by repeated addition
  - ii. Solve picture problems by multiplication
  - iii. Use rectangular arrays to illustrate multiplication facts.

XIV. Unit 14: Division

- a. Sharing and grouping
  - i. Use picture cutouts (or manipulatives) to illustrate the sharing concept of division
  - ii. Solve picture problems involving division
  - iii. Use picture cutouts (or manipulatives) to illustrate the grouping concept of division
  - iv. Solve picture problems involving division

XV. Unit 15:  $\frac{1}{2}$ 's and  $\frac{1}{4}$ 's

- a. Making halves and quarters
  - i. Recognize and name one half of a whole which is divided into 2 equal parts

- ii. Recognize and name one quarter of a whole which is divided into 4 equal parts
- iii. Recognize halves and quarters
- iv. Recognize patterns

XVI. Unit 16: Time

- a. Telling Time
  - i. Tell the times on the hour
  - ii. Sequence events according to time
  - iii. Tell the times at half past the hour

XVII. Unit 17: Numbers to 100

- a. Numbers to 100
  - i. Count by tens
  - ii. Read and write numerals and number-words for tens
  - iii. Count within 100 by tens
  - iv. Read and write numerals and number-words for numbers within 100
- b. Order of numbers
  - i. State the number which is 1 more than / 10 more than / 1 less than / 10 less than a given number within 10
  - ii. Compare two numbers within 100
  - iii. Arrange a group of numbers within 100 in ascending or descending order
  - iv. Count-on by ones/tens from a given number
  - v. Count-back by ones/tens from a given number
- c. Addition within 100
  - i. Add a 2-digit number and a 1-digit number, without renaming
  - ii. Add a 2-digit number and a 1-digit number, using the “make-10” strategy
  - iii. Add a 2-digit number and tens
  - iv. Add two 2-digit numbers in two steps, by first adding the tens and then adding the ones
- d. Subtraction within 100
  - i. Subtract a 1-digit number from a 2-digit number, without renaming
  - ii. Subtract a 1-digit number from a 2-digit number, using the “subtract-from-ten” strategy
  - iii. Subtract tens from a 2-digit number
  - iv. Subtract a 2-digit number from another 2-digit number in two steps, by first subtracting the tens and then subtracting the ones

XVIII. Unit 18: Money

- a. Bills and Coins
  - i. Recognize and name the coins

- ii. Count coins
  - iii. Change a coin for an equivalent set of coins of smaller denominations
  - iv. Recognize bills and count
  - v. Change a bill for an equivalent set of bills of smaller denominations
  - vi. Compare the amount of money in 2 or 3 sets of coins or bills
- b. Shopping
- i. Read the price of an item and prepare payment
  - ii. Solve simple picture problems involving money within \$20