Unit 1

Counting, Coins, and Combinations (Addition, Subtraction, and the Number System 1)

Mathematical Emphases

1. Counting and Quantity Developing strategies for accurately counting a set of objects by ones and groups
   Math Focus Points
   - Counting sets of up to 60 objects
   - Developing strategies for counting accurately
   - Counting a quantity in more than one way
   - Developing and analyzing visual images for quantities up to 10
   - Counting by groups of 10

2. Counting and Quantity Developing an understanding of the magnitude and sequence of numbers up to 100
   Math Focus Points
   - Using the number line to reason about, and keep track of information about, the magnitude and relationship of numbers
   - Developing an understanding of the structure of the 100 chart
   - Counting, writing, and reading numbers sequentially from 1 to 100 and beyond
   - Identifying and using patterns in the structure of the number system

3. Whole-Number Operations Making sense of and developing strategies to solve addition and subtraction problems with totals up to 45
   Math Focus Points
   - Generating equivalent expressions for a number
   - Comparing two amounts under 45 to find the difference
   - Combining two quantities with totals up to 45
   - Visualizing, retelling, and modeling the action of addition and subtraction (as removal) situations
   - Using known combinations (e.g., combinations that make 10) to compose, decompose, and combine numbers
   - Subtracting a quantity from a whole of up to 30
   - Solving addition and subtraction (as removal) story problems
   - Doubling a quantity

4. Computational Fluency Knowing addition combinations to 10 + 10
   Math Focus Points
   - Developing fluency with the Make 10, Plus 1, and Plus 2 addition combinations
   - Finding two addends that make 10
   - Finding the missing addend to make a total of 10
   - Doubling a quantity
   - Developing fluency with the doubles combinations

5. Whole-Number Operations Using manipulatives, drawings, tools, and notation to show strategies and solutions
   Math Focus Points
   - Establishing use of tools, routines, and expectations for math class
   - Using standard notation (>, <, +, -, =) to describe arrangements of cubes, to record expressions that equal a given number, to compare quantities, to represent addition and subtraction situations, and to represent doubling
   - Using the number line to reason about, and keep track of information about, the magnitude and relationship of numbers
   - Recording strategies for solving problems, including addition and subtraction story problems
   - Using equations to record
   - Connecting standard notation for addition and subtraction (+, -, =) to the quantities and actions that the signs and symbols represent
   - Using a rectangular array to model doubling

This Unit also focuses on
- Fitting shapes together to cover an area
- Identifying coins and their values
- Identifying how many pennies each coin is worth
- Identifying and using coin equivalencies
- Collecting, counting, representing, discussing, interpreting, and comparing data
- Making predictions about data

Classroom Routines focus on
- Using clocks as tools for keeping track of and measuring time
- Naming, noting, and telling time to the hour, half hour, and quarter hour on digital and analog clocks
- Associating times on the hour and half hour with daily events
- Determining what time it will be when given start and elapsed times that are multiples of 15 minutes
- Seeing a timeline as a representation of events over time
- Using a timeline to keep track of and compare time and events
- Determining the length of a given interval (e.g., 8:30 to 9:30) or activity (e.g., math class)
- Solving problems involving elapsed time
- Generating equivalent expressions for a number
- Developing fluency with addition and subtraction
- Using standard notation (+, -, =) to record expressions and write equations
- Developing and analyzing visual images for quantities up to 10
- Seeing a timeline as a representation of events over time
- Using a timeline to keep track of and measure time
- Comparing two time and events
- Making predictions about data
- Discussing, interpreting, and comparing data
- Collecting, counting, representing, discussing, interpreting, and comparing data
- Making predictions about data

Assessed Benchmarks
- Count a set of objects up to 60 in at least one way
- Determine the difference between two numbers (up to 45)
- Interpret addition and subtraction story problems (read a story problem and determine what needs to be figured out)
- Have at least one strategy for solving addition and subtraction (as removal) story problems
- Demonstrate fluency with the Plus 1, Plus 2, and Make 10 addition combinations
- Understand what it means to double a quantity

This Unit also focuses on
- Fitting shapes together to cover an area
- Identifying coins and their values
- Identifying how many pennies each coin is worth
- Identifying and using coin equivalencies
- Collecting, counting, representing, discussing, interpreting, and comparing data
- Making predictions about data

Classroom Routines focus on
- Using clocks as tools for keeping track of and measuring time
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- Determining the length of a given interval (e.g., 8:30 to 9:30) or activity (e.g., math class)
- Solving problems involving elapsed time
- Generating equivalent expressions for a number
- Developing fluency with addition and subtraction
- Using standard notation (+, -, =) to record expressions and write equations
- Developing and analyzing visual images for quantities up to 10
- Seeing a timeline as a representation of events over time
- Using a timeline to keep track of and measure time
- Comparing two time and events
- Making predictions about data
- Discussing, interpreting, and comparing data
- Collecting, counting, representing, discussing, interpreting, and comparing data
- Making predictions about data

Assessed Benchmarks
- Count a set of objects up to 60 in at least one way
- Determine the difference between two numbers (up to 45)
- Interpret addition and subtraction story problems (read a story problem and determine what needs to be figured out)
- Have at least one strategy for solving addition and subtraction (as removal) story problems
- Demonstrate fluency with the Plus 1, Plus 2, and Make 10 addition combinations
- Understand what it means to double a quantity
Mathematical Emphases

1. **Features of Shape** Composing and decomposing 2-D and 3-D shapes
   - Math Focus Points
   - Combining shapes to make a new shape
   - Covering a region, without gaps or overlaps, with a single shape or multiple shapes
   - Covering a region, without gaps or overlaps, using different shapes
   - Combining 3-D shapes to make a 3-D whole
   - Drawing 3-D shapes

2. **Features of Shape** Describing, identifying, comparing, and sorting 2-D and 3-D shapes
   - Math Focus Points
   - Describing attributes of and sorting 2-D and 3-D shapes
   - Identifying names and attributes of 2-D and 3-D shapes
   - Attending to features of 3-D shapes, particularly the number and shape of faces
   - Identifying categories for 2-D shapes
   - Identifying a 3-D shape by touch
   - Sorting polygons by the number of sides
   - Sorting quadrilaterals by angle
   - Identifying quadrilaterals as shapes with 4 sides
   - Identifying rectangles as 4-sided shapes with 4 right angles
   - Identifying important features of a rectangle
   - Defining biggest in different ways
   - Ordering rectangles from biggest to smallest
   - Recognizing that rectangular prisms have rectangular faces
   - Recognizing which faces of a rectangular prism are the same size and shape
   - Constructing a rectangular prism from rectangles
   - Visualizing and describing rectangular prisms
   - Comparing rectangular prisms

3. **Area Measurement** Visualizing the structure of arrays
   - Math Focus Points
   - Covering rectangles with arrays of tiles
   - Arranging square tiles in rectangular arrays
   - Constructing and describing rectangular arrays of tiles
   - Making different rectangular arrays using the same number of tiles
   - Drawing rectangles by attending to the lengths of the sides

4. **Features of Shape** Exploring mirror symmetry
   - Math Focus Points
   - Describing and identifying objects and designs that have mirror symmetry
   - Constructing 2-D and 3-D symmetrical designs with mirror symmetry
   - Reflecting a shape across a line of symmetry
   - Exploring symmetry by folding and cutting paper patterns
   - Identifying lines of symmetry
   - Orienting shapes so that a line of symmetry aligns with a mirror (Shapes software)
   - Determining what makes a design symmetrical

5. **Computational Fluency** Knowing addition combinations to 10 + 10
   - Math Focus Points
   - Reviewing known addition combinations (combinations of 10, Plus 1, Plus 2)
   - Developing fluency with the doubles combinations to 10 + 10
   - Achieving fluency with the doubles combinations

Assessed Benchmarks

- Identify the number of sides of a polygon
- Identify the number of rows and the number of squares in each row in an array
- Identify rectangles as four-sided shapes with four right angles
- Identify the number of faces on a rectangular prism and show which faces are congruent
- Make a symmetrical picture based on an image provided
- Demonstrate fluency with addition combinations: doubles combinations to 10 + 10
Stickers, Number Strings, and Story Problems (Addition, Subtraction, and the Number System 2)

Mathematical Emphases

➊ Whole-Number Operations Making sense of and developing strategies to solve addition and subtraction problems with totals up to 45

Math Focus Points
• Using known combinations to add two or more numbers
• Comparing a number to 20 to find the difference
• Visualizing, retelling, and modeling the action of a variety of addition and subtraction situations
• Developing strategies for solving a variety of addition and subtraction story problems with totals up to 45 and recording work
• Solving problems with an unknown change
• Combining coins to a total of 50¢
• Solving an addition story problem by counting on or breaking numbers apart

➋ Whole-Number Operations Understanding the properties of addition and subtraction

Math Focus Points
• Considering whether reordering three addends results in the same total
• Considering a generalization about reordering addends for all numbers
• Considering whether reordering the numbers in a subtraction problem results in the same total
• Considering the relationship between addition and subtraction

➌ Counting and Quantity Counting by equal groups

Math Focus Points
• Investigating numbers that can and cannot be made into groups of two or two equal groups
• Understanding that any number that can be divided into groups of two can also be divided into two equal groups (and vice versa)
• Characterizing even and odd numbers as those that do or do not make groups of two (partners) and two equal groups (teams)
• Considering whether observations about even or odd numbers apply to all even numbers or all odd numbers

➍ Counting and Quantity Developing strategies for accurately counting a set of objects by ones and groups

Math Focus Points
• Looking at patterns and developing fluency with skip counting by 2s, 5s, and 10s
• Considering the relationship between skip counting and grouping
• Counting by groups of 2, 5, and 10
• Noticing and describing a 2:1 relationship (e.g., there are 2 legs for every 1 person)
• Solving problems that involve equal groups
• Knowing that the size of a group remains constant no matter how it is counted (by 1s, 2s, 5s, or 10s)

➎ The Base-Ten Number System Understanding the equivalence of one group and the discrete units that comprise it

Math Focus Points
• Identifying coins and their values
• Identifying and using coin equivalencies
• Recognizing that the first digit of a 2-digit number designates the number of groups of 10 and the second digit designates the number of ones
• Solving problems about 10s and 1s
• Using a place-value model to represent a number as 10s and 1s
• Finding as many combinations of a number as possible, using only 10s and 1s
• Recognizing that different combinations of 10s and 1s for the same number are equivalent (e.g., 4 tens and 6 ones = 3 tens and 16 ones, etc.)

➏ Whole-Number Computation Using manipulatives, drawings, tools, and notation to show strategies and solutions

Math Focus Points
• Using the calculator as a mathematical tool
• Using standard notation (+, -, =) to represent a variety of addition and subtraction situations
• Telling stories to match given equations
• Using tally marks to represent groups of 5

➐ Computational Fluency Knowing addition combinations to 10 + 10

Math Focus Points
• Relating the doubles and near-doubles combinations
• Developing fluency with the near-doubles combinations
• Adding 10 to any number (or any number to 10)
• Developing fluency with the Plus 10 combinations
• Achieving fluency with the near-doubles combinations

Assessed Benchmarks
• Use known combinations to add several numbers in any order
• Interpret and solve subtraction (removal) and unknown change story problems with totals up to 45
• Define even and odd numbers in terms of groups of two or two equal groups
• Recognize and identify coins and their value
• Count on or break apart numbers to add two or more numbers up to a total of 45
• Interpret and solve problems about the number of tens and ones in a quantity
• Demonstrate fluency with addition combinations: near-doubles

Classroom Routines focus on
• Generating equivalent expressions for a number
• Developing fluency with addition and subtraction
• Using standard notation (+, -, =) to record expressions and write equations
• Skip counting by 2s, 5s, and 10s
• Identifying patterns in the multiples of 2, 5, and 10
• Developing fluency with the addition combinations to 10 + 10
• Using known combinations (i.e., combinations that make 10) to combine numbers
• Counting by groups
• Counting a quantity in more than one way
• Using known combinations (i.e., combinations that make 10) to combine numbers
• Developing strategies for solving addition problems with many addends
• Using a place-value model to represent a number as 10s and 1s
• Recognizing that the first digit of a 2-digit number designates the number of groups of 10 and the second digit designates the number of ones
• Using clocks as tools for keeping track of and measuring time
• Naming, noting, and telling time to the hour, half hour, and quarter hour on digital and analog clocks
• Associating times on the hour and half hour with daily events
• Determining what time it will be when given start and elapsed times that are multiples of 15 minutes
• Determining the number of minutes in hours, half hours, and quarter hours
• Counting by 5s
Mathematical Emphases

1 Data Analysis Sorting and classifying data
   Math Focus Points
   - Grouping data into categories based on similar attributes
   - Sorting the same set of data in different ways
   - Sorting a set of data by two attributes at one time

2 Data Analysis Representing data
   Math Focus Points
   - Representing a set of data sorted into categories
   - Comparing representations of a set of data
   - Using equations to show how the sum of the responses in each category equals the total responses collected
   - Using a Venn diagram to represent a sorted set of data
   - Ordering, representing, and describing a set of numerical data
   - Comparing ways of organizing data
   - Representing data on a line plot

3 Data Analysis Describing data
   Math Focus Points
   - Describing what the data show about the group surveyed
   - Interpreting a data representation including a line plot
   - Describing important features of a data set
   - Describing a set of numerical data
   - Comparing two sets of data
   - Developing a hypothesis based on a set of data

4 Data Analysis Designing and carrying out a data investigation
   Math Focus Points
   - Choosing a survey question
   - Making a plan for collecting data
   - Making predictions about data to be collected
   - Collecting and recording data from a survey
   - Interpreting and sharing results from a data investigation

Assessed Benchmarks

- Use a Venn diagram to sort data by two attributes
- Identify categories for a set of categorical data and organize the data into chosen categories
- Order and represent a set of numerical data
- Describe a numerical data set, including the highest and lowest values and the mode
- Read and interpret a variety of representations of numerical and categorical data
- Compare two sets of numerical data
- Demonstrate fluency with Plus 10 combinations

This Unit also focuses on

- Developing strategies for combining multiple addends
- Achieving fluency with the Plus 10 combinations

Classroom Routines focus on

- Generating equivalent expressions for a number
- Developing fluency with addition and subtraction
- Using standard notation (+, -, =) to record expressions and write equations
- Using clocks as tools for keeping track of and measuring time
- Naming, notating, and telling time to the hour, half hour, and quarter hour on digital and analog clocks
- Determining what time it will be when given start and elapsed times that are multiples of 15 minutes
- Determining the number of minutes in hours, half hours, and quarter hours
- Developing and analyzing visual images for quantities
- Combining groups of tens and ones
- Adding to or subtracting 10 from a 2-digit number
- Noticing what happens to the tens place when a multiple of 10 is added to or subtracted from a 2-digit number
- Identifying coins and their values
- Adding coin amounts
- Using standard notation (¢, +, -, =) to write equations
How Many Floors? How Many Rooms? (Patterns, Functions, and Change)

**Mathematical Emphases**

1. **Linear Relationships** Describing and representing ratios
   - Math Focus Points
     - Describing the relationship between two quantities in a constant ratio situation
     - Using tables to represent the ratio relationship between two quantities
     - Finding the value of one quantity in a constant ratio situation, given the value of the other

2. **Using Tables and Graphs** Using tables to represent change
   - Math Focus Points
     - Connecting numbers in a table to the situation they represent
     - Using conventional language for a table and its parts: rows, columns
     - Describing the pattern in the numbers in a column and interpreting the pattern in terms of the situation the table represents
     - Describing how the two numbers in the row of a table are connected to the situation the table represents
     - Using information in a table to determine the relationship between two quantities

3. **Number Sequences** Constructing, describing, and extending number sequences with constant increments generated by various contexts
   - Math Focus Points
     - Extending a repeating pattern
     - Identifying the unit of a repeating pattern
     - Creating a repeating pattern that has the same structure as, but different elements than, another repeating pattern (e.g., a red–blue pattern and a clap–tap head pattern)
     - Defining even and odd numbers
     - Determining and describing the number sequence associated with one of the elements in an AB, ABC, ABCD, or AABBC repeating pattern (e.g., 2, 4, 6, 8, . . .; 3, 6, 9, . . .; 1, 4, 7, . . .)
     - Determining the element of a repeating pattern associated with a particular counting number in AB, ABC, ABCD, or AABBC patterns (e.g., what color is the 8th element in a red–blue repeating pattern?)
     - Determining how and why the same number sequence can be generated by different contexts

**This Unit also focuses on**
- Counting by and adding equal groups, such as 2s and 5s

**Classroom Routines focus on**
- Generating equivalent expressions for a number
- Developing fluency with addition and subtraction
- Using standard notation (+, -, =) to record expressions and write equations
- Using clocks as tools for keeping track of and measuring time
- Naming, notating, and telling time to the hour, half hour, and quarter hour on digital and analog clocks
- Determining what time it will be when given start and elapsed times that are multiples of 15 minutes
- Developing and analyzing visual images for quantities
- Combining groups of 10s and 1s
- Identifying coins and their values
- Adding coin amounts
- Using standard notation (¢, +, =) to write equations
- Using ratio relationships to solve problems
- Making estimates based on data collected over time
- Collecting, counting, representing, discussing, interpreting, and comparing data
- Counting by groups
- Counting a quantity in more than one way
- Using known combinations (e.g., combinations that make 10) to combine numbers
- Developing strategies for solving addition problems with many addends
- Using a place value model to represent a number as 10s and 1s
- Recognizing that the first digit of a 2-digit number designates the number of groups of 10 and the second digit designates the number of ones

**Assessed Benchmarks**
- Explain what the numbers in a table represent in a constant ratio situation (involving ratios of 1:2, 1:3, 1:4, 1:5, and 1:6)
- Complete and extend a table to match a situation involving a constant ratio
- Extend a repeating pattern and determine what element of the pattern will be in a particular position (e.g., the 16th position) if the pattern keeps going
How Many Tens? How Many Ones? (Addition, Subtraction, and the Number System 3)

Mathematical Emphases

➊ Whole-Number Operation Making sense of and developing strategies to solve addition and subtraction problems with totals up to 100
Math Focus Points
• Developing efficient methods for adding and subtracting 2-digit numbers
• Adding tens and ones to combine 2-digit numbers
• Noticing what happens to the tens place when a multiple of 10 is added or subtracted
• Adding 2-digit numbers by keeping one number whole
• Naming and comparing strategies for adding and subtracting 2-digit numbers
• Determining the difference between a number and a multiple of 10 up to 100
• Adding 2-digit numbers
• Adding multiples of 5 and 10, up to 100
• Adding coin amounts, up to $1.00
• Determining the difference between a given amount and $1.00
• Adding and subtracting 10 and multiples of 10 to/from any number
• Subtracting amounts from 100 or $1.00, down to 0

➋ Counting and Quantity Developing an understanding of the magnitude and sequence of numbers up to 100
Math Focus Points
• Becoming familiar with the structure of the 100 chart
• Developing fluency with the sequence of numbers from 1 to 100
• Finding and using patterns in the sequence of numbers
• Using the 100 chart to reason about, and keep track of, information about the magnitude and relationship of numbers

➌ Counting and Quantity Counting by equal groups
Math Focus Points
• Skip counting by 2s, 5s, and 10s
• Thinking about the structure of 100 in terms of groups of 5 and 10
• Identifying patterns in the multiples of 2, 5, and 10
• Using the relationship between 5 and 10, and between nickels and dimes, to solve problems

➍ The Base-Ten Number System Understanding the equivalence of one group and the discrete units that comprise it
Math Focus Points
• Organizing cubes into 10s and 1s
• Using a place-value model to represent a number as 10s and 1s
• Using coin equivalencies
• Working with the relationship between 1, 10, and 100

➎ Whole-Number Computation Using manipulatives, drawings, tools, and notation to show strategies and solutions
Math Focus Points
• Writing an equation that represents a problem
• Developing efficient methods for notating addition and subtraction strategies
• Visualizing and making jumps of multiples of 5 on the 100 chart
• Using coins to model adding by 5s and 10s
• Using the 100 chart and the number line to model addition

Assessed Benchmarks
• Write an equation that represents an addition or subtraction situation
• Determine the difference between a number and any multiple of 10, up to 100
• Count by 2s, 5s, and 10s, up to 110
• Add multiples of 5, up to 100
• Know coin equivalencies for nickel, dime, and quarter

Classroom Routines focus on
• Using clocks as tools for keeping track of and measuring time
• Naming, noting, and telling time to the hour, half hour, and quarter hour on digital and analog clocks
• Determining the number of minutes in hours, half hours, and quarter hours
• Counting by 5s
• Determining what time it will be when given start and elapsed times that are multiples of 15 minutes
• Generating equivalent expressions for a number
• Developing fluency with addition and subtraction
• Using standard notation (+, -, =) to record expressions and write equations
• Skip counting by 2s, 5s, and 10s
• Identifying patterns in the multiples of 2, 5, and 10
• Making estimates based on data collected over time
• Collecting, counting, representing, discussing, interpreting, and comparing data
• Counting by groups
• Counting a quantity in more than one way
• Identifying coins and their values
• Identifying and using coin equivalencies
• Using a place-value model to represent a number as 10s and 1s
• Recognizing that the first digit of a 2-digit number designates the number of groups of 10 and the second digit designates the number of ones
• Developing and analyzing visual images for quantities
• Using ratio relationships to solve problems
• Adding coin amounts
Mathematical Emphases

1. **Rational Numbers** Understanding fractions as equal parts of a whole
   - Finding equal parts of a whole and naming them with fractions (e.g., \( \frac{1}{2} \) is one of two equal parts; \( \frac{1}{3} \) is one of three equal parts, and so on)
   - Showing one half of an object
   - Determining whether a block is half of another block
   - Determining whether a region is half of a given rectangle
   - Seeing different ways to make fourths of a square
   - Recognizing the equivalence of different fourths of the same object
   - Identifying halves, thirds, and fourths of regions
   - Identifying and naming fractional parts that have numerators greater than 1 (e.g., \( \frac{2}{3} \), \( \frac{2}{4} \), \( \frac{3}{4} \))

2. **Rational Numbers** Understanding fractions as equal parts of a group
   - Finding equal parts of a group and naming them with fractions (e.g., \( \frac{1}{2} \) is one of two equal parts; \( \frac{1}{3} \) is one of three equal parts, and so on)
   - Finding one half of a set
   - Solving problems about finding halves of quantities in different contexts
   - Solving problems that result in mixed numbers
   - Finding thirds and fourths of sets
   - Finding fractions of sets

3. **Rational Numbers** Using terms and notation
   - Learning the term one half and the notation \( \frac{1}{2} \)
   - Learning the terms and notation for mixed numbers (e.g., one and a half and \( 1\frac{1}{2} \))
   - Learning the term one fourth and the notation \( \frac{1}{4} \)
   - Learning the term one third and the notation \( \frac{1}{3} \)
   - Learning the terms and notation for fractions that contain more than one part (e.g., \( \frac{2}{3} \), \( \frac{3}{4} \), and \( \frac{3}{4} \))

**Classroom Routines focus on**
- Developing and analyzing visual images for quantities
- Combining groups of tens and ones
- Generating equivalent expressions for a number
- Developing fluency with addition and subtraction
- Using standard notation (\(+\), \(-\), \(=\)) to record expressions and write equations
- Using clocks as tools for keeping track of and measuring time
- Naming, notating, and telling time to the hour, half hour, and quarter hour on digital and analog clocks
- Determining the number of minutes in hours, half hours, and quarter hours
- Counting by 5s
- Making predictions about data
- Collecting, counting, representing, discussing, interpreting, and comparing data
- Using known combinations (i.e., combinations that make 10) to combine numbers
- Developing strategies for solving addition problems with many addends

**Assessed Benchmarks**
- Identify \( \frac{1}{2} \), \( \frac{1}{3} \), and \( \frac{1}{4} \) of a region
- Find \( \frac{1}{2} \) of a set of objects
- Recognize that a fraction divides the whole into equal parts
Partners, Teams, and Paper Clips (Addition, Subtraction, and the Number System 4)

Mathematical Emphases

➊ Whole-Number Operations Adding even and odd numbers
Math Focus Points
• Characterizing even and odd numbers as those that do or do not make groups of two (partners) and two equal groups (teams)
• Investigating what happens with partners and teams when two groups are combined
• Finding combinations of odd and even numbers that make given numbers or determining that these combinations are not possible
• Making and justifying generalizations about adding even and odd numbers

➋ Computational Fluency Knowing addition combinations to 10 + 10
Math Focus Points
• Relating unknown combinations to known combinations
• Developing and achieving fluency with the plus 9 and remaining combinations

➌ Whole-Number Operations Making sense of and developing strategies to solve addition and subtraction problems with totals to 100
Math Focus Points
• Subtracting amounts from 100
• Visualizing, retelling, and modeling the action of addition and subtraction situations
• Developing efficient methods for adding, subtracting, and notating strategies
• Solving subtraction problems by subtracting in parts
• Solving subtraction problems by adding up or subtracting back to find the difference
• Comparing problems in which the amount subtracted differs by 1
• Adding 2-digit numbers by keeping one number whole
• Adding 2-digit numbers by adding tens and ones
• Noticing what happens to place value when two 2-digit numbers with a sum over 100 are combined

➍ Whole-Number Computation Using manipulatives, drawings, tools, and notation to show strategies and solutions
Math Focus Points
• Using cubes and the number line to show how addition combinations are related
• Representing the action of subtraction and addition situations using notation (−, +, =)

This Unit also focuses on
• Counting a set of objects by equal groups
• Thinking about what happens if you subtract 1 more or 1 less

Classroom Routines focus on
• Generating equivalent expressions for a number
• Developing fluency with addition and subtraction
• Using standard notation (+, −, =) to record expressions and write equations
• Using clocks as tools for keeping track of and measuring time
• Naming, notating, and telling time to the hour, half hour, and quarter hour on digital and analog clocks
• Determining what time it will be when given start and elapsed times that are multiples of 15 minutes
• Developing and analyzing visual images for quantities
• Solving problems about an unknown change
• Adding or subtracting 10
• Noticing what happens to the tens place when a multiple of 10 is added or subtracted
• Making predictions about data
• Collecting, counting, representing, discussing, interpreting, and comparing data
• Counting by groups
• Counting a quantity in more than one way
• Developing strategies for solving addition problems with many addends

Assessed Benchmarks

• Subtract 2-digit numbers
• Reason about partners, teams, and leftovers to make and justify generalizations about what happens when even and odd numbers are added
• Add two 2-digit numbers accurately and efficiently
• Demonstrate fluency with addition combinations: plus 9 and remaining combinations
Mathematical Emphases

1. **Linear Measurement** Understanding length
   - Math Focus Points
     - Comparing two lengths
     - Using direct and indirect comparison to identify equal lengths
     - Identifying length and width as different dimensions of an object

2. **Linear Measurement** Using linear units
   - Math Focus Points
     - Iterating units to measure length
     - Estimating and calculating length using units that are related by a 2:1 ratio
     - Identifying strategies for accurate measurement
     - Considering sources of measurement error
     - Understanding that different-sized units yield different counts (the smaller the unit, the higher the count)
     - Establishing the need for and using a common unit in order to compare measurements
     - Identifying and labeling partial units
     - Recognizing that, given equal counts of two different units, the larger unit marks off a longer length

3. **Linear Measurement** Measuring with standard units
   - Math Focus Points
     - Establishing the need for and using a standard unit of measure
     - Creating and using a 12-inch measuring tool
     - Iterating a 12-inch measuring tool
     - Measuring lengths that are longer than 12 inches
     - Using a ruler as a standard measuring tool
     - Comparing a variety of measuring tools
     - Becoming familiar with the terms inches, feet, yards, centimeters, and meters as standard units of measure
     - Using inches, feet, yards, centimeters, and meters to describe lengths
     - Comparing centimeters and inches

4. **Time** Representing time and calculating duration
   - Math Focus Points
     - Representing time as a horizontal sequence
     - Connecting time, its digital notation, and its representation on an analog clock to a timeline
     - Naming and using notation for times that are 30 and 15 minutes before or after the hour
     - Associating times with daily events
     - Using a timeline to determine duration
     - Moving forward and backward along a timeline in multiples of hours, half hours, and quarter hours
     - Using a timeline to show a 24-hour period
     - Recording events on a timeline

This Unit also focuses on
- Solving comparison problems by finding the difference between two measurements

Classroom Routines focus on
- Developing and analyzing visual images for quantities
- Combining groups of 10s and 1s
- Using standard notation (+, -, =) to write equations
- Generating equivalent expressions for a number
- Developing fluency with addition and subtraction
- Using standard notation (+, -, =) to record expressions and write equations
- Making predictions about data
- Collecting, counting, representing, discussing, interpreting, and comparing data
- Counting by groups
- Developing strategies for solving addition problems with many addends
- Using known combinations (i.e., combinations that make 10) to combine numbers
- Using a place value model to represent a number as 10s and 1s
- Using clocks as tools for keeping track of and measuring time
- Naming, notating, and telling time to the hour, half hour, and quarter hour on digital and analog clocks
- Associating times on the hour and half hour with daily events
- Determining what time it will be when given start and elapsed times that are multiples of 15 minutes
- Seeing a timeline as a representation of events over time
- Using a timeline to keep track of and compare time and events
- Determining the length of a given interval (e.g., 8:30 to 9:30) or activity (e.g., math class)
- Solving problems involving elapsed time

Assessed Benchmarks
- Identify sources of measurement error
- Recognize that the same count of different-sized units yields different lengths
- Recognize that, when measuring the same length, larger units yield smaller counts
- Measure objects using inches and centimeters
- Use a ruler to measure lengths longer than one foot
- Solve problems involving the beginning time of an event, ending time of an event, and duration of the event; given two of these, find the third for events beginning and ending on the hour or half-hour
- Use a timeline to record and determine duration to the hour or half-hour