Addition & Subtraction Units in *Investigations*

K-2

Kindergarten

2nd Edition

Measuring and Counting

Measurement and the Number System

Students gain a deeper understanding of numbers and number relationships as they engage in activities in which they count, combine, and compare amounts. They develop visual images of numbers and solve problems in which they find different combinations of the same number. Students are introduced to addition and subtraction situations through story problem contexts. Work with linear measurement continues as students use non-standard units to measure the length of objects and paths

How Many Do You Have?

Addition, Subtraction and the Number System

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Classroom Routine: Attendance ✦ Calendar

Grade 1

How Many of Each?

Addition, Subtraction and the Number System

In this first number unit in grade 1, students count, order, and compare quantities, and work with the operation of addition. Students also work on finding addition combinations up to 10 and learn to make sense of and solve story problems. They are introduced to several of the classroom routines which practice and reinforce work with counting, developing visual images of number, collecting data and working with concepts of time (calendar/clock).

Solving Story Problems

Addition, Subtraction and the Number System

This unit focuses on counting to higher numbers (forward and back), counting sets of objects, comparing larger quantities, composing and decomposing numbers, and finding all the two-addend combinations of a number. Students revisit familiar addition activities with variations that encourage counting on, and are introduced to the operation of subtraction. Through games and story problems, students' work focuses on developing an understanding of addition and subtraction, using numbers and notation to represent these operations and developing strategies for solving addition and subtraction problems.

Addition & Subtraction Units in *Investigations*

Grade 1 continued...

✦ **Number Games and Crayon Puzzles**   Addition, Subtraction and the Number System

Students work on composing numbers with two and three addends and in a variety of contexts, they work with combinations that equal 10, and explore relationships among those combinations. The addition and subtraction work of this unit continues to focus on making sense of the operations of addition and subtraction, practicing adding and subtracting single-digit numbers, and solving addition and subtraction story problems. There is a focus on naming and comparing different strategies used for solving problems such as counting all, counting on or back, and using known number combinations. Students also discuss how different tools such as objects, the number line and 100 chart can be used to model and solve problems.

✦ **Twos, Fives and Tens**   Addition, Subtraction and the Number System

Students revisit the number sequence as they count and write numbers to 100 and beyond. Students work on achieving fluency with the two-addend combinations of ten, they are introduced to ideas about equivalence (8+5=10+3) and engage in activities that highlight the importance of ten in our base 10 number system. As students work with contexts that provide opportunities to count by groups of 2s, 5s and 10s they think about ways to organize objects so that they are easier to count and combine, and begin to make sense of what it means to count by equal groups.

✦ **Classroom Routine:** Start With/Get To ✦ Morning Meeting ✦ Quick Images ✦ Tell a Story

Grade 2

✦ **Counting, Coins and Combinations**   Addition, Subtraction and the Number System

This unit focuses on counting and comparing quantities, composing and decomposing numbers and understanding the operations of addition and subtraction. Students develop strategies for comparing, combining, and doubling quantities, as well as taking one quantity away from. They also achieve fluency with yhree sets of addition combinations (10s, +1, + 2). During this first unit of the year students are introduced to several year-long classroom routines that offer regular practice with composing and decomposing numbers, developing visual images of quantities, counting, collecting and analyzing data and telling time.

Addition & Subtraction Units in *Investigations*

2ⁿᵈ Edition

Grade 2 continued...

✦ **Stickers, Number Strings and Story Problems**   Addition, Subtraction and the Number System

> In this second number students solve problems with multiple addends and consider whether order matters in addition. For example, does 7+4+3+6 = 7+3+4+6? Students revisit addition and subtraction story problems, investigate even and odd numbers, and begin to make sense of counting by groups and place value (tens and ones). Work on addition combinations continues as students achieve fluency with the Near Doubles.

✦ **How Many Tens? How Many Ones?**   Addition, Subtraction and the Number System

> Students continue to build their understanding of place value (ones, tens, hundred) as they compose and decompose numbers into tens and ones and work with contexts and models for the base 10 number system. Students apply their work with place value as they play games which involve composing and decomposing100, and solve addition and subtraction problems to 100. There is continuing work on and coin equivalencies and combinations, developing visual images of numbers and telling time.

✦ **Partners, Teams and Paper Clips**   Addition, Subtraction and the Number System

> This final number unit of grade 2 is a culmination of the number and operations work students have done in grade 2. Students refine their strategies for adding and subtracting numbers as they work towards developing fluency with addition and subtraction of two digit numbers up to 100. They investigate and make generalizations about what happens when you add even and odd numbers. They learn the remaining single digit addition combinations, achieving fluency with all single digit addition combinations. Work continues with telling time, place value and coin combinations.

✦ **Classroom Routine:** How Many Pockets? ✦ Today's Number ✦ Quick Images