



Grade 1 - Unit C - Leap Frogging

Unit Focus

This unit begins with a place value introduction using estimation jars and counting collections. Students develop an understanding of our number system and build two-digit numbers. Students learn:

- that ten ones makes one ten
- there are ten digits in our number system that make up all numbers
- to identify the number of tens and ones in a number

Then the unit shifts into placing two-digit numbers on the number line, helping students visualize number relationships in order to count and calculate.

- Closed and open number lines are used both as models of our number system, as well as models for beginning operations with addition and subtraction.
- Numbers lines with both large scales (skip-count by 10s or 50s) and small scales (skip count by 1s or 5s) ranging to 120 are introduced.
- Students learn that addition and subtraction problems can be solved in different ways

Stage 1: Desired Results - Key Understandings

Standard(s)	Transfer	
Standards • Common Core ○ <i>Mathematics: 1</i> ▪ Represent and solve problems involving addition and subtraction. ▪ Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (CCSS.MATH.CONTENT.1.OA.A.1) ▪ Understand and apply properties of operations and the relationship between addition and subtraction. ▪ Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8. (CCSS.MATH.CONTENT.1.OA.B.4) ▪ Add and subtract within 20. ▪ Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). (CCSS.MATH.CONTENT.1.OA.C.5) ▪ Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating	<i>Students will be able to independently use their learning to...</i> T1 Initiate a plan using a variety of methods/strategies appropriately, execute it, and evaluate the reasonableness and accuracy of the solution. T2 Identify and generalize patterns and structure in numbers, expressions, data and objects.	
	Meaning	
	Understanding(s)	Essential Question(s)
	<i>Students will understand that...</i> U1 Mathematicians monitor progress while problem solving, change course if necessary and evaluate the reasonableness of their solution. U2 Mathematicians see patterns to make generalizations about structures and relationships.	<i>Students will keep considering...</i> Q1 How can I represent relationships between the numbers 0-120? Q2 How do I determine that my answer makes sense? Q3 What generalizations can be made from this pattern?

Stage 1: Desired Results - Key Understandings

equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$). (CCSS.MATH.CONTENT.1.OA.C.6) - Work with addition and subtraction equations. - Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$. (CCSS.MATH.CONTENT.1.OA.D.8) - Number & Operations in Base Ten - Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (CCSS.MATH.CONTENT.1.NBT.A.1) - Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: (CCSS.MATH.CONTENT.1.NBT.B.2) 10 can be thought of as a bundle of ten ones —called a ten. (CCSS.MATH.CONTENT.1.NBT.B.2A) - The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. (CCSS.MATH.CONTENT.1.NBT.B.2B) - The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). (CCSS.MATH.CONTENT.1.NBT.B.2C) - Understand place value. - Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$. (CCSS.MATH.CONTENT.1.NBT.B.3) - Use place value understanding and properties of operations to add and subtract. - Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. (CCSS.MATH.CONTENT.1.NBT.C.4) - Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. (CCSS.MATH.CONTENT.1.NBT.C.5) - Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. (CCSS.MATH.CONTENT.1.NBT.C.6) - Mathematical Practices - Make sense of problems and persevere in solving them. (CCSS.MATH.MP.1) - Look for and make use of structure. (CCSS.MATH.MP.7) Madison Public Schools Profile of a Graduate Analyzing: Examining information/data/evidence from multiple sources to identify possible underlying assumptions, patterns, and relationships in order to make inferences. (POG.1.2)	Acquisition of Knowledge and Skill	
	Knowledge	Skill(s)
	<i>Students will know...</i> K1 Patterns of adding and subtracting numbers in increments of 1, 2, 5, and 10 K2 How to manipulate and create an open and closed number line K3 How to interpret and detect patterns from a given set of numbers to solve for the unknown K4 Vocabulary: number line, scale, open, closed, tens, multiple, skip-jump, decade K5 Understand that 10 ones makes 1 ten K6 Understand that 10 tens makes 100	<i>Students will be skilled at...</i> S1 Counting to 120, starting with any number less than 120 S2 Counting by 5's and 10's S3 Recognizing the difference between an addition and subtraction problem S4 Solving addition and subtraction problems by counting on and back S5 Recognizing, describing and extending number patterns S6 Creating a number line counting by varying numbers such as 1s, 5s, and 10s S7 Comparing 2-digit numbers