Unit F - *Problems All Around Us*

Overview

In the final unit, students strengthen their understanding of quantity, number combinations and written notation to 20. They spend more time developing fluency with addition and subtraction to 5 and continue to develop strategies for adding and subtracting to 10. A deeper understanding of subtraction is developed as they begin to see subtraction as both taking away and comparing. Students learn to identify and solve problems by applying known facts or using materials to model and then solve problems.

21st Century Capacities: Analyzing, Problem Identification

Stage 1 - Desired Results

ESTABLISHED GOALS/ STANDARDS

MP 1 Make sense problems and persevere in solving them
MP7 Look for and make use of structure

CCSS.MATH.CONTENT.K.CC.A.1
Count to 100 by ones and by tens.

CCSS.MATH.CONTENT.K.CC.A.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

CCSS.MATH.CONTENT.K.OA.A.1
Represent addition and subtraction with objects, fingers, mental images, drawings[1], sounds (e.g., claps), acting out situations, verbal explanations, expressions, or

Transfer:

Students will be able to independently use their learning in new situations to...

1. Develop fluency with addition and subtraction to 10 by applying strategies based on patterns; (Analyzing)
2. Make sense of a problem, initiate a plan, and execute it (Problem Identification).

Meaning:

UNDERSTANDINGS: *Students will understand that:*	ESSENTIAL QUESTIONS: *Students will explore & address these recurring questions:*
1. Using a variety of strategies helps us to add and subtract 2. Utilizing tools to model problem solving helps to visualize mathematics and show our thinking	A. What strategies can we use to solve this problem? B. What is the problem? C. How do a group of numbers go together? D. How can understanding a pattern help me?

Acquisition:

Students will know…	*Students will be skilled at…*
1. We can use tools and models to understand quantities and solve story problems	1. Recognizing combinations of two numbers that make a sum of numbers less than 10 2. Adding and subtracting within 5

equations. CCSS.MATH.CONTENT.K.OA.A.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. CCSS.MATH.CONTENT.K.OA.A.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1). CCSS.MATH.CONTENT.K.OA.A.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation. CCSS.MATH.CONTENT.K.OA.A.5 Fluently add and subtract within 5.	2. There are more efficient strategies than counting each object/dot/etc in order to add 3. A fact family demonstrates the relationship between addition and subtraction 4. Connections between equations and quantities 5. Subtraction can mean taking away from a total or comparing the difference between two quantities. 6. Vocabulary: add, addition, combinations, equal, equation, fact family, in all, minus, plus, subtract, subtraction	3. Writing equations for sums to 10 4. Counting backward in order to solve subtraction problems 5. Discussing multiple solution strategies 6. Representing addition and solving addition story problems 7. Representing subtraction and solving subtraction story problems