Grade K - Unit B - Five and Ten, Do It Again!

Unit Focus

In this unit, the question of "how many" begins to shift to "which is more and which is less". Student activities should focus on promoting flexible ways of interpreting or representing and recognizing quantities, not memorizing combinations. Students visually represent numbers by using five frames, ten frames, number racks, finger patterns and tallies to:

- find and recognize combinations of numbers that make 5
- recognize and compare quantities within 10
- compose and decompose numbers less than 5
- compare numbers

Stage 1: Desired Results - Key Understandings

Standard(s)

Standards

- Common Core
  - *Mathematics: K*
    - Know number names and the count sequence.
    - Count to 100 by ones and by tens. *(CCSS.MATH.CONTENT.K.CC.A.1)*
    - Count forward beginning from a given number within the known sequence (instead of having to begin at 1). *(CCSS.MATH.CONTENT.K.CC.A.2)*
    - Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). *(CCSS.MATH.CONTENT.K.CC.A.3)*
    - Understand the relationship between numbers and quantities; connect counting to cardinality. *(CCSS.MATH.CONTENT.K.CC.B.4)*
    - When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. *(CCSS.MATH.CONTENT.K.CC.B.4.A)*
    - Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. *(CCSS.MATH.CONTENT.K.CC.B.4B)*
    - Understand that each successive number name refers to a quantity that is one larger. *(CCSS.MATH.CONTENT.K.CC.B.4.C)*
    - Count to tell the number of objects.
    - Count to answer how many? questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects. *(CCSS.MATH.CONTENT.K.CC.B.5)*

Transfer

Students will be able to independently use their learning to...
T1 Apply models to solve problems.
T2 Represent situations using mathematical reasoning and symbols.

Meaning

Understanding(s)	Essential Question(s)
Students will understand that... **U1** Mathematicians make sense of quantities to represent situations mathematically. **U2** Mathematicians create or use models to generalize, represent, and solve problems.	*Students will keep considering...* **Q1** What do the quantities mean? **Q2** What model best represents this problem?

Acquisition of Knowledge and Skill

Knowledge	Skill(s)
Students will know... **K1** the order of the counting sequence **K2** quantities can be compared **K3** the equal sign means "is the same" or "has the same value as" **K4** how to combine quantities to make 5 or 10	*Students will be skilled at...* **S1** finding combinations of 5 or 10 **S2** comparing quantities less than 10 to determine which has more or less **S3** seeing numbers in groups and subitizing **S4** matching quantities with numerals **S5** counting to 20 by 1s

Stage 1: Desired Results - Key Understandings

▪ Compare numbers. ▪ Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. *(CCSS.MATH.CONTENT.K.CC.C.6)* ▪ Compare two numbers between 1 and 10 presented as written numerals. *(CCSS.MATH.CONTENT.K.CC.C.7)* ▪ Understand addition, and understand subtraction. ▪ Represent addition and subtraction with objects, fingers, mental images, drawings1, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. *(CCSS.MATH.CONTENT.K.OA.A.1)* ▪ 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.3)* ▪ Fluently add and subtract within 5. *(CCSS.MATH.CONTENT.K.OA.A.5)* ▪ Classify objects and count the number of objects in each category. ▪ Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. *(CCSS.MATH.CONTENT.K.MD.B.3)* ▪ Mathematical Practices ▪ Model with mathematics. *(CCSS.MATH.MP.4)* ▪ 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)*	**K5** Vocabulary: same, different, five/ten-frame, in all, tally, problem, backward, forward, strategies	**S6** counting backward from any number in the range 10-1 **S7** counting a set of up to ten objects showing cardinality **S8** adding and subtracting 1 to a given quantity