Unpacked South Dakota State Mathematics Standards

Purpose: *In order for students to have the best chance of success, standards, assessment, curriculum resources, and instruction must be aligned in focus, coherence, and rigor. Unpacked standards documents are intended to help align instruction to the focus, coherence, and rigor of the South Dakota State Mathematics Standards. The standards have been organized in clusters as they are not so much built from topics, but rather woven out of progressions. Not all content in a given grade is emphasized equally in the mathematics standards. Some clusters require greater emphasis than others based on the depth of the ideas, the time that they take to master, and/or their importance to future mathematics or the demands of college and career readiness. To say that some things have greater emphasis is not to say that anything in the standards can safely be neglected in instruction. Neglecting standards will leave gaps in student skill and understanding and may leave students unprepared for the challenges of a later grade.*

Domain: Numbers and Operation in Base Ten	**Grade Level: Kindergarten**

K.NBT.A Cluster: Work with numbers 11 – 19 to gain foundations for place value.

The focus of this cluster is on composing and decomposing numbers from 11-19 into ten ones and some more ones.

****This is a MAJOR cluster.** *Students should spend the large majority of their time (65-85%) on the major work of the grade. Supporting work and, where appropriate, additional work should be connected to and engage students in the major work of the grade.*

K.NBT.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Aspects of Rigor for Student Learning: (Conceptual, Procedural, and/or Application)

Conceptual Understanding	***Procedural Fluency***	***Application***
Understand that numbers 11-19 can be composed and decomposed into a group of ten ones and some more ones **(K.NBT.1)** Use objects, drawings, or equations to represent numbers 11-19 as a group of ten ones and some more ones **(K.NBT.1)** **Teacher Note:** Learners do not unitize a group of ten ones as a "ten" in kindergarten. This standard does not directly address place value. Teachers should reference a unit of 10 as "10 ones".		

Enacting the Mathematical Practices - Evidence of Students Engaging in the Practices

1. **Make sense of problems and persevere in solving them.**
2. **Reason abstractly and quantitatively.**
   - Symbolically represent a quantity with numerals
3. **Construct viable arguments and critique the reasoning of others.**
4. **Model with mathematics.**
   - Create models such as bundles of ten and ten frames to create a collection of "ten ones"
5. **Use appropriate tools strategically.**

- Use base ten frames, bundles, and other pictorial representations

6. **Attend to precision.**
7. **Look for and make use of structure.**
    - This is a first experience with the place value structure of the base ten number system
8. **Look for and express regularity in repeated reasoning.**

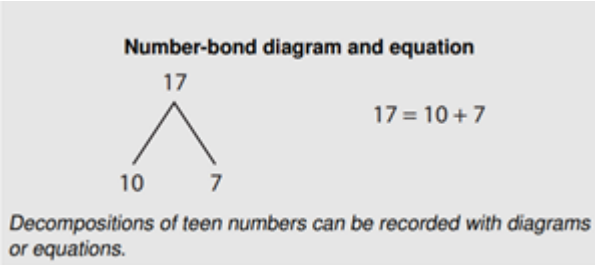
Vertical and Horizontal Coherence and Learning Progressions

Previous Learning Connections	***Current Learning Connections***	***Future Learning Connections***
Early childhood learning guidelines address: Count by one to 10 and higher Count the number of items in a group of up to 10 objects and know that the last number tells how many	Learners decompose numbers to ten into pairs in more than one way **(K.OA.3)**	These understandings developed in kindergarten will support the following learning in first grade: The thinking of 10 ones shifts to thinking of 10 ones as “a ten” The numbers 10, 20, 30, 40, 50, 60,70, 80, and 90 refer to one, two, three, four, five, six, seven, eight, and nine tens and 0 ones

Vocabulary *(Key Terms Used by Teachers and Students in this Cluster):*

- bundles of ten
- ten frame
- ten ones
- Equation
- Equal
- Group
- record

Relevance, Explanations, and Examples:

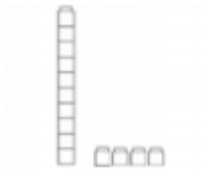


Decompositions of teen numbers can be recorded with diagrams or equations.

Here is the solution for number 13:

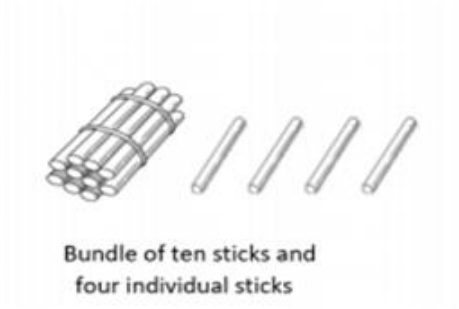
13 = 10 + 3

The solutions for 11-19 follow the same pattern.



Linking cubes

Shows 10 +4 =14



Bundle of ten sticks and four individual sticks