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: Measurement and Data	**Grade Level: Kindergarten**

K.MD.B Cluster: Classify objects and count the number of objects in each category.

Kindergarteners will experience sorting by a variety of criteria as well as sorting rules that promote logical thinking and reasoning. Students will identify similarities and differences between objects and use attributes and characteristics to sort a collection of objects.

****This is a SUPPORTING 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.MD.3 Classify objects into given categories; count the number of objects in each category and sort the categories by count. Limit category counts to be less than or equal to 10.

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

Conceptual Understanding	***Procedural Fluency***	***Application***
Identify similarities and differences between objects **(K.MD.3)** Classify objects into given categories **(K.MD.3)** Sort categories by count (up to 10) **(K.MD.3)**	Count the number of objects in each category (up to 10) **(K.MD.3)**	

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.**
   - Learners will use reasoning to compare objects
3. **Construct viable arguments and critique the reasoning of others.**
   - Learners will describe measurable attributes and reason about how to compare objects
4. **Model with mathematics.**
5. **Use appropriate tools strategically.**
6. **Attend to precision.**
   - Learners attend to precision by aligning endpoints when comparing length
   - Learners will use clear language to describe attributes and comparisons
7. **Look for and make use of structure.**
8. **Look for and express regularity in repeated reasoning.**

Vertical and Horizontal Coherence and Learning Progressions

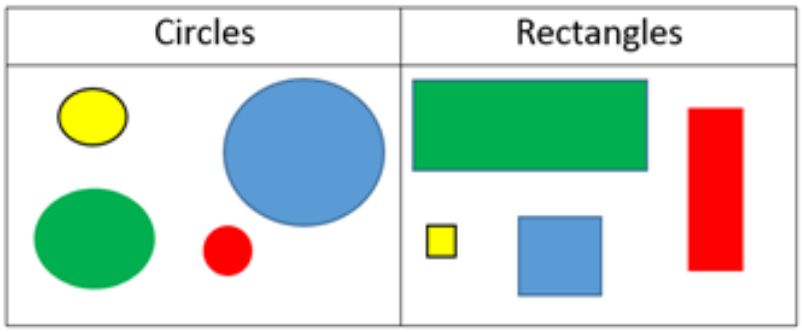
Previous Learning Connections	***Current Learning Connections***	***Future Learning Connections***
Early childhood learning guidelines Address: Sort objects onto a large graph according to one attribute, such as size, shape or color Sort, classify, and order objects by size and other properties Arrange objects in order according to characteristics or attributes, such as height	Kindergarten learners use Understanding of counting and cardinality to accurately count to tell how many. They recognize whether the number in a group greater than, less than, or equal to the number in another group **(K.CC.4, 5, 6)**	These understandings developed in Kindergarten will support the following learning in first grade: Organize, represent, interpret, and compare data with up to three categories

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

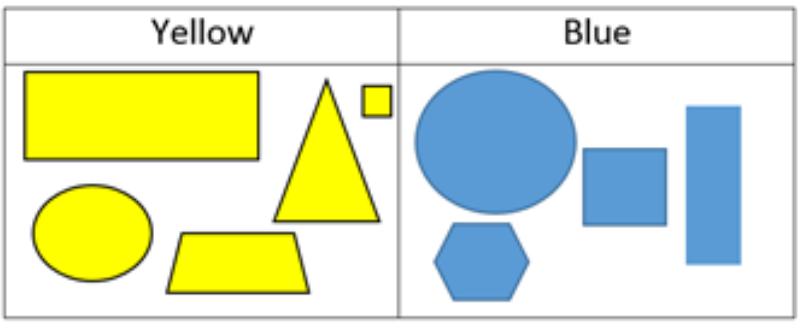
- Sort
- Groups
- Count
- Attribute

Relevance, Explanations, and Examples:

Example of sorting by one attribute



Example of sorting by a non-defining attribute (characteristic)



Students are not required to verbalize the difference between an attribute and a characteristic (non-defining attribute). They may sort by either and tell the rule they used to sort.