

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: Number and Operation in Base Ten		Grade Level: 2
2.NBT.A Cluster: Understand place value.		
<p>In second grade, students continue to develop a deep understanding of place value and use that understanding to add and subtract within 1,000. This cluster focuses on the development of place value up to and beyond 100. Students should use the structure of building tens out of 10 ones, building hundreds out of 10 tens, and building a thousand out of 10 hundreds. This is the structure of our base-ten place value system. It is built on repeated reasoning that every time you have 10 of a particular item, you group it to make the next place value unit. Students use precision in describing their work with appropriate vocabulary and reading numbers accurately. They explain their reasoning to classmates throughout the cluster and compare their thinking with that of their peers.</p>		
<p>**This is a MAJOR cluster. <i>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.</i></p>		
<p>2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. a. 100 can be thought of as a bundle of ten tens - called a “hundred.” b. The numbers 100, 200, 300, 400, 500, 500, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).</p>		
<p>2.NBT.2 Count within 1000; skip-count by 5’s, 10’s, and 100’s, starting from any number in it’s skip counting sequence.</p>		
<p>2.NBT.3 Read and write number to 1000 using base 10 numerals (standard form), number names (word form), and expanded form.</p>		
<p>2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$, symbols to record the results of comparisons.</p>		
Aspects of Rigor for Student Learning: (Conceptual, Procedural, and/or Application)		
Conceptual Understanding	Procedural Fluency	Application
Understand that 3 digit numbers represent different amounts based on place value (2.NBT.1)		
	Count within 1000 using 1’s, 5’s, 10’s, or 100’s (2.NBT.2) Describe place value patterns when skip counting (2.NBT.2)	
	Express a number within 1000 in multiple forms (2.NBT.3)	

	Read a number within 1000 in multiple forms (2.NBT.3)	
Understand the place value of three digit numbers to compare two numbers (2.NBT.4)	Use $>$, $=$, and $<$ symbols to record comparisons of three digit numbers (2.NBT.4)	

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.**
 - Visualize three digit numbers based on place value to compare numbers.
3. **Construct viable arguments and critique the reasoning of others.**
4. **Model with mathematics.**
5. **Use appropriate tools strategically.**
6. **Attend to precision.**
7. **Look for and make use of structure.**
8. **Look for and express regularity in repeated reasoning.**
 - Understand that every time they have 10 of a particular item, they group it to make the next place value unit.

Vertical and Horizontal Coherence and Learning Progressions

<u>Previous Learning Connections</u>	<u>Current Learning Connections</u>	<u>Future Learning Connections</u>
<p>Learners will count to 120, starting with any number less than 120. (1.NBT.1)</p> <p>Learners will understand place value of ones and ten in two digit numbers. (1.NBT.2)</p>	<p>Learners will represent and solve addition and subtraction, 2-step word problems. (2.OA.1)</p> <p>Learners will tell and write time to the nearest five minutes. (2.MD.7)</p> <p>Learners will solve word problems involving coins and bills by knowing the value of coins. (2.MD.8)</p> <p>Learners will use rectangular arrays (within 5×5) to find the total number of objects, and to write equations based on repeated addition. (2.OA.4)</p>	<p>Learners will interpret the products of whole numbers, such as interpreting 7×5 as the total number of objects in 7 groups of 5 objects each. (3.OA.1)</p> <p>Learners will use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities. (3.OA.3)</p>

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

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> • Base Ten • Expanded Form • Standard Form • Word Form • Ones | <ul style="list-style-type: none"> • Tens • Hundreds • Place Value • Skip Count • Greater Than | <ul style="list-style-type: none"> • Less Than • Equal To |
|---|---|---|

Relevance, Explanations, and Examples:

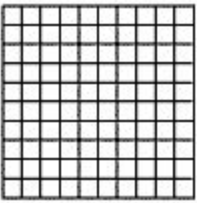


		
Hundreds 10 x 10	Tens 10 = 10 x 1	Ones 1

Image source: Mathisfun.com

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Image source: eduplace.com

Teacher Note: In kindergarten students use verbal language to identify whether groups of objects or numerals are greater than, less than or equal to other groups of objects or numerals. In first grade students are introduced to using the symbols to record comparisons. Emphasis should be placed on the meaning of quantities rather than tricks such as “the alligator eats the bigger number,” etc. In second grade, students should become more comfortable with the use and meanings of these symbols.