

South Dakota • English Language Arts

DOCUMENTS REVIEWED

South Dakota Reading Content Standards. March 2007.

Accessed from: <http://doe.sd.gov/contentstandards/languagearts/index.asp>

South Dakota Writing, Listening and Communication Content Standards. March 2007.

Accessed from: <http://doe.sd.gov/contentstandards/languagearts/index.asp>

Overview

South Dakota’s standards are clearly organized and well presented. Unfortunately, they also include far too many vaguely worded standards and omit much essential content. This leaves teachers in the Mount Rushmore State without the guidance they need to drive instruction and rigorous curriculum and assessment development.



Clarity and Specificity: 2/3

Content and Rigor: 4/7

Total State Score: 6/10

(Common Core Grade: B+)

General Organization

South Dakota’s standards are organized in three strands: Reading; Writing; and Listening, Speaking, and Viewing. For each strand, the state provides indicators, common to all grades, which “represent expected outcomes for all students preparing to graduate from South Dakota schools.” For example:

Students can comprehend and fluently read text (reading indicator 2)

Grade-level content standards are then provided to delineate “expected outcomes for students completing each grade level.”

In addition, the state provides “performance descriptors,” which are rubrics that outline what skills students must have mastered by the end of the year to be considered advanced, proficient, or basic.

Clarity and Specificity

As noted above, the South Dakota standards are well organized and clearly presented. In particular, the state helpfully lists them in two ways: by grade level, so that teachers can clearly see everything their students need to master in a particular year, and by indicator, so that readers can understand the development and progression of content and rigor in a particular strand or indicator from grade to grade.

Some standards are clear and specific, such as:

Students can edit text for subject-verb agreement (grade 6)

Unfortunately, too many of the grade-specific standards are vague and provide insufficient guidance. For example:

Students can contribute to group discussions on a topic (Kindergarten)

Utilize comprehension strategies while constructing meaning (grade 5)

Students can determine and utilize organizational features of text (grade 3)

Occasionally, the performance descriptors add specificity, but most frequently the grade-level standards are simply repeated verbatim under the “proficient” heading. (Note, though, that by providing some guidance about what students would need to know and be able to do to be considered “advanced,” the state admirably demonstrates how teachers can differentiate instruction for more advanced students.)

South Dakota also includes a helpful glossary to define content-specific vocabulary used throughout the standards.

Though clear organization and inclusion of the glossary and performance descriptors partially offset the vagueness of the grade-level standards themselves, overall the standards leave too much room for interpretation and variation and, consequently, earn two points out of three for Clarity and Specificity. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Strengths

South Dakota is one of the few states to provide an appendix that is devoted to naming suggested authors (and occasionally texts) that reflect our common literary and cultural heritage. This list is divided by grade band (Pre-K-4, 5-8, and 9-12) and includes important authors and works of literature and poetry, such as Louisa May Alcott, Robert Frost, C. S. Lewis, Shakespeare, Sir Arthur Conan Doyle, Chaucer’s *Canterbury Tales*, William Blake, and so on. In addition, South Dakota includes important works of American nonfiction, such as Martin Luther King, Jr.’s *Letter from a Birmingham Jail* and Lincoln’s *Gettysburg Address*, as well as a list of suggested authors from “contemporary American literature” that is presented for grades Pre-K-2, 3-4, 5-8, and 9-12.

The standards also include expectations that address the quality and complexity of writing expected at each grade, such as:

- Students can write a thesis statement for an expository or persuasive document (grade 9)
- Students can summarize and paraphrase information from references to compose text (grade 7)
- Students can edit text for verb-tense agreement (grade 7)
- Students can compose narrative, descriptive, expository, and persuasive text of five paragraphs (grade 8)

The standards helpfully address the genres of writing that students should be doing at each grade, as shown in the eighth-grade standard above and the following third-grade standard:

- Students can write a friendly letter, thank-you notes, and invitations (grade 3)

While no rubrics or annotated samples of student writing are provided, the performance descriptors help clarify expectations of the level of writing expected of students at each grade level. For example:

Third-grade students performing at the advanced level:

- compose a paragraph with indentation, a topic sentence, supporting details, and a conclusion; incorporate questions, commands, statements and/or exclamations; write friendly letters, thank-you notes, invitations, letter to the editor or principal;
- capitalize newspapers, magazines, first words in quotations, names, holidays, special events, book and story titles, and titles of people;
- use commas in dates, city and state, items in a series; and quotation marks in dialogue;
- write legibly in cursive with proper spacing in a paragraph;
- write a paragraph using multiple interjections (grade 3, advanced)

The standards also delineate expectations for listening, speaking, and, in grades K-8, for delivering formal oral presentations.

Content Weaknesses

The standards that address phonics and phonemic awareness are generally too vague to provide real guidance to teachers, as demonstrated below:

- Students can read text by decoding word parts (grade 1)
- Students can decode to read and recognize words (grade 1)

Similarly, the vocabulary standards are generally empty, as in:

- | Students can apply example clues to extend vocabulary (grade 7)
- | Students can analyze word parts to determine meaning and context (grade 9)

While the state admirably includes the appendix listing sample authors and texts, the actual standards that address literary and non-literary texts outline virtually no rigorous or specific content. For example:

- | Students can identify and describe literary elements and devices in literature (grade 3)
- | Students can interpret text using comprehension strategies (grade 7)
- | Students can identify how authors use literary elements to create meaning (grade 7)
- | Students can evaluate how style affects the meaning of text (grade 12)

Such standards leave little confidence that students across the state will master the critical content necessary to become proficient readers.

Similarly, while the writing standards address the genres students should be learning at each grade, they do not specify essential genre-specific content. Nor do they clearly outline the grammar content that students must learn each year. Instead, the state includes mostly generic standards, such as:

- | Students can identify and incorporate nouns in the writing process (grade 4)

Finally, while the document includes research standards, their expectations are so general as to be meaningless, such as this one from twelfth grade:

- | Students can write a research document which will defend a position or recommend a plan of action (grade 12)

Taken together, these shortcomings leave almost 50 percent of the essential K-12 content missing, thus earning South Dakota four points out of seven for Content and Rigor. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

With their grade of C, South Dakota's ELA standards are mediocre. Those developed by the Common Core State Standards Initiative earn a solid B-plus. The CCSS ELA standards are superior to what the Mount Rushmore State has in place today.

South Dakota • Mathematics

DOCUMENTS REVIEWED

Mathematics Content Standards. May 17, 2004.

Accessed from: <http://doe.sd.gov/contentstandards/math/docs/MathStandards--Approved05-17-04.pdf>

Overview

South Dakota's standards are beautifully presented. They are well organized and illustrated throughout with examples. Unfortunately, their mathematical content is often incomplete. Arithmetic, though somewhat prioritized, is poorly developed. High school is missing important content.



Clarity and Specificity: 2/3

Content and Rigor: 3/7

Total State Score: 5/10

(Common Core Grade: A-)

General Organization

The K-8 standards are organized by five content strands such as Algebra and Geometry. Each strand is subdivided into topics, and within these topics are the grade-level standards. Associated with each standard are examples and supporting skills.

The high school organization is similar, but the standards are divided not by grade, but into two categories: Core and Advanced.

Clarity and Specificity

The standards are generally very easy to read. They are well organized and the statements are often succinct and clear, such as:

Students are able to measure length to the nearest $\frac{1}{2}$ inch (grade 3)

For standards that are not so clear, the associated examples and supporting skills often serve to clarify. Take the following standard and example:

Students are able to identify information and apply it to a given formula

Example: Given the formula for distance, $D = rt$, the troop hiked 12 miles in 4 hours. At what rate did they hike?
(grade 5)

Sometimes the supporting skills contain crucial mathematics. In the following standard, recall of number facts is included as a supporting skill rather than as a standard itself:

Students are able to find the products of two-digit factors and quotient of two natural numbers using a one-digit divisor
(grade 4)

The supporting skill is:

Recall and apply multiplication and division facts through the 12s (grade 4)

The examples are necessary in interpreting the high school standards. For example, for linear equations:

Students are able to use graphs, tables, and equations to represent linear functions.

Examples:

1. Create a table from the graph or equation of a line.
2. Graph a linear equation in the form $y=mx+b$.
3. Write an equation of a line that passes through the points (3, 2) and (-1, 5) (high school—core)

Another example is the following broadly stated standard that, in and of itself, could be interpreted at almost any level of rigor:

Students are able to apply properties and definitions of trigonometric, exponential, and logarithmic expressions (high school—advanced)

Five examples accompany this standard, and they make clear that the standard expects a high level of rigor, such as:

$(\sin x - \cos x)^2 = 1 - \sin(2x)$ (high school—advanced)

Not every type of problem appears as an example, however, so the scope of this standard is still unclear.

A similarly vague standard with a high-level example is:

Students are able to describe characteristics of nonlinear functions and relations

Example: Find the period, amplitude, vertical and horizontal shift of $y = 3\sin 2(x + \frac{\pi}{3}) - 2$ (high school—advanced)

The standards are well presented and easy to read, but they are often overly general, though the use of examples to clarify the intent is an exemplary feature. Even with the examples, however, the standards do not quite provide a complete guide to users. They receive a Clarity and Specificity score of two points out of three. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Priorities

South Dakota does prioritize the development of arithmetic, though not adequately. The introduction states:

Grades 3 through 5 standards emphasize multiplicative reasoning, equivalence, and computational fluency with whole numbers.

This emphasis is not adequately reflected in the standards themselves where about 40 percent of the standards support the stated emphasis, indicating a moderate priority for arithmetic.

Content Strengths

As mentioned above, the primary strength of South Dakota's standards is their relatively high prioritization of essential arithmetic in the crucial elementary grades. In addition, some of the high school examples indicate a high degree of rigor in coverage. For another important example, although the arithmetic of rational functions is not explicitly required in the standards, there is:

Students are able to write equivalent forms of rational algebraic expressions using properties of real numbers (high school—advanced)

This is too broad a statement to discern the level of rigor required, but the examples include problems indicating a high degree of sophistication, such as:

$$\left| \begin{array}{l} 2 + \frac{1}{x} \\ \hline \frac{1}{x+3} - 1 \end{array} \right. \text{ (high school—advanced)}$$

In addition, linear equations are generally well covered.

Content Weaknesses

Though arithmetic is stated as a priority, it is not well developed. Beginning with the foundations of whole-number arithmetic, instant recall of addition and subtraction facts is not mentioned. Automaticity, or quick recall, of basic number facts is the basis for future mathematics; students who are still struggling with basic facts are not prepared to move on to the next level of mathematics. The capstone standards for addition and subtraction are:

Students are able to solve two-digit addition and subtraction problems written in horizontal and vertical formats using a variety of strategies (grade 2)

Students are able to add and subtract whole numbers up to three digits and multiply two digits by one digit (grade 3)

Fluency and standard algorithms go unmentioned and may be undermined by the “variety of strategies” which are specified. The development of multiplication and division is better, but still not adequate. Neither fluency nor standard algorithms is specified.

The poor development of arithmetic continues with the development of fractions. Few standards even deal with fractions. For example, in fifth grade, we find just two standards about fractions and none of the operations is specified. The coverage of fractions in sixth grade is similarly scant, and the arithmetic of fractions is again not specified. Despite the lack of development, in seventh grade:

Students are able to add, subtract, multiply, and divide integers and positive fractions (grade 7)

In high school, much essential content is missing. Geometry lacks constructions as well as proofs of basic theorems. Polynomials are mentioned, but the coverage is not complete. There is little development of quadratic equations, and the important skills of factoring and completing the square are not covered. Few standards explicitly deal with trigonometry, although the examples imply high expectations. Much of the STEM-ready content is missing, including inverse trigonometric functions and polar coordinates.

Although arithmetic is somewhat prioritized, it is not well developed. The high school standards are missing much of the essential content, including STEM-ready content. These “serious problems” result in a Content and Rigor score of three points out of seven. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

With their grade of C, South Dakota’s mathematics standards are mediocre, while those developed by the Common Core State Standards Initiative earn an impressive A-minus. The CCSS math standards are significantly superior to what the Mount Rushmore State has in place today.