

Nebraska • English Language Arts

DOCUMENTS REVIEWED

Nebraska Language Arts Standards: K-4. April 2009.

Accessed from: http://www.nde.state.ne.us/Assessment/documents/StandardsGradesK-4BoardApproved_000.pdf

Nebraska Language Arts Standards: 5-8 and 12. April 2009.

Accessed from: <http://www.nde.state.ne.us/Assessment/documents/StandardsGrades5-8.12BoardApproved.pdf>

Overview

The Nebraska standards are a disappointment. The prevalence of vaguely worded standards that repeat across grades makes it difficult to discern a rigorous progression of content from grade to grade. What's more, the state's failure to include standards for grades 9, 10, and 11 leaves enormous content gaps at the high school level. Students, teachers, curriculum, and assessment developers will have a hard time understanding what Nebraska expects its students to know and be able to do.



Clarity and Specificity: 1/3

Content and Rigor: 1/7

Total State Score: 2/10

(Common Core Grade: B+)

General Organization

The standards are organized into four strands:

- » Reading
- » Writing
- » Speaking/Listening
- » Multiple Literacies

Each strand is organized into one to six broad sub-strands. For instance, the Writing strand includes two sub-strands, Writing Process and Writing Genres. For grades K-8, each sub-strand is divided into grade-specific standards. For high school, standards are provided only for grade 12.

Clarity and Specificity

The standards are clearly organized, but unmeasurable verbs, generalized or tendentious language, and repetition characterize the Nebraska standards. Students are often asked to “demonstrate an awareness of,” “recognize,” “use,” or “engage in” something, but the purpose is not always clear, and the action is presented in a way that cannot be measured nor success determined. For example:

Demonstrate awareness of and sensitivity to the use of words (grade 1)

Respond to text verbally, in writing, or artistically (grade 4)

Use narrative and informational text to develop a national and global multi-cultural perspective (grade 5)

Where specificity is attempted, it is often a laundry list of content presented parenthetically, such that specific outcomes for students are indiscernible. For example:

Apply knowledge of organizational patterns found in informational text (e.g., sequence, description, cause and effect, compare/contrast, fact/opinion, proposition/support) (grade 8)

It is commendable that these text structures are mentioned, but ultimately the state provides no guidance about what it means to “apply knowledge of” them.

Because the standards are generally unmeasurable and do not provide specificity about student expectations, they earn one point out of three for Clarity and Specificity. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Strengths

Nebraska’s standards for “concepts about print,” “phonological awareness,” and “word analysis” are detailed, frequently offering helpful examples to clarify intent, as in:

Use common word patterns to read, write, and spell new words (e.g., r-controlled letter-sound associations, endings [-s, -ing, -ed], consonant blends) (grade 1)

Fluency targets (for sight words) are included in Kindergarten and grade 1.

Content Weaknesses

Despite their strengths mentioned above, the early reading standards are ultimately too broadly worded to help teachers develop a systematic sequence of early reading content, as in this word analysis standard repeated in first and second grades:

Manipulate phonemes orally (e.g., blend, segment) (grades 1-2)

Nebraska gives equal weight to essential early reading content—such as phonics and phonemic awareness—and to comprehension strategies. The latter, however, are a mish-mash of repetitive standards related to literary and informational text features, retelling, and author’s purpose, and of content-less and unmeasurable standards such as this one:

Build and activate prior knowledge in order to identify text to self, text to text, and text to world connections before, during, and after reading (grades K-3)

Standards for vocabulary at the early grades do not fully address word analysis and etymology and they repeatedly call instead for the use of context clues to determine the meaning of unknown words (though dictionary use is also mentioned). Vocabulary in upper elementary includes some structural analysis of words, but also includes “selecting” a context clue strategy “to determine meaning.”

Nebraska outlines standards for analyzing literary and non-literary texts, but they are not systematically treated. At times the two text types are addressed together, as in this all-encompassing “multi-genre” standard:

Describe the defining characteristics of narrative and informational genres (e.g., folk tales, poetry, historical fiction, biographies, chapter books, textbooks) (grade 4)

Much of the language that is specific to text type is similarly all-encompassing and often repeated across grades, as in this standard for literary text:

Identify and analyze elements of narrative text (e.g., character development, setting, plot development, conflict, point of view, theme) (grade 7)

Similarly packed statements are included for informational text, and nowhere else are these elements explored in any detail.

The standards nowhere define or illustrate the quality and complexity of reading that students should master, and American literature is never mentioned.

Writing standards are divided into “process” and “genres.” The former looks remarkably similar across grade levels and are very general. Thesis statements are not mentioned until grade 8. Distinct characteristics of writing products by specific genres are never delineated. The closest Nebraska comes to detailing expectations for writing in specific genres is the following eighth-grade standard:

Write considering typical characteristics of the selected genre (e.g., business letter, report, email, class notes, research paper, play, web page/blog) (grade 8)

Even in twelfth grade, where it is essentially the same, this standard fails to identify the kinds of writing (narrative, argument, etc.) that students should know how to produce. Without describing the characteristics of effective persuasive writing, among many other omissions, the standards cannot be helpful in preparing students for the post-high school world.

Conventions are discussed in writing but only nominally. There is no specific progression of expectations for knowledge of grammar, usage, and mechanics. Instead, Nebraska repeats empty editing standards across most grades, as in:

Edit writing for format and conventions (e.g., spelling, capitalization, grammar, basic punctuation) (grades 1-4)

Speaking and listening standards are perfunctory, vague, and frequently focused on nonacademic content, such as:

Demonstrate awareness of and sensitivity to the use of words (e.g., helpful and hurtful words, stereotypes, multiple meanings of words) (grade 2)

The standards do not address group discussions or formal oral presentations (or their evaluation).

The final category of standards, “Multiple Literacies,” appears designed to address mostly information, media, and technology skills. They are as close as Nebraska comes to “research” standards. Although they laudably note the need for ethical use of source material, they primarily dwell on hard-to-assess activities that might or might not be academic. It’s hard to tell:

Engage in activities with learners from a variety of cultures through electronic means (e.g., podcasts, video chats, distance learning, e-pals) (grades K-4)

Nowhere do the standards outline expectations for a serious research process nor the qualities of any research products. Multimedia is addressed only obliquely in the listening and speaking strand, such as here:

Utilize available media to enhance communication (e.g., presentation software, poster) (grade 4)

At least 80 percent of essential content is missing here, leaving Nebraska with one point out of seven for Content and Rigor. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

With their grade of F, Nebraska’s ELA standards are among the worst in the country, while those developed by the Common Core State Standards Initiative earn a solid B-plus. The CCSS ELA standards are significantly superior to what the Cornhusker State has in place today.

Nebraska • Mathematics

DOCUMENTS REVIEWED

Nebraska Mathematics Standards. October 8, 2009.

Accessed from: <http://www.nde.state.ne.us/math/index.html>

Overview

Nebraska's standards are well organized and easy to read. In K-8, however, arithmetic is only slightly prioritized, and there are problems with its development. High school is missing much of the essential 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 grade-specific standards are organized in four content strands such as Number Sense and Algebraic Concepts, which are further subdivided into topics. The topics change from grade to grade. High school material is provided for grade 12 only.

Clarity and Specificity

The standards are well presented and easy to read. They are divided by topic, though, logically, not every topic appears in each grade. For example, there are no standards about probability in the early grades.

Many standards are succinct and clear, such as:

Count by multiples of 5 up to 100 (grade 1)

Compare and order whole numbers 0-1,000 (grade 2)

Estimate and measure length using customary (nearest 1/2 inch) and metric (nearest centimeter) units (grade 4)

Some, however, are not clear, such as:

Compare different models to represent mathematical situations (grade 5)

Justify the classification of three-dimensional objects (grade 6)

Explain how statistics are used or misused in the world (grade 12)

In these examples, the reader is left with no idea what students are supposed to know or what kinds of problems they should be able to solve. Moreover, as the twelfth-grade standard above illustrates, the high school material tends to be particularly broadly stated and subject to interpretation. Another example of this is the following, which is one of the few standards that mentions quadratic equations but does not make clear what students should know, specifically, about quadratic equations:

Model contextualized problems using various representations for non-linear functions (e.g., quadratic, exponential, square root, and absolute value) (grade 12)

In addition, some standards are confusing such as:

- | Show equivalence among common fractions and non-repeating decimals and percents (grade 6)
- | Prove special types of triangles and quadrilaterals (e.g., right triangles, isosceles trapezoid, parallelogram, rectangle, square) (grade 12)

In regards to the first example, $1/3$, a common fraction, gives a repeating decimal. Moreover, technically, non-repeating decimals are never equivalent to fractions. The second one just makes no sense.

Nebraska’s standards are generally well presented and easy to read. However, there are some standards that are too broadly stated to interpret. They “do not quite provide a complete guide to users” and receive a Clarity and Specificity score of two points out of three. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Priorities

While the state does not explicitly set priorities, the number of standards devoted to particular content areas communicates implicit priorities. Accordingly, arithmetic is only moderately well prioritized—almost 40 percent of the standards in appropriate grades deal with its development.

Content Strengths

The structure of arithmetic—commutativity, associativity, distributivity, and the inverse nature of addition and subtraction and of multiplication and division—are all well covered.

The number line starts early and is carried through the years, for example:

- | Show equivalence among common fractions and non-repeating decimals and percents (grade 6)
- | Prove special types of triangles and quadrilaterals (e.g., right triangles, isosceles trapezoid, parallelogram, rectangle, square) (grade 12)

In the development of fractions, common denominators are explicitly included:

- | Identify and name fractions in their simplest form and find common denominators for fractions (grade 5)

In addition, the standards include the important skill of conversion between measurement systems:

- | Convert between metric and standard units of measurement, given conversion factors (e.g., meters to yards) (grade 8)

In high school, while some standards are too vague to determine the intent, we also find some very strong standards. In geometry, for example, proofs of some major theorems and explicit mention of postulates are both included:

- | State and prove geometric theorems using deductive reasoning (e.g., parallel lines with transversals, congruent triangles, similar triangles) (grade 12)
- | Recognize that there are geometries, other than Euclidean geometry, in which the parallel postulate is not true (grade 12)

In addition, important high school algebra skills are included, for example:

- | Add, subtract, and simplify rational expressions (grade 12)
- | Multiply, divide, and simplify rational expressions (grade 12)

Content Weaknesses

The development of whole-number arithmetic is inadequate. One illustration of this is the fact that the phrase “place value” does not even appear in the standards.

Instant recall of number facts is not required, but is replaced with the less stringent:

- Fluently add whole number facts with sums to 20 (grade 2)
- Compute whole-number multiplication facts 0-10 fluently (grade 3)

In the continued development of whole-number arithmetic, fluency and standard algorithms are not required. There are some clear statements that students are expected to know how to do basic arithmetic, but methods and procedures are not specified.

The development of formulas for area is not specifically included in the standards. Students are expected to “determine” area, but the development of the requisite formulas is not made explicit:

- Determine the area of rectangles and squares (grade 5)
- Determine the area of parallelograms and triangles (grade 6)

The high school standards are missing much essential content.

The coverage of linear functions is missing some basic content such as point-slope form and finding the equation of a line through two points.

Quadratic equations are not well covered. They are mentioned specifically only a few times, and the theory is not developed. Solving quadratic equations is in the following standard, but it does not adequately specify particular content expectations:

- Solve quadratic equations (e.g., factoring, graphing, quadratic formula) (grade 12)

Missing content for quadratics includes the technique of completing the square, vertex form, and max/min problems.

In addition, most of the STEM-ready material is not covered. There is almost no trigonometry after the basic definitions. Other missing content includes logarithms and polar coordinates.

Though slightly prioritized, the development of whole-number arithmetic is not adequate. The high school material is missing much of the essential 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, Nebraska’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 Cornhusker State has in place today.