Alaska • English Language Arts

DOCUMENTS REVIEWED

Content and Performance Standards for Alaska Students. 2006.
Accessed from: http://www.eed.state.ak.us/standards/pdf/standards.pdf

Overview

The Alaska standards cover some important content and skills, but gaps exist, and the language is often unclear and repetitive, making prioritization difficult. The format and complex numbering system also make the document nearly impossible to follow. Still, the most egregious problem is that no expectations are included at all for grades 11 and 12. This means that Alaska fails to present college and career-ready standards. Further, listening and speaking standards are completely missing.

GRADE **F**

Clarity and Specificity:	1/3
Content and Rigor:	1/7
Total State Score:	**2/10**

(*Common Core Grade: B+*)

General Organization

Alaska's ELA document is prefaced by a two-page list of "content standards" which are far-reaching statements not organized by grade level. For example, one declares that "a student should be a competent and thoughtful reader, listener, and viewer of literature, technical materials, and a variety of other information." This laudable list is aligned with up to eight sub-standards that are not much more detailed than their "parent" standard. The document also includes forty-two performance standards/grade-level expectations (PSGLEs) that are organized first by grade span, then by grade level. The link between the content standards and the PSGLEs is tenuous at best. The latter are cross-referenced to the former yet sometimes bear little relationship to one another.

Finally, the individual PSGLEs are repeated across grades and customized at each grade level. For instance, one PSGLE reads "The student reads text aloud." At grade 3, this becomes "The student reads text aloud by: Reading orally with rhythm, flow, and expression showing understanding of punctuation and other conventions of print." And in grade 7, it is "The student reads text aloud by: Orally interpreting short stories, poetry, and drama to an audience." In short, though the organization sometimes makes sense, it is far more convoluted than it needs to be.

Clarity and Specificity

In almost every strand, Alaska's ELA standards are dense and vague, using far more words than necessary to convey expectations, and yet they manage to overlook important content. Then these dense, vague standards are repeated across grade levels. Consider this reading standard repeated across grades 7-10:

> The student connects themes by: Making thematic connections between a variety of texts and relating these themes to personal experiences, experiences of others, prior knowledge, and the broader world of ideas (grades 7-10)

Such expectations make it very difficult to determine what students are actually responsible for producing or mastering. The state earns a score of one point out of three for Clarity and Specificity. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Alaska's standards cover early reading and reading comprehension well, but the coverage of subsequent reading and writing content and skills is sporadic throughout the grades. No standards are provided for listening and speaking. Most

importantly—and mysteriously—no standards appear at all for grades 11 and 12, obviously making it impossible to know what is expected of students in those grades.

Content Strengths

The K-2 standards for reading acquisition are detailed, specific, and rigorous. They address all areas prioritized in the *ELA Content-Specific Criteria* (see Appendix A). Vocabulary development is good, including some etymology.

Content Weaknesses

In many strands, despite volume, important content goes missing. There are many broadly worded expectations in third through tenth grade regarding the study of literature from diverse cultures, for example, but no expectations for the study of American literature. The standards do not define the quality and complexity of reading through the use of reading lists or other exemplars. For example, it is apparently sufficient for students in early grades to "dramatize" a story rather than to retell it, which would be more rigorous. Standards for making inferences are included for grades 3-6, but not for grades 7-10.

No standards for speaking and listening are included. Expectations for oral presentations (included under a standard for "reading texts aloud") are not defined in any detail by genre or otherwise, as in the following eighth-grade standard:

> Giving an oral, formal presentation (e.g., research reports, literature responses) (grade 8)

No other detailed references are made to the research process or research products except general standards about "giving credit for others' ideas" when writing.

Students are not expected to write a complete paragraph until fourth grade, nor multi-paragraph essays until sixth grade. Specific genres are not addressed in detail; rather, they are mentioned superficially as part of a string of possible writing products. For example, consider the following "genre-free" standard:

> The student writes about a topic.
>
> Write a coherent composition that includes a thesis statement, supporting evidence, and a conclusion.
>
> Write a coherent composition with a thesis statement that is supported with evidence, well-developed paragraphs, transitions, and a conclusion (grades 7-10)

More detail is provided under these general standards, but genres are never mentioned. Later, through the writing for a variety of audiences and purposes, standards mention genres, expectations are vague:

> The student writes for a variety of purposes and audiences by:
>
> - Writing a narrative using elements of fiction to advance the plot
> - Writing in a variety of nonfiction forms (e.g., letter, report, biography, autobiography, and/or essay) to inform, describe, or persuade
> - Writing expressively when producing or responding to texts (e.g., poetry, journals, editorials, drama, reflective essays, and/or newsletters)
> - Using research-based information and/or analysis in research projects or extended reports (grade 9)

Too many vague standards here mean that both students and teachers are left to define high expectations on their own. It would be better to organize the standards by genre and offer specific details regarding each of the products at various grades.

The grammar standards are superficial and overlook much important content. This seventh-grade standard is typical:

> Applying rules of usage (i.e., verb tense, subject/verb agreement, possessives, pronouns, adjectives, adverbs, and sentence structure) (grade 7)

From fourth grade on, Alaska requires its students to write "simple and complex sentences," but never mentions compound sentences. Although there are references to "using commas correctly," there are none for the complexities of comma usage in compound and complex sentences.

It is hard to imagine what eleventh- and twelfth-grade standards would look like, based on what we see for K-10. That said, omitting them altogether means that Alaska is missing an opportunity to describe more complex literary and informational text analysis, as well as more sophisticated expository writing standards, such as persuasive writing. Therefore, The Last Frontier earns one point out of seven for Content and Rigor. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

With their grade of F, Alaska'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 Last Frontier State has in place today.

Alaska • Mathematics

DOCUMENTS REVIEWED

Content and Performance Standards for Alaska Students. Revised March 2006.
Accessed from: http://www.eed.state.ak.us/standards/pdf/standards.pdf

Overview

Alaska's standards are poorly organized and difficult to read. Grade-level standards are only provided through tenth grade, and important content for high school mathematics is largely missing.

GRADE **D**

Clarity and Specificity:	1/3
Content and Rigor:	3/7
Total State Score:	**4/10**

(*Common Core Grade: A-*)

General Organization

Alaska's standards are defined across five broad standards—a content standard and four integrated process standards. The content standard is divided into seven strands, such as "numeration" and "functions and relationships." The strands are first presented with grade-banded overall Performance Standards, and then each strand is further subdivided into topics broken into grade-level expectations for grades 3-10. These are presented in a chart, and the grade-level expectations for a topic all begin with the same phrase, or stem.

Clarity and Specificity

The presentation of the standards is bulky and convoluted. The organization of grade-level material around repeated phrase stems results in many standards that are both awkward and unclear. For example, the standard on basic number facts for multiplication in the fourth grade, with the stem indicated in bold, is unnecessarily wordy:

> **The student accurately solves problems (including real-world situations) by** recalling basic multiplication facts, products to 100, and corresponding division facts efficiently (grade 4) (emphasis original)

This organizational pattern affects the clarity of all the standards. In grades 3-7, students are expected both to estimate and measure various quantities with greater accuracy each year. This results in a completely unreasonable culminating standard on estimation in seventh grade:

> **The student demonstrates understanding of measurable attributes by** estimating length to the nearest sixteenth of an inch or millimeter, volume to the nearest cubic centimeter or milliliter, or angle to the nearest 30 degrees (grade 7) (emphasis original)

The grade-banded Performance Standards are not hampered by the stem structure pattern of grade-level expectations; as such, they are often clearer. For example, the Performance Standard for multiplication facts is:

> Recall and use basic multiplication and division facts orally and with paper and pencil and without a calculator (grades 4-6)

Differences between the Performance Standards and the grade-level expectations are usually not significant, but in the worst case, they are contradictory. For example, a Performance Standard for the grade band 9-10 states that students should be able to "add, subtract, and multiply polynomials"; but the grade-level expectations—which should be more specific—make no mention of polynomials at all.

These standards are difficult to read, inconsistent, and confusing. They are not a clear "guide for users" and earn one point out of three for Clarity and Specificity. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Priorities

Alaska does not offer explicit guidance as to which content is the most important. In the elementary grades, arithmetic standards comprise slightly more than one-third of the whole. This relatively small presence of arithmetic does not give adequate priority to arithmetic.

Content Strengths

Alaska does cover some content well. For example, students are expected to recall the basic number facts, and conversions within measurement systems are explicitly documented.

Content Weaknesses

Alaska's arithmetic standards beg improvement. The development of whole-number arithmetic does not describe appropriate levels of mastery and is missing standard algorithms overall. For example, some standards require that students "accurately solve problems" in arithmetic, but the methods are not specified, and the standards make no mention of fluency. The development of the arithmetic of fractions is also weak. For example, multiplying fractions is jumbled among many other computation specifications:

> **The student accurately solves problems (including real-world situations) by** multiplying whole numbers by two- or three-digit numbers, dividing three-digit numbers by one- or two-digit numbers, or multiplying or dividing decimals that represent money by whole numbers, or multiplying or dividing proper fractions (grade 6) (emphasis original)

Other weak areas include the development of rates, ratios, and formulas for areas. In addition, calculators are explicitly and unnecessarily inserted into the standards in all grades, even appearing in a stem phrase for estimation for grades 1-6:

> The student determines reasonable answers to real-life situations, paper/pencil computations, or calculator results by... (grades 1-6)

Calculator inclusion is more egregious throughout the high school standards. In the following grade band 9-10 Performance Standard, students are asked to use calculators to graph even simple functions that college-bound students should be able to graph without the use of a calculator:

> Identify, graph, and describe the graphs of basic families of functions including linear, absolute value, quadratic, and exponential using a graphing calculator (grades 9-10)

The high school standards are missing much essential content. Proofs in geometry are not mentioned explicitly except in the process standards. High school algebra receives minimal attention. Some basics on linear equations are developed, but the standards barely touch upon theory and techniques for quadratic equations—though quadratic equations do appear in a few awkward standards, such as:

> The student demonstrates conceptual understanding of functions, patterns, or sequences...including those represented in real-world situations by describing or extending patterns (families of functions: linear, quadratic, absolute value) up to the nth term, represented in tables, sequences, graphs, or in problem situations (grades 9-10)
>
> The student demonstrates algebraic thinking by...selecting and using the quadratic formula to solve problems (grade 10)

This vague treatment offers little guidance on developing the theory of quadratics. These standards make no mention of complex roots, factoring, finding maximum and minimum values, or completing the square. As discussed above, polynomials do not appear in the grade-level standards. Many STEM-ready topics also go unmentioned, including logarithms and the graphs of trigonometric functions.

Alaska does not provide standards for eleventh and twelfth grades, and the material provided for ninth and tenth grades misses much of the essential content for high school. The standards include some treatment of arithmetic, but arithmetic is not prioritized or rigorously developed. These serious shortcomings in the standards 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 D, Alaska's mathematics standards are among the worst in the country, while those developed by the Common Core State Standards Initiative earn an impressive A-minus. The CCSS math standards are vastly superior to what the Last Frontier State has in place today.