

AS OF JUNE 20, 2010,  
THIS STATE HAD ADOPTED  
THE COMMON CORE  
STATE STANDARDS.

## Arkansas • English Language Arts

### DOCUMENTS REVIEWED

*English Language Arts Curriculum Framework: K-8. 2003.*

Accessed from: <http://www.arkansased.org/educators/curriculum/frameworks.html#language>

*English Language Arts Curriculum Framework: 9-12. 2006.*

Accessed from: <http://www.arkansased.org/educators/curriculum/frameworks.html#language>

### Overview

The Arkansas standards include some good content but lack specificity and, in many strands, a clear progression, making it hard to determine real levels of rigor.



Clarity and Specificity: 1/3

Content and Rigor: 3/7

**Total State Score: 4/10**

(Common Core Grade: B+)

### General Organization

The Arkansas standards are divided into four strands: Oral and Visual Communications, Writing, Reading, and Inquiring/Researching. Each strand is broken into standards and sub-standards that are common across all grades. For example, the reading strand is divided into four standards—foundations of reading; comprehension; variety of texts; and vocabulary, word study, and fluency—and each standard is divided into two to seven sub-standards.

Finally, grade-level expectations are provided for each sub-standard for every grade K-12.

### Clarity and Specificity

The language of the Arkansas standards is at times bloated, vague, and/or repetitive. For example:

Discuss poetry to determine meaning (grade 4)

Demonstrate voice in informal and formal writing (grade 9)

How would a teacher hold students accountable for such unmeasurable standards?

In some places, the language is politically tendentious at the expense of real content, such as:

Determine the author's purpose by connecting own background knowledge, including personal experience and perspectives shaped by age, gender, class, or national origin (grade 9)

Such standards make for unreasonable reading expectations, and the experience-centric nature of them reduces their rigor.

Finally, due in part to the vague wording of the standards, demanding grade-level progressions are not always evident, as in the following sequence under the standard for "Vocabulary, Word Study, and Fluency":

Refine the meanings of words through repeated encounters (grade 1)

Self-monitor reading and self-correct (grade 2)

Recognize the relationship between a pronoun and its referent (grade 3)

Explain words with multiple meanings (grade 4)

The combination of vaguely worded, repetitive, and jargon-filled standards leaves Arkansas teachers, curriculum developers, and assessment writers with limited guidance about what students are expected to know and be able to do at any given point in their schooling. As such, the standards earn one point out of three for Clarity and Specificity. (See *Common Grading Metric*, Appendix A.)

## Content and Rigor

### *Content Strengths*

The early-reading standards address reading fluency and comprehension skills. They include specific targets for accuracy and number of words per minute, both of which are laudable skills.

Some high school research standards are clear and rigorous, such as:

- Compare the credibility of authors and reliability of sources for strengths and limitations (e.g., analyze two or more texts addressing the same topic to determine how authors reach similar or different conclusions) (grade 11)

Noteworthy “logic” expectations also exist in the reading comprehension standards, such as the following grade 10 standard:

- Use logic to examine fallacies to determine purpose in both inductive and deductive arguments (grade 10)

Finally, an admirable attempt is made to include standards for English language conventions.

### *Content Weaknesses*

The islands of good content in Arkansas’s standards (described above) are surrounded by a sea of disjointed and unclear expectations in almost every strand.

The grade-level expectations provided in the “Utilizing Concepts about Print” and “Developing Phonological Awareness” sub-standards lack sufficient guidance to ensure that students will learn essential early-reading content. For example:

- Apply knowledge of letter and word (Kindergarten)
- Apply knowledge of first and last (i.e., letter, sounds, words, etc.) (Kindergarten)

Furthermore, the expectations provided in other reading sub-standards overemphasize unmeasurable comprehension strategies, such as “Using Prior Knowledge to Make Meaning” and “Using Connections to Make Meaning.” The following is an example from grade 4:

- Form mental pictures reflecting vivid details and personal connections with the text (grade 4)

Finally, in a category called “Meaning-Based Word Recognition,” students in grades 3 and 4 are asked to “use context clues to determine the precise meaning of new words” rather than analyzing the word’s parts and/or referring to a dictionary.

Expectations for vocabulary development are not very systematic and are sprinkled across several strands and sub-strands. More attention should be paid to word families, etymology, and word parts.

Grade-level expectations for reading and analyzing literary and non-literary texts are hard to understand. For example, the standards for “reading, examining and responding to a wide variety of texts” focus more on process than on student outcomes. Consider this grade 4 standard:

- Respond to a wide variety of texts by contributing to a reading journal which demonstrates appropriate comprehension skills, including written responses, reading log interest list, and reading goals (grade 4)

Occasionally, the standards call out specific genres, structures, literary elements or devices, but these are not systematically addressed.

Quality and complexity of reading are never addressed, nor do the standards include any specific mention of American literature. The following vague standard is the only one that hints at any literary heritage. It is repeated verbatim in grades 9-12:

[Student] [r]eads a variety of literary and content prose including selections from American, British, and/or world literature (grades 9–12)

The Arkansas writing standards emphasize process over products and only nominally address writing conventions. The listening and speaking standards tender a mish-mash of expectations for formal and informal communication; moreover, they do not address formal oral presentations.

These shortcomings leave Arkansas teachers without the guidance they need to plan rigorous curriculum, instruction, and assessment. Consequently, the standards can earn no higher than three points out of seven for Content and Rigor. (See *Common Grading Metric*, Appendix A.)

### **The Bottom Line**

With their grade of D, Arkansas'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 Natural State has in place today.

# Arkansas • Mathematics

## DOCUMENTS REVIEWED

*K-8 Mathematics Curriculum Framework*. Revised 2004.

Accessed from: [http://arkansased.org/educators/pdf/k8\\_math\\_may05.pdf](http://arkansased.org/educators/pdf/k8_math_may05.pdf)

*High School Courses Curriculum Framework*. Revised 2004; Amended 2006.

Accessed from: <http://arkansased.org/educators/curriculum/frameworks.html#math>

## Overview

While Arkansas's standards seem easy to read and understand, they often lack clarity as to the content that is to be covered—particularly in K-8, where arithmetic is neither prioritized nor appropriately culminated. The high school content is thorough and includes most of the STEM-ready material.



Clarity and Specificity: 2/3

Content and Rigor: 3/7

**Total State Score: 5/10**

(Common Core Grade: A-)

## General Organization

Arkansas organizes its math standards into two categories: grades K-8 and high school. Within each, standards are divided into broad content strands such as “Algebra” and “Geometry,” which are further divided into substrands (such as “Triangles” for the Geometry strand). Finally, specific grade-level expectations (GLEs) are provided for each substrand. (It is the GLEs that we refer to as “standards” in this review.)

## Clarity and Specificity

Arkansas standards are succinctly stated and are easy to read and understand. Content is easily drawn from some standards, and examples are sometimes included to clarify intent:

Identify the change over time

Ex. We have recorded the morning and afternoon temperatures all week. Which day had the greatest change in temperature? (grade 3)

The use of examples is an excellent feature, and, as the above standard shows, often necessary. Still, many standards are not provided with examples and/or are far too broad:

Describe repeating and growing patterns in the environment (grade 2)

Develop an understanding of the associative and zero properties of multiplication using objects (grade 4)

It is not clear how students might use objects to show that zero times any number is zero.

Furthermore, many other standards pay insufficient attention to language. For example, the following fourth-grade standard implies that the size of a fraction can vary. This is not true.

Utilize models, benchmarks, and equivalent forms to recognize that the size of the whole determines the size of the fraction (grade 4)

In addition to confusing language, the organization of the standards can sometimes be confusing. Related standards may appear under different topics. For example, standards on whole-number addition and subtraction in third grade appear

across many topics, including “Computational Fluency-Addition and Subtraction,” “Whole-number Operations,” and “Application of Computation.”

The standards for high school are generally clearer, for example:

Write an equation in slope-intercept, point-slope, and standard forms given

- two points
- a point and y-intercept
- x-intercept and y-intercept
- a point and slope
- a table of data
- the graph of a line (Algebra I)

There are some serious issues with the clarity of these standards, particularly in K-8. This is somewhat mitigated by the use of examples within the standards, and the high school standards are clearer. But the standards “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

Arkansas has many standards, generally around fifty per grade. With so many standards, guidance as to the most important content is important. However, there is no explicit setting of priorities. Standards on arithmetic comprise less than a third of the standards in the elementary grades—an insufficiently small presence given the importance of mastering arithmetic skills at this age.

### Content Strengths

The standards cover the basic structure of arithmetic—such as the commutative, associative, and distributive properties—as well as the inverse nature of addition and subtraction and of multiplication and division. The number line is used throughout. Although arithmetic is not culminated appropriately, some developmental standards are strong, such as:

Write a fraction to name part of a whole, part of a set, a location on a number line, and the division of whole numbers, using models up to  $\frac{12}{12}$  (grade 4)

The high school standards are generally strong. The Algebra and Geometry courses are solid, and the Pre-Calculus course includes much STEM-ready material. Algebra II includes this important standard on the graph of a quadratic:

Determine the maximum or minimum values and the axis of symmetry both graphically and algebraically (Algebra II)

### Content Weaknesses

The most glaring problem with Arkansas’s standards is the end product of the study of arithmetic. Automaticity with number facts is covered inadequately with:

Demonstrate computational fluency (accuracy, efficiency and flexibility) in addition facts with addends through 9 and corresponding subtractions (grade 2)

Demonstrate fluency with combinations for multiplication and division facts ( $12 \times 12$ ) and use these combinations to mentally compute related problems (grade 4)

In the development of whole-number arithmetic, standard methods are not specified. Methods are further undermined by the use of both technology and the “variety of algorithms” that students are expected to develop. The capstone standards for whole-number arithmetic are:

Develop and use a variety of algorithms with computational fluency to perform whole-number operations using addition and subtraction (up to five-digit numbers), multiplication (up to three-digit x two-digit), division (up to two-digit divisor) interpreting remainders, including real-world problems (grade 5)

Apply, with and without appropriate technology, algorithms with computational fluency to perform whole-number operations (+, -, x, /) (grade 6)

This lack of standard procedures and the inclusion of technology continue beyond whole-number arithmetic to fractions:

Develop and analyze algorithms for computing with fractions (including mixed numbers) and decimals and demonstrate, with and without technology, computational fluency in their use and justify the solution [sic] (grade 6)

Common denominators are never mentioned.

The standards are strong in high school, but the use of technology and manipulatives is pervasive. For example, students are expected to solve equations “algebraically (including the use of manipulatives).” Students in high school algebra should have some facility with abstraction, and manipulatives are inappropriate in standards at this level.

Arkansas’s standards are strong in places. High school content is covered well, including STEM-ready content. However, in the elementary grades, arithmetic is not prioritized or appropriately culminated. 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, Arkansas’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 Natural State has in place today.