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

Mississippi • English Language Arts

DOCUMENTS REVIEWED

Mississippi Language Arts Curriculum Framework. 2007.
Accessed from: http://www.mde.k12.ms.us/ACAD/ID/Curriculum/LAER/frameworks.html

Overview

The Mississippi standards are mysterious, as if they were constructed to obfuscate rather than clarify student expectations. They are organized under just two headings: Reading and Writing. Some content is strong, as in early reading, but most of the standards are characterized by complicated and repetitive prose in which content and skills are mostly disconnected from one another, making it difficult to identify the expectations for students.

GRADE **D**

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

(*Common Core Grade: B+*)

General Organization

Mississippi's standards are organized under the two headings Reading and Writing. Each of these is divided into two "competencies." For Reading, the competencies are "word recognition" and "vocabulary & reading strategies" and for Writing they are "express, communicate, evaluate, or exchange ideas effectively" and "apply standard English" [sic]. These four competencies comprise the required learning for all students, according to the state, although they are further broken into more detailed "objectives" and numbered bullet points for each grade K-12.

Clarity and Specificity

The Mississippi standards are specific in some places, but overall they are woefully lacking in clarity and extremely repetitive, making it impossible to identify specific expectations for students at each grade level.

In many cases, the standards include overarching statements jam-packed with skills for students to demonstrate, as in the following grade 10 reading objective:

> The student will analyze (e.g., interpret, compare, contrast, evaluate, etc.) literary elements in multiple texts from a variety of genres and media for their effect on meaning (grade 10)

This and other skills-based statements are often followed by bulleted lists of specific content. The tenth-grade standard shown above, for example, is followed by a list of nearly every genre and literary device imaginable (along with a shorter list for informational texts). No connection is ever made between the skills and the content. Which verbs in the overarching statement go with which predicates in the bulleted list—and to what end? Separating the skills from the content in this way makes it impossible to know what students are supposed to be learning.

Besides this confusion, repetition of standards verbatim (or nearly verbatim) across grade levels further clouds Mississippi's expectations for students. The long list of genres and literary devices that accompanies the standard above is repeated nearly verbatim from grades 2-7:

> The student will identify ("use" at grade 7) and use ("produce" at grade 4) grade-level synonyms, antonyms and homonyms (grades 2-7)

One happy exception is in the "word recognition" competency in the early grades, which is quite specific about phonemic awareness, phonics, and vocabulary development.

These critical shortcomings leave Mississippi with one point out of three for Clarity and Specificity. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Strengths

Phonemic awareness and phonics are both addressed systematically and in great detail, with examples, as in these first-grade objectives:

> Identify and produce rhyming words orally that include consonant blends and digraphs (e.g., flat/splat, trap/snap, sing/ring) (grade 1)
>
> Identify, blend, and segment syllables within spoken words (e.g., clap the syllables in "bi-cy-cle," bas + ket + ball = basketball, telephone = tel + e + phone) (grade 1)

Fluency targets are identified, including specific numbers of high-frequency and irregularly spelled words. The vocabulary objectives are detailed, with lists of roots and affixes for each grade. Dependence on context clues seems minimal, and the use of reference materials, such as the dictionary, is required.

Another bright spot is the analysis of the "tools of persuasion," which builds from grades 4-8 and culminates in these objectives:

> 1) Evaluate the author's use of and distinguish between fact and opinion
> 2) Evaluate use of tools of persuasion (e.g., name calling, endorsement, repetition, air and rebut the other side's point of view, association, stereotypes, bandwagon, plain folks, tabloid thinking, shock tactics and fear, intertextual references, card stacking, slanted words, glittering generalities, false syllogisms, etc). (grade 8)

Not many state standards address these specific "tools of persuasion," and it is a shame that Mississippi's high school standards don't do more of it at higher levels of complexity.

Standards for grammar are included under the writing competency, and they are detailed if a bit repetitive. Good examples are offered to illustrate expectations in some cases.

Content Weaknesses

Mississippi's reading comprehension standards are bloated, repetitive, and skills-based, with little connection between the skills and any content. For example, competency two states:

> The student will apply strategies and skills to comprehend, respond to, interpret, or evaluate a variety of texts of increasing levels of length, difficulty, and complexity

As is clear from the objectives attached to it, this competency conflates literary and informational texts and does not make important distinctions about how each type should be read and analyzed.

Nowhere is the study of American literature required, nor are any examples offered of the quality and complexity of reading that students should be doing.

The writing standards are process-heavy and repetitive across grades. Products are superficially treated, even in eleventh grade, as in this objective:

> The student will compose formal persuasive texts, providing evidence as support (grade 11)

By the junior year of high school, we would expect to see more detail about the necessary characteristics of persuasive writing, such as the use of rhetorical techniques, the anticipation of counterclaims, and the quality of the reasoning.

Research is given sporadic treatment, first in the reading comprehension section for grades 9-12, where the same standard is repeated for each grade:

> The student will apply understanding of electronic text features to gain information or research a topic using electronic libraries (grades 9-12)

Research is also addressed in the writing section of the standards, with some coverage beginning in second grade. The research process is outlined, but the only products specified are "to present the results using a variety of communication techniques." No standards address proper citation of sources. In high school, the standards for research simply state that students will:

> Research a topic comparing and/or contrasting information from a variety of sources to present findings (grade 10)

Research papers are mentioned briefly at twelfth grade, but no characteristics or page lengths are provided.

Finally, it must be noted that Mississippi has no standards for listening and speaking, and that different media are only nominally mentioned in the publishing phase of the writing process where students are asked to "publish writing formally and informally using a variety of media." Such omissions are glaring.

The missing content coupled with the vague and repetitive language makes it impossible to understand what is expected of Mississippi's students.

Taken together, close to 65 percent of the essential K-12 ELA content is missing from these standards, leaving Mississippi with three points out of seven for Content and Rigor. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

With their grade of D, Mississippi'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 Magnolia State has in place today.

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

Mississippi • Mathematics

DOCUMENTS REVIEWED

2007 Mississippi Mathematics Framework Revised. 2007.
Accessed from: http://www.mde.k12.ms.us/acad/id/curriculum/math/2007_framework/2007 MS Math Framework Competencies and Objectives 9-18-07.pdf

Overview

Mississippi's standards are well organized and concise. In the elementary grades, arithmetic is moderately prioritized, but the development is not quite rigorous enough. The high school material covers much of the essential content, including STEM-ready content.

GRADE **C**

Clarity and Specificity:	2/3
Content and Rigor:	4/7
Total State Score:	**6/10**

(*Common Core Grade: A-*)

General Organization

The standards are organized into five content strands such as Number and Operations and Measurement. Grade-level standards are provided through seventh grade, and then, from eighth grade on, standards are presented by course rather than by grade.

For each grade or course, the strands have broad "competency" statements which are subdivided into more specific "Objectives." It is the latter that are treated here as standards.

Also provided are five process standards, including "problem solving" and "reasoning and proof." According to the state, these process standards should "permeate all instructional practices."

Clarity and Specificity

The standards are well presented and generally easy to read. Statements are often concise and clear, such as:

> Read and write time to the hour, half-hour, quarter-hour, and five-minute intervals using digital and analog clocks (grade 2)
> Add and subtract decimals through hundredths (grade 4)

However, some standards are subject to wide interpretation on the part of the reader, such as:

> Use a pattern rule to translate and recognize patterns from one pattern representation to another (grade 1)
> Identify and analyze the relationships between and among points, lines, line segments, angles, and rays (grade 4)
> Predict and calculate the volume of prisms (grade 6)
> Explain the meaning of multiplication and division of rational numbers (grade 6)
> Develop generalizations to characterize the behaviors of graphs (linear, quadratic, and absolute value) (transition to algebra)

These standards do not clearly outline what students are expected to know or what types of problems they are expected to solve.

The lack of specificity in the following standard makes it unclear if inverse trigonometric functions should be covered:

> Provide a convincing argument (or proof) regarding the inverse relationship of two functions (Advanced Algebra)

Mississippi's standards are well presented and generally easy to read with many clear and specific standards. There are, however, some standards that are too broadly stated to interpret, so that the standards "do not quite provide a complete guide to users." (See *Mathematics Content-Specific Grading Criteria*, Appendix A.) The Clarity and Specificity score is 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. In Mississippi, fewer than 40 percent of the standards in the crucial elementary grades are devoted to arithmetic, which prioritizes this essential content only moderately well.

Content Strengths

The structure of arithmetic is emphasized. For example, the inverse nature of addition and subtraction appears in all grades 2-7, and commutativity in all grades 3-7.

The high school content is often strong. Examples include the following important standards for manipulative skills, quadratic equations, and geometry:

> Add, subtract, multiply, and divide polynomial expressions (Transition to Algebra)
>
> Determine the solutions to quadratic equations by using graphing, tables, completing the square, the Quadratic formula, and factoring (Algebra I)
>
> Classify triangles and apply postulates and theorems to test for triangle inequality, congruence, and similarity (Geometry)

Content Weaknesses

The development of arithmetic is inadequate, in part because automaticity with basic number facts is not explicitly required.

In addition, although there are some clear expectations for whole-number arithmetic, the development is sometimes weak. Specifically, fluency with the standard algorithms is not specified. The development of multiplication is illustrated in the following standards:

> Model multiplication using arrays, equal-sized groups, area models, and equal-sized moves on the number line (grade 3)
>
> Explain two or more methods of multiplying whole numbers (one- and two-digits) with justification (grade 4)
>
> Multiply four-digit numbers by two-digit numbers (including whole numbers and decimals) (grade 6)

The grade 6 standard above is desirable but not adequately supported by the preceding standard, which mentions "two or more methods" and may undermine student mastery of the standard algorithm.

In addition, there is little development of fractions. When fractions are introduced, they are not explicitly introduced as parts of a set or a whole, but with:

> Identify and model representations of fractions (halves, thirds, fourths, fifths, sixths, and eighths) (grade 3)

Although fraction arithmetic is expected, methods and procedures, including common denominators, are not mentioned. Fractions are not put on a number line until sixth grade.

The standards are also weak on explicating place value. It is never mentioned specifically, though it appears implicitly as in:

> Compose and decompose five-digit numbers and decimal numbers through hundredths, with representations in words, physical models, and expanded and standard forms (grade 4)

The high school content, though generally well covered, is missing some details. These include point-slope form for linear equations, vertex form for quadratic equations, and constructions in geometry.

The STEM-ready content is missing inverse trigonometric functions.

Taken together, these critical shortcomings result in a Content and Rigor score of four points out of seven. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

With their grade of C, Mississippi'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 Magnolia State has in place today.