

Tennessee • English Language Arts

DOCUMENTS REVIEWED

Standards, Learning Expectations and Performance Indicators. Effective 2009-2010.
Accessed from: <http://www.state.tn.us/education/ci/english/index.shtml>

Overview

The Tennessee standards cover nearly all of the essential K-12 ELA content rigorously and with sufficient detail. While there is some unnecessary repetition, a few instances of vague language, and an overemphasis on writing “work-related” texts, these Tennessee standards are a vast improvement over earlier iterations.



Clarity and Specificity: 3/3
Content and Rigor: 6/7
Total State Score: 9/10
(Common Core Grade: B+)

General Organization

The Tennessee standards are organized into eight strands:

- » Language
- » Communication
- » Writing
- » Research
- » Logic
- » Informational Text
- » Media
- » Literature

Within each strand are grade-level expectations (GLEs) (and “course-level expectations” for high school), which, according to the state, “are the overarching goals for student learning.” “Checks for Understanding”—which appear directly below the GLEs—offer guidance about potential formative and summative assessments, and “State Performance Indicators” convey what will be assessed by the state. The standards are grade by grade, K-12.

Clarity and Specificity

The grade-level and course-level expectations tend to be broad in scope, and not always measurable, but the Checks for Understanding and the State Performance Indicators are much more specific—and read like standards as well. All four (GLEs, course-level expectations, Checks for Understanding, and State Performance Indicators) are referred to as standards in this review, though Checks for Understanding is the primary focus.

Most of the standards are clear and specific, as illustrated by these grade 5 and grade 8 expectations:

Identify the correct use of adjectives (i.e., common/proper, comparative forms, predicate adjectives) and adverbs (i.e., comparative forms, negatives) within context (grade 5)

Identify the thesis of a speech in which the main idea may be explicitly or implicitly stated, concepts may be more abstract, and extended metaphors may be used; determine the essential elements that elaborate it (grade 8)

A small number of unmeasurable standards do make their way into the document, such as:

- Write poems, stories, and essays based upon thoughts, feelings, and experiences (grade 3)
- Derive meaning while reading (e.g., use metacognitive and self-monitoring reading strategies to improve comprehension (reread, ask for help, self-questioning, draw on earlier reading) (grade 5)

Such standards are rare, however.

Repetition across grades is sometimes a problem, but for the most part meaningful distinctions are made. For example, lists of frequently confused words and foreign words and phrases are offered with some repetition at each grade level, but new words are also added every year at the end of each list, implying that teachers are responsible for the new additions at that grade level.

In short, Tennessee’s standards are very clear and specific. They leave little doubt about student expectations and therefore earn three points out of three for Clarity and Specificity. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Strengths

Tennessee’s early reading standards are rigorous. The following phonics standard from grade 1 is typical in its rigor:

- Apply phonics generalizations in order to decode words.
 - name all uppercase/lowercase letters of the alphabet
 - understand that the sequence of letters in a written word represents the sequence of sounds in a word
 - use letter-sound matches and structural analysis to decode grade-level words
 - use parts of words (e.g., root/base words, compound words, contractions, prefixes, suffixes) to decode grade-level words
 - apply long and short vowel rules when decoding text
 - use sounding out words; chunking words into smaller parts; and looking for blends, digraphs, word families, etc. as a means of decoding unfamiliar words
 - continue to decode unknown words that are grade-level appropriate (grade 1)

The vocabulary standards are detailed, focus on word analysis and etymology, and do not prioritize the use of context clues over more reliable ways of determining meaning. Standards for spelling, grammar, and usage are also thoroughly treated, as in this example:

- Distinguish between clauses (adjective, adverb, noun) and phrases (adjective, adverb, appositive, infinitive, prepositional, verb, verbal—including gerunds and participles) (grade 7)

Such grade-specific detail makes it easy for the teacher to hold students accountable for correct and progressively sophisticated use of the English language.

Standards for literary and informational text are distinct, and each is treated in detail, despite some repetition across grades. Literary genres, structures, elements, and devices are all well scaffolded. For example, in grade 2, students must simply “identify the characters, plot, and setting of a story,” but by grade 7, each of these elements is addressed in detail, as in this example about plot:

- Identify how the author reveals character (i.e., what the author tells us, what the characters say about him or her, what the character does, what the character says, what the character thinks) (grade 7)

Tennessee also includes expectations—at least in eleventh grade—that students will:

- Compare and contrast the elements (e.g., form, language, plot, and characters) of two works representing different literary periods (e.g., *The Scarlet Letter* and *An American Tragedy*) (grade 11)

Although Tennessee does not go farther to describe the quality and complexity of texts that students should read in each grade, the state deserves plaudits for prioritizing the study of American literature.

When it comes to informational text, the structures and various characteristics of informational text are well addressed. Related content concerning the analysis of arguments is also addressed in the logic strand (see below).

Tennessee’s communication standards are straightforward and practical, although some are repeated across grades. For the most part, good augmentations are made at appropriate benchmark grades to demonstrate an overall progression of rigor. For example, in the earliest grades, students must “summarize what has been heard” but, by grade 5, they must “recognize common organizational structures of speeches (e.g., sequential, chronological, problem-solution, comparison-contrast, cause-effect).” Recitation and oral presentations are included throughout and these standards detail specific characteristics of effective presentations. Standards for “group work” are surprisingly detailed and useful, noting the specific ways in which “self-directed work teams” may accomplish a particular purpose.

Tennessee’s writing standards exhibit many good characteristics. The standards offer explicit direction about aspects of good writing, including the third grade requirement to write a coherent paragraph:

Using complete sentences, develop a logical, coherent paragraph with a topic sentence, supporting details, and a concluding sentence (grade 3)

Tennessee also requires, at grade 6, that students write a coherent thesis statement.

As early as grade 1, the Writing standards incorporate aspects of research and technology. A good synergy exists between what is expected in writing when it comes to doing research and the content of the Research standards themselves.

The Research standards also maintain explicit and rigorous expectations for students, noting at each grade level, for example, how to distinguish among and evaluate the various types of resources. As early as second grade, students are expected to:

Write a simple research report that demonstrates a gathering of information (grade 2)

This standard at grade 6 becomes:

Write a research paper, using primary and secondary sources and technology and graphics, as appropriate (grade 6)

Sixth-graders are also expected, among other things, to:

Distinguish between primary and secondary sources, defining the characteristics of each and evaluating each for their benefits and limitations (grade 6)

Choose among sources provided and those found independently based on the usefulness, credibility, and reliability of the sources (grade 6)

Identify reasons for choosing one source over another, including those found on websites (grade 6)

Identify the characteristics and limitations of source material (grade 6)

Considering all the research-related standards together, little doubt remains as to what kinds of research products students should be producing.

Tennessee also includes an entire strand devoted to logic. As early as Kindergarten, students must “develop an understanding of sequential events.” By grade 6, they must define inductive and deductive reasoning and identify examples of each in texts. In twelfth grade, students analyze common fallacies and:

Differentiate among evidence, inferences, assumptions, and claims in argumentation (e.g., explain and evaluate opinion editorials, commercials, political cartoons, philosophical arguments) (grade 12)

The emphasis on logic is a welcome addition.

Finally, both the analysis and production of multimedia are required and a rigorous progression across the grades is evident. The standards for writing, research, logic, and media complement each other well.

Content Weaknesses

Despite the many positive features of Tennessee’s writing standards, they do not describe by genre the writing products that students must produce. Instead, they maintain a standard (nearly verbatim across most grades) that encompasses all writing types:

Write in a variety of modes (e.g., a summary; an explanation; a description; a creative expression; a literary analysis, informational, research, or argumentative essay) (grades 3-12)

The odd exception to this perfunctory treatment of genres is the inordinate emphasis, starting in grade 6, on “work-related texts.” Based on these standards, students might produce terrific business letters and résumés, but never be able to write a compelling persuasive essay. Samples of student writing to illustrate expected quality are not included.

On balance, the Tennessee standards are very helpful to teachers and other users. They are thorough and exhibit a rigorous progression across grades in almost all areas emphasized in the *ELA Content-Specific Criteria*, despite the over-emphasis on writing “work-related” texts, to the exclusion of other genres, in the writing strand. They therefore earn six points out of seven for Content and Rigor. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

Tennessee’s standards are generally more straightforward, clear, and specific than the Common Core. They treat both literary and non-literary texts in systematic detail throughout the document, addressing the specific genres, sub-genres, and characteristics of both text types. Tennessee also provides more detailed guidance and clearer expectations regarding the general characteristics of good writing expected throughout the grades, and its standards for logic are more thorough and rigorous.

On the other hand, Common Core includes samples of student writing to clarify grade- and genre-specific writing expectations, as well as a reading list to provide guidance about the quality and complexity of texts that students should be reading each year. In addition, the Common Core includes standards explicitly addressing foundational U.S. documents. Such enhancements would benefit Tennessee’s already-strong standards.

Tennessee • Mathematics

DOCUMENTS REVIEWED

User's Guide to the Tennessee Mathematics Curriculum Framework, PreCalculus and Advanced Algebra and Trigonometry. January 25, 2008.
Accessed from: <http://www.state.tn.us/education/ci/math/index.shtml>

Overview

Tennessee's standards cover much mathematical content with both depth and rigor. The high school standards are strong. The main failure is in the area of arithmetic, which is neither prioritized nor appropriately culminated.



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, one of which is a mathematical process strand that focuses on topics such as problem-solving and that is intended to be integrated into the instruction of all content.

Each standard is presented by grade with three components: grade-level expectations, Checks for Understanding, which are suggestions for student learning, and State Performance Indicators, which help clarify how the grade-level expectation is assessed. The three components are interrelated and all are considered to be standards.

The high school standards are organized similarly except that the material is presented by course rather than grade. The courses, however, are still organized by strand so that Algebra I has an algebra strand, as well as strands for geometry and data analysis.

Clarity and Specificity

The standards are generally easy to read and understand. However, the distinction among the three categories is unclear, in particular because you must piece together information from all three to understand what, precisely, students are expected to know and be able to do. In addition, although the mathematical processes strand is described as integrated, it is listed with each grade level and sometimes includes content, such as time-telling in the early grades.

Many standards are clearly stated and easy to understand, including the following:

Use the prime factorization of two whole numbers to determine the greatest common factor and the least common multiple (grade 5)

But some standards are overly broad, not measurable, or mathematically impossible, for example:

Find lengths given areas or volumes, and vice versa (grade 6)

This standard is subject to interpretation, particularly since it is not generally possible to find lengths given areas. As mentioned above, the division of the high school courses into strands is peculiar in that “algebra” becomes a strand in the algebra courses. Despite this, the courses are still reasonably accessible.

There are other occasional lapses in clarity, as with the overly broad Algebra I standard:

Recognize “families” of functions (Algebra I)

While the standards are somewhat repetitive and occasionally lack specificity, most are clearly stated and easy to understand. The Clarity and Specificity score is two points out of three. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Priorities

The standards do not explicitly prioritize any content, and fewer than 30 percent of the elementary school standards are devoted to arithmetic. This does not adequately prioritize arithmetic.

Content Strengths

The standards have many strong features. The structures of the operations of arithmetic are well covered, and the use of the number line is excellent.

The high school course standards are particularly strong. They include advanced courses such as Pre-Calculus and include some rigorous mathematics. Significant trigonometry is presented, including inverse trigonometric functions. Proofs are woven into high school geometry. Logarithmic and exponential functions are well covered. Solving quadratic equations is done thoroughly, with the standards including:

Solve quadratic equations by factoring, graphing, completing the square, extracting square roots and using the quadratic formula (Algebra II)

Also strong, and providing students with valuable and oft-neglected insight, is the following Algebra II standard:

Identify the weaknesses of calculators and other technologies in representing non-linear data, such as graphs approaching vertical asymptotes, and use alternative techniques to identify these issues and correctly solve problems (Algebra II)

Content Weaknesses

The development of whole-number arithmetic is weak. While fluency is stated as a goal, the standards do not mention the standard algorithms that are necessary to the mastery of arithmetic. For example, the capstone for addition and subtraction is this second-grade standard:

Use efficient and accurate strategies to develop fluency with multi-digit addition and subtraction (grade 2)

Similarly, the culminating standards for whole-number multiplication are these standards:

Multiply two- and three-digit whole numbers (grade 4)

Understand and use a reliable algorithm for multiplying multi-digit numbers and dividing numbers by a single-digit divisor accurately and efficiently (grade 4)

Again, the standard algorithms are not mentioned, allowing students to use potentially inappropriate methods.

There is no mention of common denominators in preparation for adding and subtracting fractions, and the problems with whole-number arithmetic are extended with these standards:

Develop fluency with addition and subtraction of proper and improper fractions and mixed numbers; explain and model the algorithm (grade 5)

Develop and analyze algorithms and compute efficiently with integers and rational numbers (grade 7)

These are acceptable pedagogical standards, but they fail to specify the content that students must eventually know. They let students develop their own ways to do arithmetic with rational numbers. They do not specify standard methods and procedures, which students must learn in order to master arithmetic.

High school coverage is generally strong but incomplete. The development of quadratic functions is missing the vertex form and finding the maximum or minimum. Some STEM-ready material is also missing, including polar coordinates.

Tennessee's standards are often strong and have fairly good coverage of high school and STEM-ready material. However, arithmetic is neither prioritized nor sufficiently developed. 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, Tennessee'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 Volunteer State has in place today.