

Connecticut • English Language Arts

DOCUMENTS REVIEWED

2006 *Connecticut English Language Arts Curriculum Framework*. 2006.
Accessed from: <http://www.sde.ct.gov/sde/cwp/view.asp?a=2618&q=320866>

Connecticut PK-8 English Language Arts Curriculum Standards. 2008.
Accessed from: <http://www.sde.ct.gov/sde/cwp/view.asp?a=2618&q=320866>

Overview

The Connecticut standards are a mix of good and bad. The *Curriculum Framework* outlines broad categories and standards for each grade, Pre-K-12, but is written in terms far too general to provide guidance to teachers. More specific grade-level expectations are developed for grades Pre-K-8 in the 2008 *Curriculum Standards*, but no such document exists for grades 9-12, leaving critically important expectations for high school grades unknown.



Clarity and Specificity: 1/3
Content and Rigor: 2/7
Total State Score: 3/10
(Common Core Grade: B+)

General Organization

The *Connecticut ELA Curriculum Framework* is first divided into four “standards” that are common across grades Pre-K-12: Reading and Responding, Exploring and Responding to Literature, Communicating with Others, and Applying English Language Conventions. Each of these standards includes an “overarching idea” and a “guiding question,” and is then divided into two to four “component statements.” For example:

Standard 1: Reading and Responding

Overarching Idea: Students read, comprehend and respond in individual, literal, critical and evaluative ways to literary, informational and persuasive texts in multimedia formats.

Guiding Question: How do we understand what we read?

Component Statements:

- 1.1 Students use appropriate strategies before, during and after reading in order to construct meaning.
- 1.2 Students interpret, analyze and evaluate text in order to extend understanding and appreciation.
- 1.3 Students select and apply strategies to facilitate word recognition and develop vocabulary in order to comprehend text.
- 1.4 Students communicate with others to create interpretations of written, oral and visual texts.

For grades K-8, each component statement is divided into a grade-specific expectation. The high school grade expectations, however, are combined for grades 9-12.

In addition to the *Framework*, Connecticut provides Pre-K-8 *Curriculum Standards*. These follow the same organizational structure as the *Framework* (in fact, they repeat the standards and component statements), but they also provide more detailed grade-level expectations for each component statement. No such document exists for high school.

Clarity and Specificity

For grades Pre-K-8, the Connecticut expectations are well organized and easy to follow. Unfortunately, the clarity and specificity of the expectations themselves are inconsistent at best. They are frequently vague, sometimes unmeasurable, and often repetitive across grades.

Consider the following vaguely worded vocabulary expectation, repeated verbatim in grades 3 and 4:

Define words and concepts necessary for understanding math, science, social studies, literature and other content area text (grades 3-4)

Similarly vague and repetitive wording can be found in many of the expectations.

Other expectations, particularly for “Reading Reflection/Behaviors,” are unmeasurable, as in:

Reflect orally on reading behaviors when prompted, i.e., What did I learn today as a reader? (grade 1)

Evaluate the quality and value of text (grade 5)

Explain how certain actions cause certain effects, e.g., how the Holocaust changed international politics today or how the internment of Japanese Americans during World War II affected traditional Japanese family structure (grade 8)

These shortcomings leave teachers with very little guidance about what students should actually know and be able to do and therefore earn Connecticut one point out of three for Clarity and Specificity. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Strengths

The K-8 expectations contain some strong content. The early-reading expectations for phonics, phonemic awareness, and fluency are comprehensive and are broken into the following categories: “Concepts About Print,” “Phonological (or, later, “Phonological (or, later, “Phonemic”) Awareness,” “Phonics,” “High-Frequency Words,” “Fluency,” and “Vocabulary.” Specific expectations are outlined for each category, even words-per-minute fluency rates. The Pre-K expectations cover important ground in phonemic awareness and build a stronger foundation for Kindergarten than do most state standards, many of which skip Pre-K entirely. The use of glossaries and dictionaries begins early.

Connecticut’s expectations for the typically content-less “writing process” category are better than most, such as this:

Revise: rework writing several times based on different points of focus, e.g., first reading—add details for elaboration; second reading—delete sentences or phrases to achieve paragraph unity; third reading—reorganize ideas for meaning (grade 5)

This process expectation helpfully offers specific tasks for revising.

The expectations also offer reasonably clear expectations about what writing products (persuasive essay, news article, personal narrative, and so on) students should produce at each grade level.

Specific expectations for spelling, capitalization, punctuation, and usage are sprinkled throughout the grades, such as the following excerpts from grade 6:

Use parallel construction when listing verbs, particularly in informational and technical writing.

- Parallel: A scientist observes, hypothesizes, and analyzes
- Not parallel: A scientist observes, hypothesized, and analyzed (grade 6)

Although its expectations for conventions are presented as a long list covering spelling, capitalization, punctuation, and usage, which can be confusing, Connecticut is to be commended for including them.

Content Weaknesses

The Connecticut expectations contain some unnecessary content, and priorities are difficult to glean. The reading expectations generally place as much emphasis on content-less and often unmeasurable comprehension skills and reading “reflection” and “behaviors” as they do on important content. For example:

Make connections to text representing different perspectives [such as] family, friendship, culture and tradition, generating personal and text-based responses [sic] (grade 2)

Explain what good readers do and identify own good reader behaviors [sic] (grade 2)

Many expectations slip inappropriately into unmeasurable instructional strategies that distract attention from critical content and student outcomes. For example:

Activate prior knowledge before reading, e.g., Direct Reading-Thinking Activity, KWL Chart, Anticipation Guide, Response Notebooks (grade 4)

Other reading expectations mention essential content but only superficially, failing to provide the genre-specific details teachers need to guide instruction. Consider this grade 4 expectation about identifying literary forms:

Identify and explain the elements of particular literary forms, e.g., poetry, short story, biography, journalistic writing, narrative. (grade 4)

Finally, no requirements exist for the study of American literature, a major flaw in the reading expectations.

In writing, though the Connecticut expectations have some strengths (mentioned above), the state fails to prioritize genres from grade to grade. Specifically, it expects too many genres to be taught at each grade, which is unmanageable.

Listening and speaking expectations could focus more attention on specific expectations for recitation and oral presentations, including scoring rubrics.

Connecticut lacks expectations for research or media, leaving important college- and career-ready standards unaddressed.

Finally, Connecticut's decision to rely on the brief, unelaborated expectations in the framework for the grade span 9-12, also leaves much essential high school content unaddressed. No guidance is tendered about which literary and informational genres should be studied, nor are their characteristics discussed. Writing genres are mentioned in passing, but no expectations for writing products are included. No specific expectations for speaking and listening are offered, nor are research and media addressed in any detail. Conventions are left unremarked upon.

Too much content, especially in high school, is omitted in the Connecticut standards, as much as 70 percent, giving the Constitution State two points out of seven for Content and Rigor. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

With their grade of D, Connecticut'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 Constitution State has in place today.

AS OF JULY 20, 2010,
THIS STATE HAD PLEDGED
TO ADOPT THE COMMON
CORE STATE STANDARDS.

Connecticut • Mathematics

DOCUMENTS REVIEWED

Connecticut PreKindergarten-Grade 8 Mathematics Curriculum Standards. March 2010.

Accessed from: http://www.sde.ct.gov/sde/lib/sde/pdf/curriculum/math/PK8_MathStandards_GLES_Mar10.pdf

Algebra I Course Level Expectations. March 2010.

Accessed from: http://www.sde.ct.gov/sde/lib/sde/pdf/curriculum/math/Algebra1_CLEs.pdf

Mathematics Curriculum Framework Companion. 2005.

Accessed from: <http://www.sde.ct.gov/sde/cwp/view.asp?a=2618&q=320872>

Overview

For K-8, Connecticut's standards are well presented and easy to read, but their quality is inconsistent. Excellent standards are diminished by some inadequate and unclear coverage. The high school standards are very poorly presented and missing most of the essential content.



Clarity and Specificity: 1/3

Content and Rigor: 3/7

Total State Score: 4/10

(Common Core Grade: A-)

General Organization

Connecticut's K-8 standards are organized by content strands such as "Numeric and Proportional Reasoning" and "Geometry and Measurement." Each strand is subdivided into topics, and grade-specific standards are presented for each topic.

The high school standards follow the same organizational structure, except that one set of standards is provided for grades 9-12.

In addition, the state provides a set of course-specific standards for algebra I.

Clarity and Specificity

Connecticut's K-8 standards are well presented. Some standards are succinct and clear, for example:

Solve problems involving telling time to the nearest quarter hour, five minutes and minute using analog and digital clocks (grade 3)

However, many standards are not clear, such as:

Develop and test generalizations based on observations of patterns and relationships (grade 1)

Design and conduct surveys of a representative sample of a population and use the data collected to begin to make inferences about the general population (grade 5)

Analyze and evaluate large amounts of numerical information using technological tools such as spreadsheets, probes, algebra systems and graphing utilities to organize (Algebra I and grades 9-12 core)

Select and use appropriate methods for computing to solve problems in a variety of contexts (grades 9-12 core)

As illustrated by the last two examples above, the high school standards are generally so broadly stated as to provide almost no guidance. The Algebra I standards are somewhat clearer, but many of them are written too broadly to understand what kinds of problems students should be able to solve. For example:

- Make and justify predictions based on patterns (Algebra I)
- Create graphs of functions representing real-world situations with appropriate axes and scales (Algebra I)
- Pose a hypothesis based upon an observed pattern and use mathematics to test predictions (Algebra I)

Topics for high school mathematics, such as quadratic equations, may be scattered about the various documents and strands within the documents. The high school standards supply almost no guidance.

Connecticut's standards for K-8 are uneven; some are clear and specific, but many are not. For high school, the organization of the standards is poor and the statements provide almost no guidance. In sum, the standards "offer limited guidance," and receive a Clarity and Specificity score of one point out of three. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Priorities

Arithmetic is the area of mathematics most in need of prioritization, and it is effectively prioritized in elementary school since it comprises almost half the standards.

Content Strengths

The properties of arithmetic are well covered and some of the development of fractions is strong, such as:

- Examine the relationships between multiplication by a unit fraction and dividing by the fraction's denominator (grade 6)
- Use the inverse relationship between multiplication and division to make sense of procedures for multiplying and dividing fractions (grade 6)

The standards include developing formulas for areas and perimeters so that students can understand as well as apply the formulas.

Content Weaknesses

The coverage of arithmetic is inadequate. The standards do not adequately specify that students have automaticity, or quick recall, of basic number facts. These are the basic building blocks for future mathematics; students who are still struggling with basic facts are not prepared to move on to the next level of mathematics. Many computational standards specify the use of a "variety of strategies," rather than standard methods and procedures. This undermines the goal of fluency with the standard algorithms. For example:

- Solve problems involving addition and subtraction of two- and three-digit whole numbers and money amounts up to \$100.00 with and without regrouping using a variety of strategies, including models (grade 3)
- Develop and use strategies involving place value relationships, inverse operations and algebraic properties (commutative, associative and distributive) to simplify addition, subtraction and multiplication problems with three-, four- and five-digit numbers and money amounts and division by one-digit factors (grade 5)

Common denominators are missing in the development of fractions.

The following is the only standard that specifically mentions the trigonometric functions, and it is so vaguely stated that the reader cannot determine what students should learn:

- Describe and compare properties and classes of functions, including exponential, polynomial, rational, logarithmic and trigonometric (grades 9-12 extended)

Similarly, logarithms are mentioned only twice in the standards. In addition to the above standard, there is also:

- Use logarithms, vectors and matrices to solve problems (grades 9-12 extended)

What students are supposed to know about logarithms is unclear.

Linear equations are introduced in eighth grade, and a few standards cover them in high school, but point-slope form is not covered.

The geometry coverage is minimal. There is no specific mention of most major theorems, including theorems about triangles and circles.

Quadratic functions are mentioned specifically only twice:

Describe and compare properties and classes of linear, quadratic and exponential functions (grades 9-12 core)

Model and solve problems with linear, quadratic and absolute value equations and linear inequalities (grades 9-12 core)

Missing content includes factoring, the quadratic formula, and completing the square.

Polynomial and rational functions are mentioned only in the broadest possible terms. The arithmetic of these functions is not covered.

Much of the STEM-ready content is also missing, including most of trigonometry.

Connecticut's standards are inconsistent. There is some strong content in K-8. Arithmetic is well prioritized but its development is not adequate. High school is presented incoherently and is missing a great deal of the essential content. These "serious shortcomings" 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, Connecticut'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 Constitution State has in place today.