

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

North Carolina • English Language Arts

DOCUMENTS REVIEWED

North Carolina Standard Course of Study for English Language Arts. 2004.

Accessed from: <http://www.ncpublicschools.org/curriculum/languagearts/scos/2004/>

Overview

The *North Carolina Standard Course of Study for English Language Arts* is one of the most befuddling sets of standards reviewed for this report. It is difficult to describe its organization and purpose, for neither is obvious to the reader. The standards are jam-packed with jargon and littered with generic skills that appear in multiple strands (often nonacademic skills, such as personal reflection). Glimpses of good content can be found in early reading, vocabulary, analysis of arguments, and even conventions, but in many places the standards are devoid of academic content.



Clarity and Specificity: 0/3

Content and Rigor: 3/7

Total State Score: 3/10

(Common Core Grade: B+)

General Organization

The North Carolina ELA standards are divided into three strands: Oral Language, Written Language, and Media/Tech-nology use. For each strand, the state lists five or six “competency goals,” such as these for grade 5:

- Competency Goal 1: The learner will apply enabling strategies and skills to read and write
- Competency Goal 2: The learner will apply strategies and skills to comprehend text that is read, heard, and viewed
- Competency Goal 3: The learner will make connections through the use of oral language, written language, and media and technology
- Competency Goal 4: The learner will apply strategies and skills to create oral, written, and visual texts
- Competency Goal 5: The learner will apply grammar and language conventions to communicate effectively (grade 5)

While these goals appear to approximate traditional ELA standards categories, the lines among reading, writing, listen-ing, and speaking are frequently blurred in confusing ways. Some goals remain the same over a few grade levels and then morph into new goals at other grade levels. Each of the competency goals are broken into grade-level objectives.

Clarity and Specificity

The North Carolina standards are rarely specific, and even more rarely clear. One reason is that the “competency goals” for each grade are all-encompassing, and the standards that appear under them are simply long lists of generic, skills-based expectations. For example:

Goal 1: The learner will use language to express individual perspectives through analysis of personal, social, cultural, and historical issues (grade 7)

This competency goal does not specify what academic content is covered, nor do the standards that follow, which state that the student will: “narrate a personal account...,” “analyze expressive materials that are read, heard, and/or viewed,” “interact in group activities...,” and “reflect on learning experiences...” (The second standard is itself followed by a list of metacognitive strategies for analyzing expressive materials, such as “making connections between works, self and related topics.”) But what products are students producing and why? What kinds of texts are they reading, hearing, and

viewing? North Carolina supplies scarcely even a clue. The standards throughout the grades include similar lists of skills unconnected to any actual content.

The standards themselves are overloaded with sweeping or otherwise unclear language, as in this second-grade standard:

Use text for a variety of functions, including literary, informational, and practical (grade 2)

“Using” texts is not something that can be assessed. A similar standard, which states that students should “read a variety of texts,” appears in several grades, including this fifth-grade standard:

Read a variety of texts, such as:

- fiction (tall tales, myths)
- nonfiction (books of true experience, newspaper and magazine articles, schedules)
- poetry (narrative, lyric, and cinquains)
- drama (plays and skits) (grade 5)

Much more guidance is needed to know what students should read and what they should do with what they have read.

At the upper grades, the standards tend to get even more abstract, as in this standard from grade 12:

Analyze general principles at work in life and literature by:

- discovering and defining principles at work in personal experience and in literature
- predicting what is likely to happen in the future on the basis of those principles (grade 12)

These significant shortcomings of organization make it impossible to give North Carolina points for Clarity and Specificity. As a consequence, they earn zero points out of three. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

The North Carolina standards exhibit a few spots where the language is specific enough to convey rigorous expectations for students, but overall the weaknesses far outweigh the strengths.

Content Strengths

Standards for early reading are fairly clear and specific in grades K-3. Phonemic awareness and phonics are addressed, as in this standard from grade 1:

Demonstrate decoding and word recognition strategies and skills:

- generate the sounds from all the letters and appropriate letter patterns which should include consonant blends and long and short vowel patterns
- use phonics knowledge of sound-letter relationships to decode regular one-syllable words when reading words and text
- recognize many high-frequency and/or common irregularly spelled words in text (e.g., have said, where, two)
- read compound words and contractions
- read inflectional forms (e.g., -s, -ed, -ing) and root words (e.g., looks, looked, looking)
- read appropriate word families (grade 1)

Long lists of comprehension strategies are also offered, some of which are unmeasurable and are really just instructional activities, but at least most of the core content for early reading can be found here.

American literature is specifically addressed in grade 11—as is British literature in grade 12. The grade 11 standard reads:

Interpret the significance of literary movements as they have evolved through the literature of the United States by:

- analyzing the characteristics of literary genres, including fiction, nonfiction, drama, and poetry, and how the selection of genre shapes meaning
- relating ideas, styles, and themes within literary movements of the United States
- understanding influences that progress through the literary movements of the United States
- evaluating the literary merit and/or historical significance of a work from Colonial Literature, the Romantic Era, Realism, the Modern Era, and Contemporary Literature (grade 11)

North Carolina deserves credit for making this attempt to codify the importance of studying our literary heritage.

The standards do a decent job of addressing oral and written language conventions, with a competency goal at each grade level identifying specific content to be mastered. Similarly, the standards cover research fairly well, although the content is buried in a generic goal about “using and evaluating information from a variety of resources.”

In upper grades, the standards address the analysis of “argumentative works” in ways that convey real expectations for students.

Content Weaknesses

The greatest weakness of the North Carolina standards is that no priority is given to real academic content, which is included along with many, many nonacademic goals for students (for instance, appraising changes in themselves).

In reading, literature and nonfiction are consistently considered in the same breath, making it difficult to know what students are supposed to do with each type of text. These standards (like the one appearing below) tend to be repeated across grades.

Identify and interpret elements of fiction and nonfiction and support by referencing the text to determine the:

- author’s purpose
- plot
- conflict
- sequence
- resolution
- lesson and/or message
- main idea and supporting details
- cause and effect
- fact and opinion
- point of view (author and character)
- author’s use of figurative language (e.g., simile, metaphor, imagery) (grades 3-4)

Other student expectations for reading have more to do with personal feelings and responses than with analyzing genres, literary elements, stylistic devices, or rhetorical techniques. Consider this eighth-grade standard:

Reflect on learning experiences by:

- evaluating how personal perspectives are influenced by society, cultural differences, and historical issues.
- appraising changes in self throughout the learning process.
- evaluating personal circumstances and background that shape interaction with text (grade 8)

Such nonacademic expectations have no place in a state standards document.

Finally, with regard to reading, the quality and complexity of reading materials are never defined; there is no list or other “exemplar” document that would indicate what students should be reading at each grade.

The Writing standards suffer from the same problem of not indicating what kind of writing should be produced at each grade, or even noting the characteristics of each genre. Standards cover a mish-mash of genres, as in this fourth-grade standard:

Compose fiction, nonfiction, poetry, and drama using self-selected and assigned topics and forms (e.g., personal and imaginative narratives, research reports, diaries, journals, logs, rules, instructions) (grade 4)

It would be much more helpful if specific characteristics of each genre were outlined and scaffolded at appropriate grade levels.

In twelfth grade, there are two “feel-good,” experience-centric standards:

Compose reflective texts that give the audience:

- an understanding of complex thoughts and feelings
- a sense of significance (social, political, or philosophical implications)
- a sense of encouragement to reflect on his or her own ideas (grade 12)

Compose texts (in print and non-print media) that help the audience understand a principle or theory by:

- researching experience for relevant principles that relate to themes in literature and life.
- presenting a thesis, supporting it, and considering alternative perspectives on the topic.
- adjusting the diction, tone, language, and method of presentation to the audience (grade 12)

Listening is covered only superficially, embedded in standards about comprehending text that is “read, heard or viewed.” No standards for formal oral presentations are included, nor any for their evaluation. Multimedia is not addressed.

Taken together, these shortcomings leave over 65 percent of the essential ELA content missing from the standards, earning North Carolina three points out of seven for Content and Rigor. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

With their grade of D, North Carolina’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 Tar Heel State has in place today.

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

North Carolina • Mathematics

DOCUMENTS REVIEWED

North Carolina Essential Standards—Mathematics. 2009.
Documents supplied to Fordham'

Overview

North Carolina's standards are well presented and easy to read. However, they are often poorly phrased and difficult to interpret. In the K-8 material, arithmetic is moderately prioritized, but the development is inadequate. The high school content is sometimes strong, sometimes not.



Clarity and Specificity: 1/3
Content and Rigor: 3/7
Total State Score: 4/10
(Common Core Grade: A-)

General Organization

The K-8 standards are grouped into five strands, such as Number and Operations and Measurement. Each strand is divided into “Essential Standards,” and then subdivided into grade-specific “Clarifying Objectives.” For the purposes of this review, we refer to both—the Essential Standards and Clarifying Objectives—as standards.

The high school standards follow a similar organization, with two important distinctions. First, standards are presented by course, such as Math A and Math BC, rather than by grade. Second, an additional strand focused on “Discrete Mathematics” is included.

Clarity and Specificity

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

Use formulas to determine the area and circumference of circles (grade 6)

However, despite the initial impression of readability, the North Carolina math standards contain numerous clarity problems. Some are just poorly stated, with no attention to grammatical conventions, such as:

Understand counting by 10's and 100's on and off the decade (grade 2)

Understand patterns to translate it into new forms (grade 3)

Use various phrases to read time (quarter 'til, noon, etc.) (grade 3)

Use order of operations (grade 4)

Apply multiplication and division to non-negative fractions (grade 6)

Many others are too broadly stated to interpret, such as:

Identify patterns and trends to make decisions using data (grade 2)

Represent situations as algebraic equations (grade 5)

Understand misuses of surveys, sampling, graphs and statistics (grade 8)

Use critical path analysis and weighted digraphs to optimally schedule large projects that are comprised of many smaller tasks (high school, Math A)

Infer conclusions from given information (high school, Math BC)

Many standards also have distinctive problems. For example, there is no relationship between perimeter and area, so this standard is confusing:

- | Understand the relationship between area and perimeter of composite rectangular figures (grade 4)

Additionally, triangles are not used to categorize polygons, but rather are a type of polygon, so the following standard is confusing:

- | Use triangles to categorize polygons by the sums of the measures of interior angles (grade 5)

Because there are no arithmetic algorithms that simplify rational expressions in general, this standard is mysterious:

- | Use arithmetic algorithms to simplify rational expressions (high school, Math BC)

In high school, besides problems with the statements themselves, the presentation of specific topics is often incoherent. Standards on specific topics, such as quadratic equations, may be scattered across various strands rather than appearing together.

Although seemingly easy to read and well organized, North Carolina’s standards include many poorly stated and/or difficult-to-interpret standards. They “offer limited guidance to users” and receive a Clarity and Specificity score of one point out of three. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Priorities

North Carolina does not provide explicit guidance as to priorities. Implicitly, however, arithmetic is moderately prioritized with about 40 percent of the standards in appropriate grades devoted to its development.

Content Strengths

The standards include some content that is often overlooked. Conversion between measurement systems is included:

- | Use given conversion factors to convert measures given in either customary or metric units to the other system (grade 7)

High school geometry is strong in places. Proof and postulates are both explicitly required, as in:

- | Summarize the structure and relationships between undefined terms, defined terms, axioms/postulates, methods of reasoning and theorems (high school, Math BC)
- | Construct arguments to prove the Pythagorean Theorem and its converse in multiple ways (high school, Math BC)

Content Weaknesses

The development of arithmetic has many weaknesses. While addition and subtraction facts are covered, no appropriate standard states that students must memorize the basic facts for multiplication and division. In addition, no clear standard states that they must understand and use the inverse nature of multiplication and division.

Standard methods and procedures are also missing. Instead, unspecified “strategies” are to be used. The following standards, which trace the development of whole-number addition and subtraction, illustrate this:

- | Use multiple strategies to solve multi-digit, single-step and multi-step addition and subtraction problems (grade 3)
- | Use strategies to develop fluency in solving problems using up to four-digit addition and subtraction (larger number with calculator) (grade 4)
- | Use strategies to develop fluency in whole-number addition and subtraction to solve multi-step problems in context (grade 5)

Such standards do not ensure that students master the standard algorithms for whole-number addition and subtraction. The use of “strategies” and lack of specificity as to method continues:

Use a variety of strategies to solve problems involving addition and subtraction of fractions with unlike denominators (grade 5)

Use a variety of strategies to solve problems involving addition and subtraction of decimals (grade 5)

North Carolina's standards fail to mention common denominators.

They also display weaknesses in the development of area. Formulae for the area of rectangles or triangles are not provided. Nor is the area of a triangle developed, although one assumes it is meant to be included in the following standard:

Calculate the area of polygons (grade 6)

In high school, there are some weaknesses in coverage. Quadratic equations are not studied thoroughly. Missing content includes completing the square and max/min problems using quadratics.

The STEM-ready content does not include inverse trigonometric functions.

Taken together, these amount to serious problems that 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, North Carolina'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 Tar Heel State has in place today.

¹ While these 2009 standards are North Carolina's most recently adopted mathematics standards, they have not yet been put into use. Students and teachers are still responsible to the previous, 2003 version of the standards. When North Carolina adopted the Common Core standards (in June 2010), they removed these 2009 standards from the website to replace them with the Common Core. The North Carolina State Department of Education supplied Fordham with a copy of the 2009 standards (as they are the most recently adopted) for review.