District of Columbia • English Language Arts

DOCUMENTS REVIEWED

Learning Standards for Grades Pre-K-8, Reading/English Language Arts. 2005.
Accessed from: http://dcps.dc.gov/DCPS/In+the+Classroom/What+Students+Are+Learning/Learning+Standards+for+Grades+Pre-K-8

Learning Standards for High School Subjects, Reading/English Language Arts. 2005.
Accessed from: http://dcps.dc.gov/DCPS/In+the+Classroom/What+Students+Are+Learning/Learning+Standards+for+High+School+Subjects

Overview

GRADE **A**

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

(*Common Core Grade: B+*)

The District of Columbia ELA standards are thoughtful, detailed, and rigorous. They delineate concrete and specific objectives in every strand prioritized in the *ELA Content-Specific Criteria* (see Appendix A), including those for the study of American literature. The District appends a thorough and strong reading list that was adapted from the list included with the Massachusetts standards; D.C. added Caldecott, King, and Newberry literary award winners. Standards for English language conventions, research, and media are all included in addition to strong standards for reading, writing, and listening and speaking.

General Organization

Washington, D.C.'s standards are organized by grade level into the following strands:

- Language Development
- Beginning Reading
- Informational Text
- Literary text
- Research
- Writing
- Media
- English Language Conventions

Strands are divided into concepts, then into more detailed expectations. For example, the strand Language Development is divided in grade 3 into four concepts: Discussion; Questioning, Listening, and Contributing; Oral Presentation; and Vocabulary and Concept Development. Following the latter are six detailed expectations, one of which is "Identify the meaning of common prefixes and suffixes (e.g., un-, re-, in-, dis-, -ful, -ly, -less), and know how they change the meaning of roots."

Clarity and Specificity

The D.C. standards are more specific than most, and this specificity adds to the document's rigor. Most state standards, for example, do not distinguish types of literary nonfiction. But the D.C. standards offer a detailed expectation relating to that content, as early as the sixth grade:

> Describe the structural differences among essays, speeches, autobiographies, and biographies (grade 6)

Similarly, while many states note literary elements such as plot, D.C. usually provides even more detail, for example:

> Analyze plot development (e.g., conflict, rising action, falling action, resolution, subplots, flashbacks, parallel episodes) to determine whether and how conflicts are resolved (grade 7)

Occasional instances of repetition or lapses of clarity are evident, such as the following grade 12 "Discussion" standard:

> Evaluate how well participants engage in discussions, and participate in a formal and an informal meeting or on a television news discussion program (grade 12)

This twelfth-grade standard is vague:

> Analyze and compare style and language among significant cross-cultural literary works (grade 12)

These lapses are extremely rare, however, and the standards overall are very clear and quite specific, thus earning the District three points out of three for Clarity and Specificity. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Strengths

The District's standards for early reading are quite good. They cover all areas identified by the *ELA Content-Specific Criteria* (see Appendix A) and do not place undue emphasis on metacognitive reading strategies that are devoid of content. The vocabulary standards are particularly good, including a focus on morphology and etymology, as in the following:

> Use knowledge of morphology or the analysis of word roots and affixes to determine the meaning of unfamiliar words (e.g., meaning of Greek root "graph" to understand the meaning of the words telegraph, photograph, and autograph) (grade 4)

As early as first grade, the vocabulary standards acknowledge the importance of dictionary use:

> Determine meanings of words by using a beginning dictionary (grade 1)

This straightforward expectation is typical of many of the vocabulary standards. In upper grades, the vocabulary standards address figurative language and literary allusions—and their relationship to vocabulary development:

> Identify the meanings of metaphors (e.g., Scrooge, Madame LaFarge, "house of glass") based on common literary allusions and conceits (grade 11)

Such an emphasis is an unusual but welcome expectation.

D.C.'s standards for both literary and non-literary text are thorough and detailed. An exhaustive set of literary text genres is specifically addressed, including literary nonfiction. The standards even include a category called "Traditional Narrative and Classical Literature," which directs students to focus on works that reflect enduring literary heritages, including American literature, as in this grade 11 expectation:

> Demonstrate knowledge of 18th- and 19th-century foundational works of American literature, including works by authors such as Emily Dickinson, Frederick Douglass, Ralph Waldo Emerson, Benjamin Franklin, Nathaniel Hawthorne, Herman Melville, Edgar Allan Poe, Henry David Thoreau, and Mark Twain (grade 11)

Other standards specifically address American literature, as well, such as the following eleventh-grade standard:

> Analyze foundational U.S. documents for their historical and literary significance (e.g., the Declaration of Independence, the Federalist Papers, the Preamble to the U.S. Constitution, Abraham Lincoln's *Gettysburg Address*, Martin Luther King's *Letter from Birmingham Jail*) (grade 11)

D.C. is one of just a handful of states that prioritizes the study of important American literature and that cites specific authors and works. In addition, it appends several excellent lists of suggested authors and texts that provide helpful guidance about the quality and complexity of reading that D.C. expects of its students.

Standards for expository text are equally rigorous, with a focus on structure, as in this grade 9 standard:

> Explain how one excerpt relates and contributes to the reading selection (e.g., how a sentence relates to a paragraph, how a paragraph relates to a selection) (grade 9)

As early as grade 6, the characteristics of important types of expository text, such as persuasive text, are specifically described:

> Identify the effect of persuasive strategies and rhetorical techniques (e.g., peer pressure, emotional appeal, exaggeration, repetition) that the author uses to influence readers' thinking or behavior (grade 6)

In the areas of listening and speaking, the standards are also rigorous and include active listening skills, group discussion skills, recitation, and oral presentations. The standards even cite specific listening skills that simultaneously address important logic content that is often left out in state standards. For example, consider these grade 12 standards:

> Distinguish between inductive and deductive reasoning in an argument (grade 12)
>
> Identify logical fallacies present in oral addresses (e.g., attack ad hominem, false causality, red herring, overgeneralization, bandwagoning) (grade 12)

These standards help ensure that students will identify different kinds of reasoning and the component parts of arguments, thereby honing their ability to discern which arguments are valid and effective—and which are not.

The District includes detailed standards for English language conventions, including specific standards for certain spelling patterns at almost all grade levels.

For example, in the grade 3 "Beginning Reading" strand, students are expected to:

> Apply knowledge of the following common spelling patterns to read words in decodable text that
> - drop the final "e" and add endings such as -ing, -ed, or -able (e.g., use, using, used, usable);
> - have final consonants that need to be doubled when adding an ending (e.g., hop to hopping);
> - require changing the final "y" to "i" (e.g., baby to babies);
> - end in -tion, -sion (e.g., election, vision); and
> - include common prefixes, suffixes, and roots (grade 3)

Research and media are also thoroughly covered; each is given its own strand. Students in upper grades are required to write research papers, culminating in a significant "extended essay" at twelfth grade. Also, in high school, students are required to analyze and produce multimedia presentations.

Content Weaknesses

D.C.'s writing standards exhibit the same flaw that many other state writing standards reveal: Too many types of writing products are expected at every grade level, including, for example, short stories, scripts, poems, and dramas. Such voluminous expectations do not help teachers prioritize types of writing by grade level (or span) and make for unrealistic expectations.

More information about how oral presentations and writing will be evaluated, such as the inclusion of sample acceptable student writing, would be very helpful.

The District's standards are mostly top-notch in content coverage. The level of rigor is also appropriate for the targeted grade levels and flaws are minor. They receive seven points out of seven for Content and Rigor. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

The District of Columbia's standards are clearer, more thorough, and easier to read than the Common Core standards. The essential content is grouped more logically, so that standards addressing inextricably linked characteristics, such as themes in literary texts, can be found together rather than spread across strands. In addition, the D.C. standards treat both literary and non-literary texts in systematic detail, addressing the specific genres, sub-genres, and characteristics of both text types. Both D.C. and the Common Core include reading lists with exemplar texts, but D.C.'s is much more comprehensive. In addition, while the Common Core addresses American literature only in high school, the D.C. standards include this important content in elementary and middle school, too.

On the other hand, Common Core includes samples of student writing to clarify grade- and genre-specific writing expectations. It also includes standards explicitly addressing foundational U.S. documents. Such enhancements would benefit D.C.'s already-strong standards.

District of Columbia • Mathematics

DOCUMENTS REVIEWED

Learning Standards for Grades Pre-K-8, Mathematics. August 2005.
Accessed from: http://dcps.dc.gov/DCPS/In+the+Classroom/What+Students+Are+Learning/Learning+Standards+for+Grades+Pre-K-8

Learning Standards for High School Subjects, Mathematics. August 2005.
Accessed from: http://dcps.dc.gov/DCPS/In+the+Classroom/What+Students+Are+Learning/Learning+Standards+for+High+School+Subjects

Overview

The District of Columbia standards are well organized and extremely easy to read. They cover most of the essential content with both depth and rigor. Arithmetic is prioritized and well developed in the early grades. High school material is generally well covered, including STEM-ready material.

GRADE **A**

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

(*Common Core Grade: A-*)

General Organization

The K-8 grade-level standards are organized by five content strands such as "Geometry" and "Measurement." The content strands are sometimes further subdivided into topics. Many of the standards are accompanied by example problems.

The high school standards are organized by course, including a Pre-Calculus and a Trigonometry course. The courses, except Geometry, which is not broken into topics, are organized by content strands.

Clarity and Specificity

The standards are well presented and easy to read and understand. Generally, the standards are straightforward and clear, for example:

> Determine the unit cost when given the total cost and number of units (grade 4)
>
> Show that two fractions are or are not equivalent by reducing to simpler forms or by finding a common denominator (grade 5)

The use of examples to clarify intent is exemplary. For example, in the following broadly stated standard, the example serves to specify what students are supposed to know and be able to do:

> Use concepts of negative numbers
>
> - Example: The temperature this morning was -6° and now it is 3°. How much has the temperature risen? Explain your answer (grade 4)

While the examples generally serve to clarify, a few are not illuminating. For example, in high school, a standard about maximum and minimum values of functions is accompanied by an example which is a straightforward area computation:

> Identify maximum and minimum values of functions. Apply to the solution of problems
> - [Example:] A right circular cylindrical can is 6 inches high and the area of its top is 36 π square inches. What is the minimum number of square inches of construction paper that it would take to cover the lateral surface of the can? (Pre-Calculus and Trigonometry)

This is a perfectly good area problem, but there is no substantial max/min aspect to it.

The standards are generally well presented, clear, and specific. The use of examples is exemplary, and the District of Columbia receives a Clarity and Specificity score of three points out of three. (See *Common Grading Metric*, Appendix A.)

Content and Rigor

Content Priorities

The District of Columbia does not provide explicit guidance as to priorities. However, in the elementary grades, arithmetic is implicitly prioritized because the "Number Sense and Operations" strand, which includes the arithmetic standards, is by far the biggest content strand.

Content Strengths

The standards cover almost all of the essential content. The development of arithmetic is strong. Knowing the addition and subtraction number facts is specified:

> Know addition and subtraction facts (addends to 10), commit to memory, and use them to solve problems (grade 1)

The properties of arithmetic are well developed, and fluency and standard procedures are required throughout. The following standards illustrate this:

> Demonstrate the ability to use conventional algorithms for addition and subtraction (two two-digit whole numbers) (grade 1)
>
> Demonstrate an understanding of and the ability to use conventional algorithms for the addition and subtraction of multi-digit whole numbers (grade 4)
>
> Demonstrate understanding of and ability to use the conventional algorithms for multiplication of up to a three-digit whole number by a two-digit whole number. Multiply three-digit whole numbers by two-digit whole numbers accurately and efficiently (grade 4)

Continued coverage of arithmetic is also quite rigorous. The number line is used throughout, as in:

> Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line (grade 6)

Examples of other excellent standards are:

> Accurately and efficiently add, subtract, multiply, and divide positive fractions (including mixed numbers) with like and unlike denominators. Simplify fractions (grade 6)
>
> Represent rational numbers as repeating or terminating decimals when possible, and translate between these representations (grade 6)
>
> Calculate the percentage increase and decrease of a quantity (grade 7)
>
> Solve problems involving ratio units such as miles per hour, dollars per pound, or persons per square mile (grade 8)

High school content is generally rigorous. For example, solid manipulation skills with rational functions and completing the square are both covered:

> Perform basic arithmetic operations with rational expressions and functions (Algebra I)
>
> Find solutions to quadratic equations (with real roots) by factoring, completing the square, or using the quadratic formula. Demonstrate an understanding of the equivalence of the methods (Algebra I)

STEM content is also well covered, with standards such as:

> Plot complex numbers using both rectangular and polar coordinates systems. Represent complex numbers using polar coordinates, i.e., a + bi = r (cos q + i sin q) (Pre-Calculus and Trigonometry)

Content Weaknesses

Though the development of arithmetic is strong, instant recall of the basic facts for multiplication and division is not completely specified.

The standards are admirably succinct, but there are some extraneous geometry and data analysis, statistics, and probability (DASP) standards. For example, there are standards about surveys in grades 1, 2, 3, 4, 7, and 8.

The high school Geometry course is missing explicit coverage of proofs of the major theorems of geometry. Simple proofs are required, but the major theorems are to be used and applied rather than proven.

The study of quadratic equations is missing some details. The vertex form is not covered and symmetry and max/min problems are missing.

The District of Columbia's standards cover much of the essential content with both depth and rigor. In the elementary grades, the standards do an excellent job of both prioritizing and developing arithmetic. The high school coverage is generally rigorous, though it is missing a few details in geometry and in the coverage of quadratics. The Content and Rigor score is seven points out of seven. (See *Common Grading Metric*, Appendix A.)

The Bottom Line

With some minor differences, Common Core and the District of Columbia both cover the essential content for a rigorous, K-12 mathematics program. D.C.'s standards are exceptionally clear and well presented. Standards are briefly stated and further clarified with the use of examples, so that D.C.'s standards are considerably easier to read and follow than Common Core. In addition, the high school content is organized so that the standards dealing with various topics, such as quadratic functions, are grouped together in a mathematically coherent way. The organization of the Common Core is more difficult to navigate, in part because standards on related topics sometimes appear separately rather than together.

On the other hand, Common Core excels in the coverage of fractions, and includes some essential high school content, mentioned above, that is missing in District of Columbia.