

# Common Core Standards for English Language Arts and Literacy in History/Social Studies & Science

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Appendix A: Research Supporting Key Elements of  
the Standards

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# Reading

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One of the key requirements of the College and Career Readiness Standards for Reading is that all students must be able to comprehend texts of steadily increasing complexity as they progress through school; by the time they complete the core, students must be able to read independently the kinds of complex texts commonly found in college and careers. The first part of this section makes a research-based case for why the complexity of what students read matters. In brief, while reading demands in college, workforce training programs, and life in general have held steady or increased over the last half century, K–12 texts and reading tasks have actually declined in sophistication, leaving a serious gap between many high school seniors’ reading ability and the reading requirements they face after graduation. The second part of this section addresses how text complexity can be measured and made a regular part of instruction. It introduces a three-part model that blends qualitative and quantitative measures of text complexity with reader and task considerations. The section concludes with several annotated examples showing how the model can be used to assess the complexity of various kinds of texts appropriate for different grade levels.

## Why Text Complexity Matters

In 2006, ACT, Inc., released a report called *Reading Between the Lines* that showed which skills differentiated those students who equaled or exceeded the benchmark score (21 out of 36) in the reading section of the ACT college admissions test from those who did not. Prior ACT research had shown that students achieving the benchmark score or better in reading—which only about half (51 percent) of the roughly half million test takers in the 2004–2005 academic year had done—had a high probability (75 percent chance) of earning a C or better in an introductory, credit-bearing course in U.S. history or psychology (two common reading-intensive courses taken by first-year college students) and a 50 percent chance of earning a B or better in such a course.<sup>1</sup>

Surprisingly, what chiefly distinguished the performance of those students who had earned the benchmark score or better from those who had not was not their relative ability in making inferences while reading or answering questions related to particular cognitive processes, such as determining main ideas or understanding the meaning of words in context. Instead, the clearest differentiator was students’ ability to answer questions associated with complex texts. Students scoring below benchmark performed no better than chance (25 percent correct) on multiple-choice questions pertaining to passages rated as “complex” on a three-point qualitative rubric described in the report. These findings held for male and female students, students from all racial/ethnic groups, and students from families with widely varying incomes. The most important implication of this study was that a pedagogy focused only on “higher-order” or “critical” thinking was insufficient to ensure that students were ready for college and careers: what students could read, in terms of its complexity, was at least as important as what they could do with what they read.

The ACT report is one part of an extensive body of research attesting to the importance of text complexity in reading achievement. The clear, alarming picture that emerges from the evidence, briefly summarized below, is that while the reading demands of college, workforce training programs, and citizenship have held steady or risen over the past fifty years or so, K–12 texts have, if anything, become easier. This finding is the impetus behind the *Standards*’ strong emphasis on increasing text complexity as a key requirement in reading.

## College, Careers, and Citizenship: Steady or Increasing Complexity of Texts and Tasks

Research indicates that the demands that college, career, and citizenship place on readers have either held steady or increased over roughly the last fifty years. The difficulty of college textbooks, as measured by Lexile scores, has not decreased in any block of time since 1962; it has, in fact, increased over that period. The word difficulty of every

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<sup>1</sup> In the 2008–2009 academic year, only 53 percent of students achieved the reading benchmark score or higher; the increase from 2004–2005 was not statistically significant. See ACT, Inc. (2009). *The Condition of College Readiness 2009*. Iowa City, IA: Author.

scientific journal and magazine from 1930 to 1990 examined by Donald P. Hayes and his colleagues had actually increased, which is important in part because, as a 2005 College Board study found, college professors assign more readings from periodicals than do high school teachers. Workplace reading, measured in Lexiles, exceeds grade 12 complexity significantly, although there is considerable variation. The vocabulary difficulty of newspapers remained stable over the 1963–1991 period Hayes and his colleagues studied.

Furthermore, students in college are expected to read complex texts with substantially greater independence (i.e., much less scaffolding) than are students in typical K–12 programs. College students are held more responsible for what they read on their own than are most students in high school, for example. College instructors assign readings, not necessarily explicated in class, for which students might be held accountable through exams, papers, presentations, or class discussions. Students in high school, by contrast, are rarely held accountable for what they read independently. This discrepancy in task demand, coupled with the vast gap in text complexity, may help explain why only about half of the students taking the ACT Test in the 2004–2005 academic year could meet the benchmark score in reading (which also was the case in 2008–2009) and why so few students in general are prepared for postsecondary reading.

### **K–12 Schooling: Declining Complexity of Texts and a Lack of Focus on Independent Reading**

Despite steady or growing reading demands from various sources, K–12 reading texts have trended downward in terms of difficulty in the last half century. Jeanne Chall and her colleagues, for instance, found a thirteen-year decrease from 1963 to 1975 in the difficulty of grade 1, grade 6, and (especially) grade 11 texts. Extending the period to 1991, Hayes and his colleagues found precipitous declines (relative to the period from 1946 to 1962) in average sentence length and vocabulary level in reading textbooks for a variety of grades. Hayes also found that while science books were more difficult to read than literature books, only books for Advanced Placement (AP) classes had vocabulary levels equivalent to those of even newspapers of the time. Carrying the research closer to the present day, Gary L. Williamson in 2004 found a 350L (Lexile) gap between the difficulty of end-of-high school and college texts—a gap equivalent to 1.5 standard deviations and more than the Lexile difference between grade 4 and grade 8 texts on the National Assessment of Educational Progress (NAEP). Although legitimate questions can be raised about the tools used to measure text complexity (a subject we return to in “Key Considerations in Implementing Text Complexity”), what is relevant in these numbers is the general, steady decline—over time, across grades, and substantiated by several sources—in the difficulty and likely the sophistication of content of the texts students have been asked to read in school since 1962.

There is also evidence that current standards, curriculum, and instructional practice have not done enough to foster the independent reading so crucial for college and career readiness, particularly in the case of informational text. K–12 students are, in general, given considerable scaffolding with their reading—reading that is already less complex overall than that typically required of students prior to 1962.<sup>2</sup> What is more, students today are asked to read very little expository text—as little as 7 and 15 percent of elementary and middle school reading, for example, is expository—yet much research supports the conclusion that such text is harder for most students to read than is narrative text, that students need sustained exposure to expository text to develop important reading strategies, and that expository text makes up the vast majority of the required reading in college and the workplace. Worse still, what little expository reading students are asked to do is too often of the superficial variety that involves skimming and scanning for particular, discrete pieces of information; such reading is unlikely to prepare students for the cognitive demand of true understanding of complex text.

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<sup>2</sup> As also noted in “Key Considerations in Implementing Text Complexity,” it is important to recognize that scaffolding often is entirely appropriate. The expectation that scaffolding will occur with particularly challenging texts is built into the *Standards’* grade-by-grade text complexity expectations, for example. The general movement, however, should be toward *decreasing scaffolding* and toward *increasing independence*, both within and across the text complexity grade bands defined in the *Standards*.

## The Consequences: Too Many Students Reading at Too Low a Level

The impact that low reading achievement has on students' readiness for college, careers, and life in general is significant. To put the matter bluntly, a high school graduate who is a poor reader is a postsecondary student who must struggle mightily to succeed academically. The National Center for Education Statistics (NCES) reports that although needing to take one or more remedial/developmental courses of any sort lowers a student's chance of eventually earning a degree or certificate, "the need for remedial reading appears to be the most serious barrier to degree completion." Only 30 percent of 1992 high school seniors who went on to enroll in postsecondary education between 1992 and 2000 and then took any remedial reading course went on to receive a degree or certificate, compared to 69 percent of the 1992 seniors who took no postsecondary remedial courses and 57 percent of those who took one remedial course in a subject other than reading or mathematics. Considering that 11 percent of those high school seniors required at least one remedial reading course, the societal impact of low reading achievement is as profound as its impact on the aspirations of individual students.

Reading levels among the adult population are also disturbingly low. The 2003 National Assessment of Adult Literacy reported that 14 percent of adults read prose texts at "below basic" level, meaning they could perform "no more than the most simple and concrete literacy skills"; a similarly small number (13 percent) could read prose texts at the "proficient level," meaning they could perform "complex and challenging literacy activities." The percent of "proficient" readers actually declined in a statistically significant way from 1992 (15 percent). This low and declining achievement rate may be connected to a general lack of reading: As reported by the National Endowment for the Arts, the percent of U.S. adults reading literature dropped from 54.0 in 1992 to 46.7 in 2002, while the percent of adults reading *any* book also declined by 7 percent during the same time period. Although the decline occurred in all demographic groups, the steepest decline by far was among 18-to-24- and 25-to-34-year-olds (28 percent and 23 percent, respectively). In other words, the problem of lack of reading is not only getting worse but doing so at an accelerating rate. Although numerous factors likely contribute to the decline in reading, it is reasonable to conclude from the evidence presented above that the deterioration in overall reading ability, abetted by a decline in K–12 text complexity and a lack of focus on independent reading, is a contributing factor.

Being able to read complex text independently, fluently, and proficiently is essential for high achievement in college and the workplace and important in numerous life tasks. Moreover, current trends suggest that if students cannot read challenging texts with understanding—if they have not developed the skill and stamina to read such texts—they will read less in general. In particular, if students cannot read complex expository text to gain information, they will likely turn to text-free or text-light sources, such as video, podcasts, and tweets. These sources, while not without value, cannot capture the nuance, subtlety, depth, or breadth of ideas developed through complex text. This circumstance is likely to lead to a general impoverishment of knowledge, which, because knowledge is intimately linked with reading comprehension, will in turn accelerate the decline in the ability to comprehend complex text and the decline in the richness of text itself. This bodes ill for the ability of Americans to meet the demands placed upon them by citizenship in a democratic republic and the challenges of a highly competitive global marketplace of goods, services, and ideas.

It should be noted also that the problems with reading achievement are not "equal opportunity" in their effects: students arriving at school from less-educated families are disproportionately represented in many of these statistics. The consequences of insufficiently high text demands and a lack of accountability for independent reading in K–12 schooling are severe for everyone, but they are disproportionately so for those who are already most isolated from text before arriving at the schoolhouse door.

## The *Standards*' Approach to Text Complexity

To help redress the situation described above, the *Standards* define a three-part model for determining how easy or difficult a particular text is to read and grade-by-grade specifications for increasing text complexity in successive years of schooling. Coupled with grade-specific reading standards that require increasing sophistication in students' reading comprehension, the *Standards* approach the intertwined issues of the *what* and the *how* of student reading.

### A Three-Part Model for Measuring Text Complexity

As signaled by the graphic at right, the *Standards*' model of text complexity consists of three equally important parts: (1) qualitative measures of text complexity, (2) quantitative measures of text complexity, and (3) the use of educators' professional judgment in matching texts to reader and task.

#### (1) Qualitative dimensions of text complexity.

In the *Standards*, *qualitative dimensions* and *qualitative factors* refer to those aspects of text difficulty best measured or only measurable by an attentive human reader, such as levels of meaning; structure; language conventionality and clarity; and knowledge demands.

(2) **Quantitative measures of text complexity.** The terms *quantitative dimensions* and *quantitative factors*, on the other hand, refer to those aspects of text difficulty, such as word frequency, sentence length, and text cohesion, that are difficult if not impossible for a human reader to evaluate efficiently, especially in long texts, and are thus today typically measured by computer software.

(3) **Reader and task considerations.** While the prior two elements of the model focus on the inherent complexity of text, factors specific to particular readers and particular academic tasks, such as students' motivation levels or background knowledge, must also be accounted for by teachers employing professional judgment and experience.

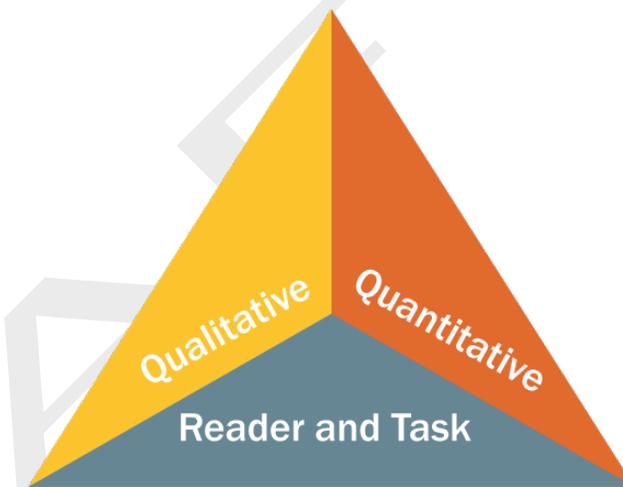
The *Standards* presume that all three elements will come into play when text complexity and appropriateness are determined. The following pages provide a quick overview of currently available tools, both qualitative and quantitative, for measuring text complexity, offer some important considerations for using text complexity with students, and conclude with a series of examples showing how the text complexity measures might be used with a number of different texts.

## A Survey of Current Qualitative and Quantitative Measures of Text Complexity

The qualitative and quantitative measures of text complexity described below are representative of the best tools presently available. However, each should be considered only provisional; more precise, more accurate, and easier-to-use tools are urgently needed to help make text complexity a vital, everyday part of classroom instruction and curriculum planning.

### Qualitative Measures of Text Complexity

Because quantitative measures cannot capture all of the elements that make a particular text easy or difficult to read, qualitative measures, along with professional judgment in matching a text to reader and task, serve as a necessary



complement and sometimes as a corrective. Built on prior research, the four qualitative factors below are offered here as a first step in the development of robust tools for the qualitative analysis of text complexity. These factors are presented as continua of difficulty rather than as a succession of discrete “stages” in text complexity. Additional development and validation would be needed to turn these or other dimensions into grade-level- or grade-band-specific rubrics, for example. The qualitative factors run from easy (left-hand side) to difficult (right-hand side). Few if any authentic texts will be low or high on all of these measures, and some elements of the dimensions are better suited to literary or to informational texts.

(1) *Levels of Meaning.* Texts with a single clear, explicit meaning tend to be easier to read than texts with multiple, implicit, hidden, and/or obscure levels of meaning.

(2) *Structure.* Texts with low structural complexity tend to have simple, well-marked, and conventional structures, whereas texts high in structural complexity tend to have complex, subtle, and (particularly in literary texts) unconventional structures. Graphics tend to be simple and either unnecessary to or supplementary to understanding the words in texts of low structural complexity, whereas texts of high structural complexity tend to have complex graphics whose interpretation is important or essential to understanding the words. (Note that many books for the youngest students rely heavily on graphics to convey meaning and are an exception to the above generalization.)

(3) *Language Conventionalty and Clarity.* Texts that rely on literal, clear, everyday language tend to be easier to read than texts that rely on figurative, ironic, ambiguous, purposefully misleading, archaic, or otherwise unfamiliar language.

(4) *Knowledge Demands.* Texts that make few assumptions about the extent of readers’ life experiences and the depth of their cultural and literary knowledge (including knowledge of other texts) and content- and discipline-specific knowledge are generally less complex than are texts that make many assumptions in one or more of those areas.

# Qualitative Dimensions of Text Complexity

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## Levels of Meaning

- Single → Multiple
- Explicitly stated → Often implicit and may be hidden or obscure

## Structure

- Simple → Complex
- Explicit → Implicit
- Conventional → Unconventional (chiefly complex literary texts)
- Simple graphics → Sophisticated graphics
- Graphics unnecessary or supplementary to understanding the text → Graphics essential to understanding the text

## Language Conventuality and Clarity

- Literal → Figurative or ironic
- Clear → Ambiguous or purposefully misleading
- Everyday → Archaic or otherwise unfamiliar

## Knowledge Demands: Life Experiences (literary texts)

- Simple themes → Complex or sophisticated themes
- Single themes → Multiple themes
- Common, everyday experiences and fantastical elements → Experiences distinctly different from one's own
- Single perspective → Multiple perspectives
- Perspective(s) like one's own → Unusual perspective(s)

## Knowledge Demands: Cultural/Literary Knowledge (chiefly for literary texts)

- General background knowledge and familiarity with genre conventions required → Cultural and literary knowledge useful
- Low intertextuality (few references/allusions to other texts) → High intertextuality (many references/allusions to other texts)

## Knowledge Demands: Content/Discipline Knowledge (chiefly for informational texts)

- Some everyday and general content knowledge → Extensive, perhaps specialized discipline-specific content knowledge

Adapted from ACT, Inc. (2005). *Reading between the lines: What the ACT reveals about college readiness in reading*. Iowa City, IA: Author; Carnegie Council on Advancing Adolescent Literacy. (2010). *Time to act: An agenda for advancing adolescent literacy for college and career success*. New York: Carnegie Corporation of New York; Chall, J. S., Bissett, G. L., Conrad, S. S., & Harris-Sharpley, S. (1996). *Qualitative assessment of text difficulty: A practical guide for teachers and writers*. Cambridge, UK: Brookline Books; Hess, K., & Biggam, S. (2004). A discussion of "increasing text complexity." Published by the New Hampshire, Rhode Island, and Vermont departments of education as part of the New England Common Assessment Program (NECAP). Retrieved from [www.nciea.org/publications/TextComplexity\\_KH05.pdf](http://www.nciea.org/publications/TextComplexity_KH05.pdf)

## Quantitative Measures of Text Complexity

Three of the quantitative tools presently available to educators are (1) traditional readability formulas, (2) the Lexile Framework for Reading, and (3) a Coh-Metrix analysis. The nature, strengths, and limitations of each measure are briefly discussed in turn below.

### (1) *Traditional Readability Formulas*

Numerous formulas exist for measuring the readability of various types of texts. Such formulas, including the widely used Flesch-Kincaid Grade Level test, typically use word length and sentence length as proxies for semantic and syntactic complexity, respectively. The assumption behind these formulas is that longer words and longer sentences are more difficult to read than shorter ones; a text with many long words and/or sentences is thus rated by these formulas as harder to read than a text with many short words and/or sentences would be. Some formulas, such as the Dale-Chall Readability Formula, substitute word frequency for word length as a factor, the assumption being that less familiar words are harder to comprehend than familiar words. The higher the proportion of less familiar words in a text, the theory goes, the harder that text is to read. While these readability formulas are easy to use and readily available (some are even built into various word processing applications), their chief weakness is that longer words, less familiar words, and longer sentences are not inherently hard to read. In fact, series of short, choppy sentences can pose problems for readers precisely because these sentences lack the cohesive devices, such as transition words and phrases, that help establish logical links among ideas and thereby reduce the inference load on readers.

### (2) *The Lexile Framework for Reading*

Like Dale-Chall, the Lexile Framework for Reading, developed by MetaMetrics, Inc., uses word frequency and sentence length to produce a single measure, called a Lexile, of a text’s complexity. The most important difference between the Lexile system and traditional readability formulas is that traditional formulas only assign a score to texts, whereas the Lexile Framework can place both readers and texts on the same scale. Certain reading assessments yield Lexile scores based on student performance on the instrument; some reading programs then use these scores to assign texts to students. The Lexile scale ranges from 5L (five Lexiles) to 2000L (two thousand Lexiles) and is divided into 5L increments. MetaMetrics considers texts rated from 100L below to 50L above the student’s own Lexile score to represent an appropriate challenge for sustained silent reading. Texts as many as 250L below the student’s score are appropriate if great fluency and almost perfect accuracy are required, whereas texts 100L or more above the student’s score should represent a significant reading challenge.

Based on research from MetaMetrics in support of the *Standards*, the following overlapping Lexile ranges—which are intended to put students on a college- and career-ready trajectory—can be used to help place texts in the *Standards’* text complexity grade bands:

**Text Complexity Grade Bands and Associated Lexile Ranges**

Grade Band	Lexile (L) Range
K–1	N/A*
2–3	450–790
4–5	770–980
6–8	955–1155
9–10	1080–1305
11–CCR	1215–1355

\*See “Key Considerations in Implementing Text Complexity,” below, for information on why K–1 texts are not included here.

Because it relies on word familiarity and sentence length as proxies for semantic and syntactic complexity, the Lexile Framework may underestimate the difficulty of texts that use simple, familiar language to convey sophisticated ideas, as is true of much high-quality fiction written for adults and appropriate for older students. For this reason and others, it is possible that factors other than word familiarity and sentence length contribute to text difficulty. In response to such concerns, MetaMetrics has indicated that it will release the qualitative ratings it assigns to some of the texts it rates and will actively seek to determine whether one or more additional factors can and should be added to its quantitative measure.

### (3) *Coh-Metrix*

A nonprofit service operated at the University of Memphis, Coh-Metrix attempts to account for those additional factors as well as the word- and sentence-level factors measured by Lexiles and other systems. The Coh-Metrix system focuses on the *cohesiveness* of a text—basically, how tightly the text holds together. A high-cohesion text does a good deal of the work for the reader by signaling relationships among words, sentences, and ideas using repetition, concrete language, and the like; a low-cohesion text, by contrast, requires the reader to make many of the connections needed to comprehend the text. High-cohesion texts are not necessarily “better” than low-cohesion texts, but they are easier to read.

Because the standard Coh-Metrix report includes information on more than sixty indices related to text coherence, it can be daunting to the layperson or even a professional educator unfamiliar with the metrics. For the *Standards*, Coh-Metrix staff members have identified five of their many factors as particularly powerful in accounting for a text’s ease or difficulty.

(1) *Narrativity*. Texts high in narrativity are considered easier to read because they rely on widely understood story structures, use largely familiar language, and convey experiences to which most people can relate. Texts low in narrativity are considered harder to read because they rely on expository text structures, typically use more general academic and domain-specific language, and convey information and ideas unfamiliar to many readers.<sup>3</sup>

(2) *Sentence-Level Cohesion*. Texts with high sentence-level cohesion have more links as well as more explicit links connecting words and sentences to each other, and are thus easier to read than texts with low sentence-level cohesion, which leave gaps between words and sentences that readers must fill by inference.

(3) *Overall Text Cohesion*. Texts with high overall cohesion make more explicit connections between parts of the text and the whole text; in other words, parts of the text are connected to each other and the whole through clear causal, intentional (goal-directed), temporal, and other logical links. Texts with low overall cohesion tend to require more inferential leaps on the part of the reader attempting to make sense of the ideas in the text.

(4) *Syntax*. Texts with simple syntax tend to have short, structurally uncomplicated sentences. Texts with complex syntax, on the other hand, tend to have long, structurally intricate sentences that require the reader to hold many words and ideas in working memory before the sentence can be interpreted.

(5) *Word Abstractness*. Texts with low word abstractness have a larger proportion of main words (nouns, verbs, and adjectives) that name or refer to concrete, tangible, easily visualized things, such as real-world objects. Texts with high word abstractness, conversely, have a large proportion of main words that name or refer to abstract ideas and concepts not easily visualized.

The following diagram illustrates the five Coh-Metrix factors as they relate to *Jane Eyre*, a novel included in the *Standards’* text exemplars (Appendix B) in the grades 11–CCR text complexity band. Note that all five scales run

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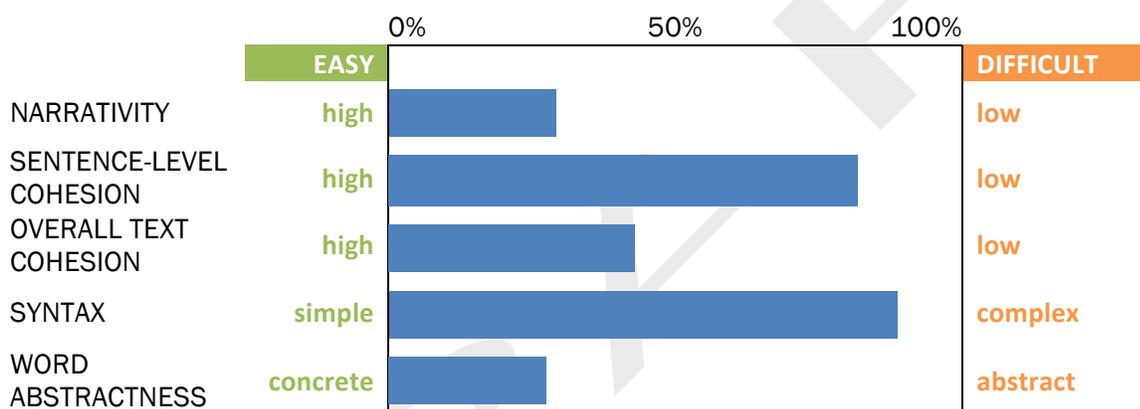
<sup>3</sup> Texts at either end of the narrative–informational continuum are close to being undiluted examples of each type (“pure” stories, “pure” informational texts). Most authentic texts have some qualities of both narrative and informational text. Many texts in the social and natural sciences are high in narrativity (for example, *Biography of an Atom* by Jacob Bronowski and Millicent Selsam, an excerpt of which appears in the grades 9–10 text exemplars in Appendix B); conversely, many works of fiction contain expository passages.

from easy to difficult. The further the bar is to the right-hand side of the scale, the harder the text is to read on that dimension. Each scale is divided into percentiles, with the percentile rank indicating the proportion of texts in the vast database used by Coh-Metrix that are easier to read on that dimension. For instance, *Jane Eyre* has a syntax percentile rank of 92, meaning that very few texts (only 8 percent) in the database Coh-Metrix used have more complex syntax.

### Sample of Coh-Metrix Key Factors of Text Complexity

*Jane Eyre* (grades 11–CCR, novel)

#### Percentile on Text Complexity



Besides being one possible tool for deciding whether a text is instructionally appropriate for a particular grade, the five Coh-Metrix factors offer insights into the kind or kinds of challenge a given text poses to readers. In the case of *Jane Eyre*, the Coh-Metrix Key Factors analysis suggests that although the novel relies heavily on a familiar story structure (moderately high narrativity) and accessible language (moderately low word abstractness), it does require the reader to make some inferences connecting the deep concepts within the text (moderate overall text cohesion). At the sentence level, the novel makes few explicit references to ideas presented earlier (low sentence-level cohesion) and uses complex, intricate syntax (high syntactic complexity). Much of the difficulty in reading *Jane Eyre*, as the Coh-Metrix results indicate, is in untangling the sentences; the author’s use of concrete language and familiar story patterns, on the other hand, should help move the reader through the text.

While the Coh-Metrix Key Factors are intriguing, they are not yet widely available to the public. The results of the Key Factors analysis also have not been calibrated to the *Standards’* grade bands, as have Lexile scores and the grade-level results yielded by some of the traditional readability formulas. No fully developed interpretive framework exists at this time for the Coh-Metrix percentiles, so it is not entirely clear where, for example, a text high in some factors and low in others should be placed within the *Standards’* grade-band scheme. The greatest value of these factors may well be the promise they offer of more advanced and usable tools yet to come.

## Summary of Factors Considered in Selected Quantitative Measures

Traditional Readability Formulas (e.g., Flesch-Kincaid, Dale-Chall)	The Lexile Framework for Reading	Coh-Metrix Key Factors
<p>Word length or word frequency Sentence length</p> <p><i>Texts with longer or less familiar words and longer sentences are considered more difficult to read.</i></p>	<p>Word frequency Sentence length</p> <p><i>Texts with less familiar words and longer sentences are considered more difficult to read.</i></p>	<p>Narrativity Sentence-level cohesion Overall text cohesion Syntax Word abstractness</p> <p><i>Texts high in each of these factors are considered more difficult to read.</i></p>

### Reader and Task Considerations

The use of qualitative and quantitative measures to assess text complexity is balanced in the *Standards'* model by the expectation that educators will employ professional judgment to match texts to particular students as well as to particular academic tasks. For example, harder texts may be appropriate for highly knowledgeable or skilled readers, and easier texts may be suitable as an expedient for building struggling readers' knowledge or reading skill up to the level required by the *Standards*. Highly motivated readers are often willing to put in the extra effort required to read harder texts that tell a story or contain information in which they are deeply interested. Complex tasks may require the kind of information contained only in similarly complex texts.

## Key Considerations in Implementing Text Complexity

### Texts and Measurement Tools

*The tools for measuring text complexity are at once useful and imperfect.* Each of the qualitative and quantitative tools described above has its limitations, and none is completely accurate. The development of new and improved text complexity tools should follow the release of the *Standards* as quickly as possible. In the meantime, the *Standards* recommend that multiple quantitative measures be used whenever possible and that their results be confirmed or overruled by a qualitative analysis of the text in question.

*Certain measures are less valid or inappropriate for certain kinds of texts.* Current quantitative measures are suitable for prose and dramatic texts. Until such time as quantitative tools for capturing poetry's difficulty are developed, determining whether a poem is appropriately complex for a given grade or grade band will necessarily be a matter of a qualitative assessment meshed with reader-task considerations. Furthermore, texts for kindergarten and grade 1 may not be appropriate for quantitative analysis, as they often contain difficult-to-assess features designed to aid early readers in acquiring written language. The *Standards'* poetry and K–1 text exemplars were placed into grade bands by expert teachers drawing on classroom experience.

### Readers and Tasks

*Students' ability to read complex text does not always develop in a linear fashion.* Although the diagram on pages 13–14 defines the required grade-by-grade growth in students' ability to read complex text, the development of this ability in individual students is unlikely to occur at an unbroken pace. Students need opportunities to stretch their reading abilities but also to experience the satisfaction and pleasure of easy, fluent reading within them, both of which the *Standards* allow for. Students' background knowledge, interests, and motivation must also factor into text selection.

Students deeply interested in a given topic, for example, may engage with texts on that subject across a range of complexity. Particular tasks may also require students to read harder texts than they would normally be required to. Conversely, teachers who have had success using particular texts that are easier than those required for a given grade band should feel free to continue to use them so long as the general movement during a given school year is toward texts of higher levels of complexity.

*Students reading well above and well below grade-band level need additional support.* Students for whom texts within their grade band (or even from the next higher band) present insufficient challenge must be given the attention and resources necessary to develop their reading ability at an appropriately advanced pace. On the other hand, students who struggle greatly to read texts within (or even below) their grade band must be given the support needed to enable them to read at a grade-appropriate level of complexity.

*Even many students on course for college and career readiness are likely to need temporary scaffolding as they progress toward mastery of higher levels of text complexity.* As they enter each new grade band, many students are likely to need at least some extra help as they work to comprehend texts at the high end of the range of difficulty appropriate to the band. For example, many students just entering grade 2 will likely need some initial support as they read texts that are considered advanced for the grades 2–3 text complexity band. Students entering a higher grade within a band (grade 3, to continue the above example) may also need such temporary scaffolding as they “stretch” to read texts from the next higher text complexity band (here, grades 4–5), as required by the *Standards*. Although such support is educationally necessary and desirable, the general progress students must make within and across grade bands is toward *decreasing scaffolding* and *increasing independence* in their reading.

## The *Standards*’ Grade-Level Text Complexity Demands: A “Staircase” of Increasing Difficulty

As illustrated in the diagram on pages 13–14, text complexity in the *Standards* is defined in grade bands: grades 2–3, 4–5, 6–8, 9–10, and 11–12 and “Beyond CCR.”<sup>4</sup> At the lowest grade in each band, students focus on reading texts within the text complexity band. In the subsequent grade or grades within a given band, students must “stretch” to read a certain proportion of texts from the next higher text complexity band. For example, in grade 2, 100 percent of the texts students read should be of a complexity appropriate for grades 2–3, with at least some texts coming from the high end of that range. In grade 3, 70 percent of the texts students read should be of appropriate complexity for grades 2–3, while the remaining 30 percent should be stretch texts chosen from those appropriate for grades 4–5. This pattern repeats itself throughout the grades, allowing students sufficient opportunity both to consolidate earlier literacy gains by reading enough texts from their particular band and to challenge and develop themselves by reading stretch texts representing a higher level of complexity. Whether stretching within a band (as in grade 2) or to the next higher band (as in grade 3), students may need temporary scaffolding when reading advanced texts.

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<sup>4</sup> As noted earlier, K–1 texts are not amenable to quantitative measure. Furthermore, students in those grades are acquiring the code at varied rates. Hence, the *Standards*’ text complexity requirements begin formally at grade 2.

## Range and Level of Text Complexity for Student Reading by Grade, K–5 (Standard 10)

Students demonstrate proficiency in reading texts at the following ranges of text complexity to progress on a path to college and career readiness.

<b>K</b>	(See specific exemplars.)						
<b>1</b>							
<b>2</b>	<table border="1" style="width: 100%;"> <tr> <td style="background-color: #008000; color: white; text-align: center;"><b>2–3 Level Text</b></td> <td style="background-color: #FFA500; text-align: center;"><b>4–5 Level Text</b></td> </tr> <tr> <td style="text-align: center;">100%</td> <td></td> </tr> </table>	<b>2–3 Level Text</b>	<b>4–5 Level Text</b>	100%			<b>In grade 2</b> , students focus on reading texts independently in the grades 2–3 text complexity band, with scaffolding likely required for texts at the high end of the range.
<b>2–3 Level Text</b>	<b>4–5 Level Text</b>						
100%							
<b>3</b>	<table border="1" style="width: 100%;"> <tr> <td style="background-color: #008000; color: white; text-align: center;"><b>2–3 Level Text</b></td> <td style="background-color: #FFA500; text-align: center;"><b>4–5 Level Text</b></td> </tr> <tr> <td style="text-align: center;">70%</td> <td style="text-align: center;">30%</td> </tr> </table>	<b>2–3 Level Text</b>	<b>4–5 Level Text</b>	70%	30%		<b>In grade 3</b> , students focus on reading texts independently in the grades 2–3 text complexity band (70 percent) and are introduced to texts in the grades 4–5 text complexity band as “stretch” texts (30 percent), which will likely require scaffolding.
<b>2–3 Level Text</b>	<b>4–5 Level Text</b>						
70%	30%						
<b>4</b>	<table border="1" style="width: 100%;"> <tr> <td style="background-color: #FFA500; text-align: center;"><b>4–5 Level Text</b></td> <td style="background-color: #0070C0; color: white; text-align: center;"><b>6–8 Level Text</b></td> </tr> <tr> <td style="text-align: center;">100%</td> <td></td> </tr> </table>	<b>4–5 Level Text</b>	<b>6–8 Level Text</b>	100%			<b>In grade 4</b> , students focus on reading texts independently in the grades 4–5 text complexity band, with scaffolding likely required for texts at the high end of the range.
<b>4–5 Level Text</b>	<b>6–8 Level Text</b>						
100%							
<b>5</b>	<table border="1" style="width: 100%;"> <tr> <td style="background-color: #FFA500; text-align: center;"><b>4–5 Level Text</b></td> <td style="background-color: #0070C0; color: white; text-align: center;"><b>6–8 Level Text</b></td> </tr> <tr> <td style="text-align: center;">70%</td> <td style="text-align: center;">30%</td> </tr> </table>	<b>4–5 Level Text</b>	<b>6–8 Level Text</b>	70%	30%		<b>In grade 5</b> , students focus on reading texts independently in the grades 4–5 text complexity band (70 percent) and are introduced to texts in the grades 6–8 text complexity band as “stretch” texts (30 percent), which will likely require scaffolding.
<b>4–5 Level Text</b>	<b>6–8 Level Text</b>						
70%	30%						

**Note:** In any given classroom, the actual range of students’ reading ability could be greater than the proposed range. Some students will be ready for—and should be encouraged to read—more advanced texts, whereas other students will require more intense scaffolding to read grade-level material.

## Range and Level of Text Complexity for Student Reading by Grade, 6–12 (Standard 10)

Students demonstrate proficiency in reading texts at the following ranges of text complexity to progress on a path to college and career readiness.

6	<table border="1"> <tr> <td style="background-color: #0070C0; color: white;"><b>6–8 Level Text</b></td> <td style="background-color: #92D050;"><b>9–10 Level Text</b></td> </tr> <tr> <td style="text-align: center; color: white;">100%</td> <td></td> </tr> </table>	<b>6–8 Level Text</b>	<b>9–10 Level Text</b>	100%			<p><b>In grade 6</b>, students focus on reading texts independently in the grades 6–8 text complexity band, with scaffolding likely required for texts at the high end of the range.</p>		
<b>6–8 Level Text</b>	<b>9–10 Level Text</b>								
100%									
7	<table border="1"> <tr> <td style="background-color: #0070C0; color: white;"><b>6–8 Level Text</b></td> <td style="background-color: #92D050;"><b>9–10 Level Text</b></td> </tr> <tr> <td style="text-align: center; color: white;">90%</td> <td style="text-align: center; color: #92D050;">10%</td> </tr> </table>	<b>6–8 Level Text</b>	<b>9–10 Level Text</b>	90%	10%		<p><b>In grade 7</b>, students focus on reading texts independently in the grades 6–8 text complexity band (90 percent) and are introduced to texts in the grades 9–10 text complexity band as “stretch” texts (10 percent), which will likely require scaffolding.</p>		
<b>6–8 Level Text</b>	<b>9–10 Level Text</b>								
90%	10%								
8	<table border="1"> <tr> <td style="background-color: #0070C0; color: white;"><b>6–8 Level Text</b></td> <td style="background-color: #92D050;"><b>9–10 Level Text</b></td> </tr> <tr> <td style="text-align: center; color: white;">70%</td> <td style="text-align: center; color: #92D050;">30%</td> </tr> </table>	<b>6–8 Level Text</b>	<b>9–10 Level Text</b>	70%	30%		<p><b>In grade 8</b>, students focus on reading texts independently in the grades 6–8 text complexity band (70 percent) as well as sustained practice with texts in the grades 9–10 text complexity band as “stretch” texts (30 percent), which will likely require scaffolding.</p>		
<b>6–8 Level Text</b>	<b>9–10 Level Text</b>								
70%	30%								
9	<table border="1"> <tr> <td style="background-color: #92D050;"><b>9–10 Level Text</b></td> <td style="background-color: #FFD700;"><b>11–CCR Level Text</b></td> </tr> <tr> <td style="text-align: center; color: white;">100%</td> <td></td> </tr> </table>	<b>9–10 Level Text</b>	<b>11–CCR Level Text</b>	100%			<p><b>In grade 9</b>, students focus on reading texts independently in the grades 9–10 text complexity band, with scaffolding likely required for texts at the high end of the range.</p>		
<b>9–10 Level Text</b>	<b>11–CCR Level Text</b>								
100%									
10	<table border="1"> <tr> <td style="background-color: #92D050;"><b>9–10 Level Text</b></td> <td style="background-color: #FFD700;"><b>11–CCR Level Text</b></td> </tr> <tr> <td style="text-align: center; color: white;">70%</td> <td style="text-align: center; color: #FFD700;">30%</td> </tr> </table>	<b>9–10 Level Text</b>	<b>11–CCR Level Text</b>	70%	30%		<p><b>In grade 10</b>, students focus on reading texts independently in the grades 9–10 text complexity band (70 percent) and are introduced to texts in the grade 11–CCR text complexity band as “stretch” texts (30 percent), which will likely require scaffolding.</p>		
<b>9–10 Level Text</b>	<b>11–CCR Level Text</b>								
70%	30%								
11–CCR	<table border="1"> <tr> <td style="background-color: #92D050;"><b>9–10 Level Text</b></td> <td style="background-color: #FFD700;"><b>11–CCR Level Text</b></td> <td style="background-color: #A9A9A9;"><b>Beyond CCR</b></td> </tr> <tr> <td></td> <td style="text-align: center; color: white;">100%</td> <td></td> </tr> </table>	<b>9–10 Level Text</b>	<b>11–CCR Level Text</b>	<b>Beyond CCR</b>		100%			<p><b>In grade 11</b>, students focus on reading texts independently in the grade 11–CCR text complexity band, with scaffolding likely required for texts at the high end of the range.</p>
<b>9–10 Level Text</b>	<b>11–CCR Level Text</b>	<b>Beyond CCR</b>							
	100%								
Beyond CCR	<table border="1"> <tr> <td style="background-color: #92D050;"><b>9–10 Level Text</b></td> <td style="background-color: #FFD700;"><b>11–CCR Level Text</b></td> <td style="background-color: #A9A9A9;"><b>Beyond CCR</b></td> </tr> <tr> <td></td> <td style="text-align: center; color: white;">70%</td> <td style="text-align: center; color: #A9A9A9;">30%</td> </tr> </table>	<b>9–10 Level Text</b>	<b>11–CCR Level Text</b>	<b>Beyond CCR</b>		70%	30%		<p><b>In grade 12</b>, students focus on reading texts independently in the grade 11–CCR text complexity band (70 percent) and are introduced to texts in the “Beyond CCR” text complexity band as “stretch” texts (30 percent), which will likely require scaffolding.</p>
<b>9–10 Level Text</b>	<b>11–CCR Level Text</b>	<b>Beyond CCR</b>							
	70%	30%							

**Note:** In any given classroom, the actual range of students’ reading ability could be greater than the proposed range. Some students will be ready for—and should be encouraged to read—more advanced texts, whereas other students will require more intense scaffolding to read grade-level material.

## The Model in Action: Sample Annotated Reading Texts

The following examples demonstrate how the various qualitative and quantitative measures of text complexity described earlier can be used along with reader and task considerations to make informed decisions about whether a particular text is an appropriate challenge for particular students. Additionally, the measures can suggest which aspects of a text (complicated syntax, for example) might pose special challenges for student readers. The cases below illustrate some of the possibilities that can arise when multiple measures are used to assess text complexity and how discrepancies among those measures might be resolved. One detailed example, relating to the *Narrative of the Life of Frederick Douglass*, is followed by several additional examples treated more briefly. It is important to note that the conclusions offered below concerning the texts' appropriateness for particular grade bands are informed judgments based on qualitative and quantitative assessments of text complexity. Different conclusions could reasonably be drawn from the same data, and reader and task considerations may also influence placement.

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### Example 1: *Narrative of the Life of Frederick Douglass* (Grades 6–8 Text Complexity Band)

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#### *Excerpt*

The plan which I adopted, and the one by which I was most successful, was that of making friends of all the little white boys whom I met in the street. As many of these as I could, I converted into teachers. With their kindly aid, obtained at different times and in different places, I finally succeeded in learning to read. When I was sent of errands, I always took my book with me, and by going one part of my errand quickly, I found time to get a lesson before my return. I used also to carry bread with me, enough of which was always in the house, and to which I was always welcome; for I was much better off in this regard than many of the poor white children in our neighborhood. This bread I used to bestow upon the hungry little urchins, who, in return, would give me that more valuable bread of knowledge. I am strongly tempted to give the names of two or three of those little boys, as a testimonial of the gratitude and affection I bear them; but prudence forbids;—not that it would injure me, but it might embarrass them; for it is almost an unpardonable offence to teach slaves to read in this Christian country. It is enough to say of the dear little fellows, that they lived on Philpot Street, very near Durgin and Bailey's ship-yard. I used to talk this matter of slavery over with them. I would sometimes say to them, I wished I could be as free as they would be when they got to be men. "You will be free as soon as you are twenty-one, but I am a slave for life! Have not I as good a right to be free as you have?" These words used to trouble them; they would express for me the liveliest sympathy, and console me with the hope that something would occur by which I might be free.

I was now about twelve years old, and the thought of being a slave for life began to bear heavily upon my heart. Just about this time, I got hold of a book entitled "The Columbian Orator." Every opportunity I got, I used to read this book. Among much of other interesting matter, I found in it a dialogue between a master and his slave. The slave was represented as having run away from his master three times. The dialogue represented the conversation which took place between them, when the slave was retaken the third time. In this dialogue, the whole argument in behalf of slavery was brought forward by the master, all of which was disposed of by the slave. The slave was made to say some very smart as well as impressive things in reply to his master—things which had the desired though unexpected effect; for the conversation resulted in the voluntary emancipation of the slave on the part of the master.

In the same book, I met with one of Sheridan's mighty speeches on and in behalf of Catholic emancipation. These were choice documents to me. I read them over and over again with unabated interest. They gave tongue to interesting thoughts of my own soul, which had frequently flashed through my mind, and died away for want of utterance. The moral which I gained from the dialogue was the power of truth over the conscience of even a slaveholder. What I got from Sheridan was a bold denunciation of slavery, and a powerful vindication of human rights. The reading of these documents enabled me to utter my thoughts, and to meet the arguments brought forward to sustain slavery; but while they relieved me of one difficulty, they brought on another even more painful than the one of which I was relieved. The more I read, the more I was led to abhor and detest my enslavers. I could regard them in no other light than a band of successful robbers, who had left their homes, and gone to Africa, and stolen us from our homes, and in a strange land reduced us to slavery. I loathed them

as being the meanest as well as the most wicked of men. As I read and contemplated the subject, behold! that very discontentment which Master Hugh had predicted would follow my learning to read had already come, to torment and sting my soul to unutterable anguish. As I writhed under it, I would at times feel that learning to read had been a curse rather than a blessing. It had given me a view of my wretched condition, without the remedy. It opened my eyes to the horrible pit, but to no ladder upon which to get out. In moments of agony, I envied my fellow-slaves for their stupidity. I have often wished myself a beast. I preferred the condition of the meanest reptile to my own. Any thing, no matter what, to get rid of thinking! It was this everlasting thinking of my condition that tormented me. There was no getting rid of it. It was pressed upon me by every object within sight or hearing, animate or inanimate. The silver trump of freedom had roused my soul to eternal wakefulness. Freedom now appeared, to disappear no more forever. It was heard in every sound, and seen in every thing. It was ever present to torment me with a sense of my wretched condition. I saw nothing without seeing it, I heard nothing without hearing it, and felt nothing without feeling it. It looked from every star, it smiled in every calm, breathed in every wind, and moved in every storm.

Douglass, Frederick. *Narrative of the Life of Frederick Douglass, an American Slave. Written by Himself.* Boston: Anti-Slavery Office, 1845.

### Using Qualitative Measures of Text Complexity

An analysis of the text using the qualitative factors described on page 7 suggests that the *Narrative* is appropriate for the grades 6–8 text complexity band.

Qualitative Factor	Analysis of the <i>Narrative</i>
Levels of Meaning	While the apparent aim of the text is to convey Douglass’s experience of slavery and freedom and thereby to convince readers of the day of the evils of slavery, it is reasonable to see other aims as well; among the latter, not fully revealed in the excerpt, are Douglass’s efforts to assert his own manhood (and that of other black men) and to create an extended analogy between his own literal rise to freedom and a spiritual awakening. Recognizing the complete range of those deeper aims is not essential, however, to grasping important ideas in the text.
Structure	The <i>Narrative</i> uses a familiar story structure to relate events and to convey deeper ideas about slavery and freedom, although there are some philosophical discussions that may, to the reader just looking for a story, seem like digressions.

Qualitative Factor	Analysis of the <i>Narrative</i>
Language Conventionality and Clarity	Douglass uses some figurative language—juxtaposing, for example, literal <i>bread</i> with the metaphorical <i>bread of knowledge</i> . Though there are some archaic and unusual words and phrasings (e.g., <i>choice documents</i> ), the language is generally clear and direct.
Knowledge Demands	The <i>Narrative</i> discusses moderately sophisticated themes related to slavery and freedom. The experiences of slavery Douglass describes are obviously not directly reflective of students’ own lives, but Douglass renders them in vivid, accessible ways. The text is bound together by Douglass’s authoritative, forceful perspective. General background knowledge about slavery and race in mid-nineteenth-century America is helpful to understanding the text, as is knowledge of Christianity, to which Douglass makes frequent reference throughout the excerpt and the work as a whole.

### Using Quantitative Measures of Text Complexity

Various quantitative measures of the *Narrative* are largely in agreement as to its complexity. The Flesch-Kincaid Grade Level test of the excerpt yields an 8.4 rating, indicating that the text is at the high end of the acceptable range of the grades 6–8 text complexity band. The Lexile score, 1010 for the excerpt and, more significantly, 1080 for the whole text, falls within the appropriate range for the grades 6–8 band.

Although the Coh-Metrix Key Factors present a variegated picture of the text’s complexity, as a whole they too suggest a moderate challenge appropriate for students in grades 6–8.

Coh-Metrix Key Factor	Percentile Rank (lower rank = easier to read)
Narrativity	13
Sentence-Level Cohesion	29
Overall Text Cohesion	70
Syntax	93
Word Abstractness	67

The single biggest challenge that the *Narrative* is likely to present to readers is its syntax, which has an extremely high complexity (93rd percentile). Helping to balance out that challenge are the text’s very high narrativity (13th percentile), meaning the text has a story-like structure, and its moderately high sentence-level cohesion (29th percentile), meaning that words and sentences tend to be tied together carefully. The moderately low overall text cohesion (70th percentile) and moderately high word abstractness (67th percentile) indicate that readers will need to make a fair amount of inferences to connect ideas and will also have to deal with quite a few nouns, verbs, and adjectives that name or refer to abstract, intangible concepts. (This mix of ratings suggests that while Douglass uses a story structure to relate events, he has deeper philosophical aims—something the qualitative analysis also reveals.) The overall impression offered by the Coh-Metrix factors is that the text’s challenges are real but appropriate for students at the high end of the grades 6–8 range.

### Matching Reader, Text, and Task

As always, reader and task variables may influence whether the *Narrative* is appropriate for students younger or older than those in grades 6–8. It may, for example, be instructionally useful to use a text such as the *Narrative* at the same

time as students are studying the antebellum period in a history/social studies class so that the text's rhetorical and historical elements can be explored simultaneously. Because the *Narrative* operates on both a story level and a philosophical level, students may also benefit from returning to this text in later grades or in college.

## Conclusion

Both the qualitative and quantitative factors support the *Standards'* inclusion of the *Narrative* in the grades 6–8 text complexity band, with the understanding that the text sits at the high end of the range and that it can be reread profitably in later years by more mature students capable of appreciating the deeper messages embedded in the story.

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### Example 2: “Computer” (Grades 4–5 Text Complexity Band)

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#### *Excerpt*

The word computer once meant a person who did computations, but now it almost always refers to automated electronic devices. Computers can do much more than calculate, however. They are now used in all sorts of ways to better control or automate products and processes. For example, computers are used in airplanes and automobiles to control the way that fuel is injected into the engine, and they are used to monitor every part of the production process in most modern factories. Computers help people write reports, draw pictures, and keep track of information. Since the invention of the Internet, computers are also used to gather information from digital libraries located all over the world, to send and receive electronic messages (e-mail), and to work, shop, and bank from home.

Computers come in many sizes and shapes. They range from small devices that perform one specific function, such as those in cameras that control the shutter speed, to supercomputers. Supercomputers are specially engineered to be able to perform trillions of operations per second. Because they are so powerful and therefore so expensive they are generally used only by government agencies and large research centers.

[ . . . ]

#### Parts of a Computer System

A computer system requires both hardware and software. Hardware includes all of the mechanical parts of a computer. Software consists of the instructions and data that the hardware uses to perform its tasks.

#### Hardware

All computers, no matter how large or small, have basically the same types of hardware. These include a central processing unit (CPU), memory, storage (secondary memory), input/output (I/O) devices, and some type of telecommunication device.

The CPU is the computer's “brain,” where all computations are performed. The computer carries out its computations one step at a time, with each step occurring on each “beat” of its built-in clock. The fastest computer clocks now beat more than 3 GHz (gigahertz), or billions of times per second.

Memory is where instructions and data are held while being worked on. Read-only memory (ROM) is built into the computer and cannot be changed. ROM contains instructions that the computer needs to start up. Random-access memory (RAM), or one of its variants, is typically used for the main computer memory because of its speed. Information is stored temporarily in RAM as a computer processes data and instructions. Secondary memory is where instructions and data are saved for long-term storage. Most computers use a magnetic device called a hard drive for storage. A hard drive accesses data very quickly. Slower devices are often used to store files on magnetic tape or optical discs such as compact discs (CDs) and digital video discs (DVDs).

I/O devices enable communication between a computer and the person using it. Input devices allow the user to enter data or commands for processing by the CPU. They include the keyboard, mouse, joystick, scanner,

and digital tablet. Output devices let the user see or hear the results of the computer’s data processing. They include the monitor, printer, and speakers.

Telecommunication devices enable computers to send data through telephone lines or other channels. In this way computer users can exchange information with one another. These devices include regular telephone modems, digital subscriber line (DSL) telephone modems, cable modems, and various wireless modems.

"Computer." Britannica Junior Encyclopedia. Encyclopædia Britannica Online Library Edition. Encyclopædia Britannica, 2010.  
 Web. 1 Feb. 2010 [www.library.cb.com/kids/elementary/article-9352990](http://www.library.cb.com/kids/elementary/article-9352990)

Qualitative Measures	Quantitative Measures		
<p><i>Levels of Meaning</i>            The main purpose is clearly signaled in the title and throughout the text.</p>	Flesch-Kincaid	10.3	Grades 9–10
<p><i>Structure</i>            The structure is simple, explicit, and conventional, particularly to students familiar with the encyclopedia format; section breaks help guide the reader and organize information; a diagram (not included here) supplements the running text by helping illustrate some of the parts of the computer; a few photographs (also not included here) offer visual interest but little new information.</p>	Lexile	1120L (excerpt) 1190L (whole text)	Grades 9–10
<p><i>Language Conventionality and Clarity</i>            Language is used in a literal way; the many domain-specific terms are explained in detail.</p>	Coh-Metrix Key Factors	Narrativity Sentence-Level Cohesion Overall Text Cohesion Syntax Word Abstractness	85 47 31 24 68
<p><i>Knowledge Demands</i>            The text assumes little prior knowledge of computer workings, although a reader already familiar with computer hardware and software would likely have a significantly easier time comprehending the text than would a less knowledgeable reader.</p>	<p>The excerpt is solidly informational in structure (85th percentile on narrativity) and uses a fair number of abstract words (68th percentile); the excerpt has moderate sentence-level cohesion (47th percentile), moderately high overall text cohesion (31st percentile), and low syntactic complexity (24th percentile), which implies that at the sentence and concept level, the text is fairly straightforward and hangs together tightly. Thus, while the text’s expository structure and word abstractness pose challenges, other factors operate to lower the difficulty.</p>		
<p><b>Reader and Task Considerations</b>            To be determined locally</p>			
<p><b>Recommended Placement</b>            Although some of the quantitative measures suggest that “Computer” is more suitable to early high school students than to the younger students a junior encyclopedia is intended for, the <i>Standards</i> place this text in the grades 4–5 band on the basis of three of the five Coh-Metrix factors and the qualitative analysis.</p>			

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Example 3: *The Grapes of Wrath* (Grades 9–10 Text Complexity Band)

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*Excerpt*

The man took off his dark, stained hat and stood with a curious humility in front of the screen. “Could you see your way to sell us a loaf of bread, ma’am?”

Mae said, “This ain’t a grocery store. We got bread to make san’widges.”

“I know, ma’am.” His humility was insistent. “We need bread and there ain’t nothin’ for quite a piece, they say.”

“F we sell bread we gonna run out.” Mae’s tone was faltering.

“We’re hungry,” the man said.

“Whyn’t you buy a san’widge? We got nice san’widges, hamburgs.”

“We’d sure admire to do that, ma’am. But we can’t. We got to make a dime do all of us.” And he said embarrassedly, “We ain’t got but a little.”

Mae said, “You can’t get no loaf a bread for a dime. We only got fifteen-cent loafs.”

From behind her Al growled, “God Almighty, Mae, give ‘em bread.”

“We’ll run out ‘fore the bread truck comes.”

“Run out then, goddamn it,” said Al. He looked sullenly down at the potato salad he was mixing.

Mae shrugged her plump shoulders and looked to the truck drivers to show them what she was up against.

She held the screen door open and the man came in, bringing a smell of sweat with him. The boys edged behind him and they went immediately to the candy case and stared in—not with craving or with hope or even with desire, but just with a kind of wonder that such things could be. They were alike in size and their faces were alike. One scratched his dusty ankle with the toe nails of his other foot. The other whispered some soft message and then they straightened their arms so that their clenched fists in the overall pockets showed through the thin blue cloth.

Mae opened a drawer and took out a long waxpaper-wrapped loaf. “This here is a fifteen-cent loaf.”

The man put his hat back on his head. He answered with inflexible humility, “Won’t you—can’t you see your way to cut off ten cents’ worth?”

Al said snarlingly, “Goddamn it, Mae. Give ‘em the loaf.”

The man turned toward Al. “No, we want ta buy ten cents’ worth of it. We got it figgered awful close, mister, to get to California.”

Mae said resignedly, “You can have this for ten cents.”

“That’d be robbin’ you, ma’am.”

“Go ahead—Al says to take it.” She pushed the waxpapered loaf across the counter. The man took a deep leather pouch from his rear pocket, untied the strings, and spread it open. It was heavy with silver and with greasy bills.

“May soun’ funny to be so tight,” he apologized. “We got a thousan’ miles to go, an’ we don’ know if we’ll make it.” He dug in the pouch with a forefinger, located a dime, and pinched in for it. When he put it down on the counter he had a penny with it. He was about to drop the penny back into the pouch when his eye fell on the boys frozen before the candy counter. He moved slowly down to them. He pointed in the case at big long sticks of striped peppermint. “Is them penny candy, ma’am?”

Mae moved down and looked in. “Which ones?”

“There, them stripy ones.”

The little boys raised their eyes to her face and they stopped breathing; their mouths were partly opened, their half-naked bodies were rigid.

“Oh—them. Well, no—them’s two for a penny.”

“Well, gimme two then, ma’am.” He placed the copper cent carefully on the counter. The boys expelled their held breath softly. Mae held the big sticks out.

Steinbeck, John. *The Grapes of Wrath*.  
New York: Viking, 1967 (1939).

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Qualitative Measures	Quantitative Measures		
<p><i>Levels of Meaning</i> There are multiple and often implicit levels of meaning within the excerpt and the novel as a whole.</p>	Flesch-Kincaid	3.1	Grades 2–3
<p><i>Structure</i> The text is relatively simple and conventional in form.</p>	Lexile	680 (excerpt) 680 (whole text)	Grades 2–3
<p><i>Language Conventionalty and Clarity</i> Although the language used is generally familiar and clear, much is left unsaid between the characters. Steinbeck also puts a great deal of weight on certain less familiar words, such as <i>faltering</i>, that are not typically part of a young student’s vocabulary. In various portions of the novel not fully represented in the excerpt, the author combines rich, vivid, and detailed description with an economy of words that requires heavy inferencing.</p>	Coh-Metrix Key Factors	Narrativity Sentence-Level Cohesion Overall Text Cohesion Syntax Word Abstractness	12 72 70 17 43
<p><i>Knowledge Demands</i> The theme and subject matter are sophisticated. Knowledge of the Great Depression, the “Okie Migration” to California, and the religion and music of the migrants is helpful, but the author himself provides much of the context needed for comprehension.</p>	<p>The familiar story structure (12th percentile on narrativity) and easy syntax (17th percentile) of the excerpt contribute greatly to its reading ease. The words Steinbeck uses in this part of Chapter 15 are only moderately abstract (43rd percentile). Only in the sentence-level and overall text cohesion measures (72nd and 70th percentiles, respectively) do we get some indication from the quantitative measures that <i>Grapes</i> is a more challenging text than it might appear at the word and syntax levels. Many of the sentences feel like self-contained units of thought, hence the low cohesion from sentence to sentence. Overall text cohesion is low because important connections among ideas are not explicitly made by the author.</p>		
<p><b>Reader and Task Considerations</b> To be determined locally</p>			
<p><b>Recommended Placement</b> Though considered extremely easy by many of the quantitative measures, <i>The Grapes of Wrath</i> has a sophistication of theme and content that makes it more suitable for early high school (grades 9–10), which is where the <i>Standards</i> have placed it. Although this placement is primarily based on qualitative measures, the two Coh-Metrix cohesion factors do point correctly to the fact that Steinbeck makes relatively few explicit links among words, sentences, and ideas—something that will likely pose a challenge to student readers.</p>			



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Example 4: *The Longitude Prize* (Grades 9–10 Text Complexity Band)

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*Excerpt*

From Chapter 1: “A Most Terrible Sea”

At six in the morning I was awaked by a great shock, and a confused noise of the men on deck. I ran up, thinking some ship had run foul of us, for by my own reckoning, and that of every other person in the ship, we were at least thirty-five leagues distant from land; but, before I could reach the quarter-deck, the ship gave a great stroke upon the ground, and the sea broke over her. Just after this I could perceive the land, rocky, rugged and uneven, about two cables' length from us . . . the masts soon went overboard, carrying some men with them . . . notwithstanding a most terrible sea, one of the [lifeboats] was launched, and eight of the best men jumped into her; but she had scarcely got to the ship's stern when she was hurled to the bottom, and every soul in her perished. The rest of the boats were soon washed to pieces on the deck. We then made a raft . . . and waited with resignation for Providence to assist us.

—From an account of the wreck of HMS *Litchfield* off the coast of North Africa, 1758

The *Litchfield* came to grief because no one aboard knew where they were. As the narrator tells us, by his own reckoning and that of everyone else they were supposed to be thirty-five leagues, about a hundred miles, from land. The word “reckoning” was short for “dead reckoning”—the system used by ships at sea to keep track of their position, meaning their longitude and latitude. It was an intricate system, a craft, and like every other craft involved the mastery of certain tools, in this case such instruments as compass, hourglass, and quadrant. It was an art as well.

Latitude, the north-south position, had always been the navigator's faithful guide. Even in ancient times, a Greek or Roman sailor could tell how far north of the equator he was by observing the North Star's height above the horizon, or the sun's at noon. This could be done without instruments, trusting in experience and the naked eye, although it is believed that an ancestor of the quadrant called the astrolabe—“star-measurer”—was known to the ancients, and used by them to measure the angular height of the sun or a star above the horizon.

Phoenicians, Greeks, and Romans tended to sail along the coasts and were rarely out of sight of land. As later navigators left the safety of the Mediterranean to plunge into the vast Atlantic—far from shore, and from the shorebirds that led them to it—they still had the sun and the North Star. And these enabled them to follow imagined parallel lines of latitude that circle the globe. Following a line of latitude—“sailing the parallel”—kept a ship on a steady east-west course. Christopher Columbus, who sailed the parallel in 1492, held his ships on such a safe course, west and west again, straight on toward Asia. When they came across an island off the coast of what would later be called America, Columbus compelled his crew to sign an affidavit stating that this island was no island but mainland Asia.

Dash, Joan. *The Longitude Prize*.  
New York: Farrar, Straus and Giroux, 2000. (2000)

Qualitative Measures	Quantitative Measures		
<p><i>Levels of Meaning</i> The single, relatively clear purpose of the text (not fully apparent in the excerpt but signaled by the title) is to recount the discovery of the concept of longitude.</p> <p><i>Structure</i> The text is moderately complex and subtle in structure. Although the text may appear at first glance to be a narrative, the author mainly uses narrative elements in the service of illustrating historical and technical points.</p> <p><i>Language Conventionalty and Clarity</i> Language is used literally and is relatively clear, but numerous archaic, technical, and otherwise unfamiliar terms are introduced in the course of citing primary historical sources and discussing the craft, art, and science of navigation.</p> <p><i>Knowledge Demands</i> The text assumes relatively little prior knowledge regarding seafaring and navigation, but some general sense of the concepts of latitude and longitude, the nature of sailing ships, and the historical circumstances that promoted exploration and trade is useful background information.</p>	Flesch-Kincaid	10.9	Grades 9–10
	Lexile	1300 (excerpt) 1160 (whole text)	Grades 9–10
	Coh-Metrix Key Factors	Narrativity	72
		Sentence-Level Cohesion	82
		Overall Text Cohesion	50
		Syntax	86
Word Abstractness	30		
<p>The excerpt is primarily informational in structure (72nd percentile on narrativity), a fact that the opening quotation may not make immediately clear. The excerpt has low sentence-level cohesion (82nd percentile) and very complicated syntax (86th percentile), suggesting the piece may be challenging for students to follow at the sentence level. Comprehension is made easier, though, by moderate overall text cohesion (50th percentile) and, especially, by moderately low word abstractness (30th percentile), meaning that the excerpt includes at least some clear links among concepts and uses mostly concrete language.</p>			
Reader and Task Considerations			
To be determined locally			
Recommended Placement			
The qualitative and quantitative measures by and large agree on the placement of <i>The Longitude Prize</i> into the grades 9–10 text complexity band, which is where the <i>Standards</i> have it.			

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Example 5: *Walden* (Grades 11–CCR Text Complexity Band)

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*Excerpt*

I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived. I did not wish to live what was not life, living is so dear; nor did I wish to practise resignation, unless it was quite necessary. I wanted to live deep and suck out all the marrow of life, to live so sturdily and Spartan-like as to put to rout all that was not life, to cut a broad swath and shave close, to drive life into a corner, and reduce it to its lowest terms, and, if it proved to be mean, why then to get the whole and genuine meanness of it, and publish its meanness to the world; or if it were sublime, to know it by experience, and be able to give a true account of it in my next excursion. For most men, it appears to me, are in a strange uncertainty about it, whether it is of the devil or of God, and have somewhat hastily concluded that it is the chief end of man here to “glorify God and enjoy him forever.”

Thoreau, Henry David. *Walden*. (1854)

Qualitative Measures	Quantitative Measures		
<p><i>Levels of Meaning</i>  <i>Walden</i> operates as both a chronicle of Thoreau’s experience and as a philosophical exploration, so there are multiple levels of meaning.</p>	Flesch-Kincaid	12.0	Grades 11–CCR
<p><i>Structure</i>  The structure is complex, implicit, and (in its blend of personal and philosophical) often unconventional.</p>	Lexile	1480 (excerpt) 1340 (whole text)	Grades 11–CCR
<p><i>Language Conventionality and Clarity</i>  The author uses a great deal of sophisticated, literary, often figurative language. He uses common words in uncommon ways (e.g., living <i>sturdily</i>; <i>mean</i> to signify “base” or “common”).</p>	Coh-Metrix Key Factors	Narrativity	–
<p><i>Knowledge Demands</i>  The author explores multiple, interacting themes and uncommon experiences. He makes allusions (e.g., <i>Spartan-like</i>) that point outside the text and assume a certain degree of literary, cultural, and historical knowledge. Knowing that Thoreau is considered a transcendentalist and what that entails is helpful to understanding the text on its deeper levels, although a reader can glean a great deal of insight into transcendentalism just from an attentive read of <i>Walden</i>.</p>		Sentence-Level Cohesion	1
		Overall Text Cohesion	14
		Syntax	100
	<p>The brevity of the excerpt contributes to the extreme results on the Coh-Metrix analysis, but they are likely close to the mark in most respects. The excerpt lacks narrative qualities, although the larger work does have them. The excerpt is very cohesive (1st percentile on sentence-level and 14th percentile on overall text cohesion) but poses daunting syntax (100th percentile) and word abstractness (87th percentile) challenges for readers, which are apparent on even a quick reading of the excerpt. (As suggested by the Lexile scores, however, this excerpt may be somewhat harder than the text as a whole.)</p>	Word Abstractness	87
<b>Reader and Task Considerations</b> To be determined locally			
<b>Recommended Placement</b>			
The qualitative and quantitative measures by and large agree on the placement of <i>Walden</i> into the grades 11–CCR text complexity band, which is where the <i>Standards</i> have it.			

# Writing

## Definitions of the *Standards'* Three Text Types

### Argument

Arguments are used for many purposes—to change the reader’s point of view, to bring about some action on the reader’s part, or to ask the reader to accept the writer’s explanation or evaluation of a concept, issue, or problem. An argument is a reasoned, logical way of demonstrating that the writer’s position, belief, or conclusion is valid. In English language arts, students make claims about the worth or meaning of a literary work or works. They defend their interpretations or judgments with evidence from the text(s) they are writing about. In history/social studies, students analyze evidence from multiple primary and secondary sources to advance a claim that is best supported by the evidence, and they argue for a historically or empirically situated interpretation. In science, students make claims in the form of statements or conclusions that answer questions or address problems. Using data in a scientifically acceptable form, students marshal evidence and draw on their conceptual understanding of scientific concepts to argue in support of their claims. Although young children are not able to produce fully developed logical arguments, they develop a variety of methods to extend and elaborate their work by providing examples, offering reasons for their assertions, and explaining cause and effect. These kinds of expository structures are steps on the road to argument. In grades K–5, the term “opinion” is used to refer to this developing form of argument.

### Informational/Explanatory Writing

Informational/explanatory writing conveys information accurately. This kind of writing serves one or more closely related purposes: to increase readers’ knowledge of a subject, to help readers better understand a procedure or process, or to provide readers with an enhanced comprehension of a concept. Informational/explanatory writing addresses matters such as types (*What are the different types of poetry?*) and components (*What are the parts of a motor?*); size, function, or behavior (*How big is the United States? What is an x-ray used for? How do penguins find food?*); how things work (*How does the legislative branch of government function?*); and why things happen (*Why do some authors blend genres?*). To produce this kind of writing, students draw from what they already know and from primary and secondary sources. With practice, students become better able to develop a controlling idea and a coherent focus on a topic, and more skilled at selecting and incorporating relevant examples, facts, and details into their writing. They are also able to use a variety of techniques to convey information, such as naming, defining, describing, or differentiating different types or parts; comparing or contrasting ideas or concepts; and citing an anecdote or a scenario to illustrate a point.

### Narrative Writing

Narrative writing conveys experience, either real or imaginary, and uses time as its deep structure. It can be used for many purposes, such as to inform, instruct, persuade, or entertain. In English language arts, students produce narratives that take the form of creative fictional stories, memoirs, anecdotes, and autobiographies. Over time, they learn to provide visual details of scenes, objects, or people; to depict specific actions (for example, movements, gestures, postures, and expressions); to use dialogue and interior monologue that provide insight into the narrator’s and characters’ personalities and motives; and to manipulate pace to highlight the significance of events and create tension and suspense. In history/social studies, students write narrative accounts about individuals. They also construct event models of what happened, selecting from their sources only the most relevant information. In science, students write narrative descriptions of the step-by-step procedures they follow in their investigations so that others can replicate their procedures and (perhaps) reach the same results. With practice, students expand their repertoire and control of different narrative strategies.

#### ***Creative Writing Beyond Narrative***

The narrative category does not include all of the possible forms of creative writing, such as many types of poetry. The *Standards* leave the inclusion and evaluation of other such forms to teacher discretion.

## Texts that Blend Types

Skilled writers many times use a blend of these text types to accomplish their purposes. For example, *The Longitude Prize*, included above and in Appendix B, embeds narrative elements within a largely expository structure. Effective student writing can also cross the boundaries of type, as does the grade 12 student sample “Fact vs. Fiction and All the Grey Space In Between” found in Appendix C. “

## The Special Place of Argument in the *Standards*

While all three text types are important, the *Standards* put particular emphasis on students’ ability to write sound arguments on substantive topics and issues, as this ability is critical to college and career readiness. Gerald Graff, professor of English and education, writes that “argument literacy” is fundamental to being educated. The university is largely an “argument culture,” Graff contends; therefore, K–12 schools should “teach the conflicts” so that students are adept at understanding and engaging in argument (both oral and written) when they enter college. He claims that because argument is not standard in most school curricula, only 20 percent of those who enter college are prepared in this respect. Theorist and critic Neil Postman calls argument the soul of an education because argument forces a writer to evaluate the strengths and weaknesses of multiple perspectives. When teachers ask students to consider two or more perspectives on a topic or issue, something far beyond surface knowledge is required: students must think critically and deeply, assess the validity of their own thinking, and anticipate counterclaims in opposition to their own assertions.

### A Note on the Term: “Argument”

The *Standards* use the terms *argument* and *writing arguments* rather than *persuasion* and *persuasive writing* to emphasize the point that to be college and career ready, students need to build a cogent case based on substantive claims supported by logical reasons and credible, relevant evidence.

The unique importance of argument in college and careers is asserted eloquently by Joseph M. Williams and Lawrence McEnerney of the University of Chicago Writing Program. As part of their attempt to explain to new college students the major differences between good writing at the high school and college levels, Williams and McEnerney define *argument* not as “wrangling” but as “a serious and focused conversation among people who are intensely interested in getting to the bottom of things *cooperatively*”:

Those values are also an integral part of your education in college. For four years, you are asked to read, do research, gather data, analyze it, think about it, and then communicate it to readers in a form . . . which enables them to assess it and use it. You are asked to do this not because we expect you all to become professional scholars, but because in just about any profession you pursue, you will do research, think about what you find, make decisions about complex matters, and then explain those decisions—usually in writing—to others who have a stake in your decisions being sound ones. In an Age of Information, what most professionals do is research, think, and make arguments. (And part of the value of doing your own thinking and writing is that it makes you much better at evaluating the thinking and writing of others.)

In the process of describing the special value of argument in college- and career-ready writing, Williams and McEnerney also establish argument’s close links to research in particular and to knowledge building in general, both of which are also heavily emphasized in the *Standards*.

Much evidence supports the value of argument generally and its particular importance to college and career readiness. A 2009 ACT national curriculum survey of postsecondary instructors of composition, freshman English, and survey of American literature courses found that “write to argue or persuade readers” was virtually tied with “write to convey information” as the most important type of writing needed by incoming college students. Other curriculum surveys, including those conducted by the College Board and the states of Virginia and Florida, also found strong

support for writing arguments as a key part of instruction. The 2007 writing framework for the National Assessment of Educational Progress (NAEP) assigns persuasive writing the single largest targeted allotment of assessment time at grade 12 (40 percent, versus 25 percent for narrative writing and 35 percent for informative writing). (The 2011 prepublication framework maintains the 40 percent figure for persuasive writing at grade 12, allotting 40 percent to writing to explain and 20 percent to writing to convey experience.) Writing arguments or writing to persuade is also an important element in standards frameworks for numerous high-performing nations.

Specific skills central to writing arguments are also highly valued by postsecondary educators. A 2002 survey of instructors of freshman composition and other introductory courses across the curriculum at California’s community colleges, California State University campuses, and University of California campuses found that among the most important skills expected of incoming students were articulating a clear thesis; identifying, evaluating, and using evidence to support or challenge the thesis; and considering and incorporating counterarguments into their writing. On the 2009 ACT national curriculum survey, postsecondary faculty gave high ratings to such argument-related skills as “develop ideas by using some specific reasons, details, and examples,” “take and maintain a position on an issue,” and “support claims with multiple and appropriate sources of evidence.”

The value of effective argument extends well beyond the classroom or workplace, however. As Richard Fulkerson puts it in *Teaching the Argument in Writing*, the proper context for thinking about argument is one “in which the goal is not victory but a good decision, one in which all arguers are at risk of needing to alter their views, one in which a participant takes seriously and fairly the views different from his or her own.” Such capacities are broadly important for the literate, educated person living in the diverse, information-rich environment of the twenty-first century.

# Speaking and Listening

## The Special Role of Speaking and Listening in K–5 Literacy

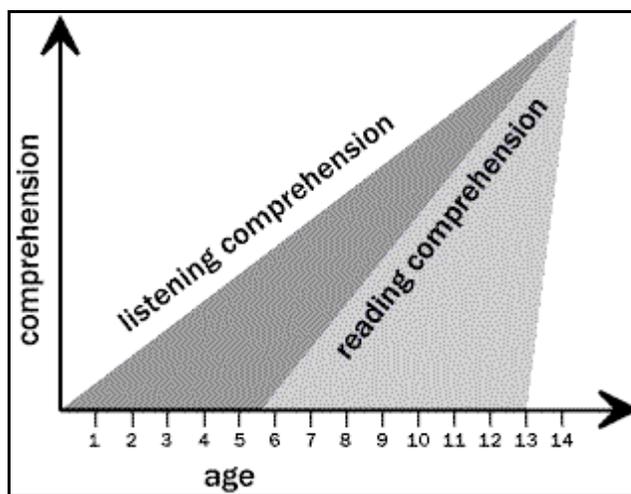
If literacy levels are to improve, the aims of the language arts classroom, especially in the earliest grades, must include oral language in a purposeful, systematic way, in part because it helps students master the printed word. Besides having intrinsic value as modes of communication, listening and speaking are necessary prerequisites of reading and writing. The interrelationship between oral and written language is illustrated in the table below, using the distinction linguists make between *receptive language* (language that is heard, processed, and understood by an individual) and *expressive language* (language that is generated and produced by an individual).

	Receptive Language	Expressive Language
Oral Language	<i>Listening</i>	<i>Speaking</i>
Written Language	<i>Reading</i> ( <i>decoding + comprehension</i> )	<i>Writing</i> ( <i>handwriting, spelling,</i> <i>written composition</i> )

Oral language development precedes and is the foundation for written language development; in other words, oral language is primary and written language builds on it. Children’s oral language competence is strongly predictive of their facility in learning to read and write: listening and speaking vocabulary and even mastery of syntax set boundaries as to what children can read and understand no matter how well they can decode.

For children in preschool and the early grades, receptive and expressive abilities do not develop simultaneously or at the same pace: receptive language generally precedes expressive language. Children need to be able to understand words before they can produce and use them.

Oral language is particularly important for the youngest students. Betty Hart and Todd Risley, who studied young children in the context of their early family life and then at school, found that the total number of words children had heard as preschoolers predicted how many words they understood and how fast they could learn new words in kindergarten. Preschoolers who had heard more words had larger vocabularies once in kindergarten. Furthermore, when the students were in grade 3, their early language competence from the preschool years still accurately predicted their language and reading comprehension. The preschoolers who had heard more words, and subsequently had learned more words orally, were better readers. In short, early language advantage persists and manifests itself in higher levels of literacy. A meta-analysis by Thomas Sticht indicates that the importance of oral language extends well beyond the earliest grades. As illustrated in the graphic below, Sticht found evidence strongly suggesting that children’s listening comprehension outpaces reading comprehension until the middle school years (grades 6–8).



The research strongly suggests that the English language arts classroom should explicitly address the link between oral and written language, exploiting the influence of oral language on a child’s later ability to read by allocating instructional time to building children’s listening skills, as called for in the *Standards*. The early grades should not focus on decoding alone, nor should the later grades pay attention only to building reading comprehension. Time should be devoted to reading fiction and content-rich selections aloud to young children, just as it is to providing those same children with the skills they will need to decode and encode.

This focus on oral language is of greatest importance for the children most at risk—children for whom English is a second language and children who have not been exposed at home to the kind of language found in written texts. Ensuring that all children in the United States have access to an excellent education requires that issues of oral language come to the fore in elementary classrooms.

### Read-Alouds and the Reading-Speaking-Listening Link

Generally, teachers will encourage children in the upper elementary grades to read texts independently and reflect on them in writing. However, children in the early grades—particularly kindergarten through grade 3—benefit from participating in rich, structured conversations with an adult in response to written texts that are read aloud, orally comparing and contrasting as well as analyzing and synthesizing. The *Standards* acknowledge the importance of this aural dimension of early learning by including a robust set of K–3 Speaking and Listening standards and by offering an extensive number of read-aloud text exemplars appropriate for K–1 and for grades 2–3. (See Appendix B.)

Because, as indicated above, children’s listening comprehension likely outpaces reading comprehension until the middle school years, it is particularly important that students in the earliest grades build knowledge through being read to as well as through reading, with the balance gradually shifting to reading independently. By reading a story or nonfiction selection aloud, teachers allow children to experience written language without the burden of decoding, granting them access to content that they may not be able to read and understand by themselves. Children are then free to focus their mental energy on the words and ideas presented in the text, and they will eventually be better prepared to tackle rich written content on their own. Whereas most titles selected for kindergarten and grade 1 will need to be read aloud exclusively, some titles selected for grades 2–5 may be appropriate for read-alouds as well as for reading independently. Reading aloud to students in the upper grades should not, however, be used as a substitute for independent reading by students; read-alouds at this level should supplement and enrich what students are able to read by themselves.

# Language

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## Why “Language” Standards?

The *Standards* include conventions and vocabulary in a separate strand rather than fully integrating them into the Reading, Writing, and Speaking and Listening standards, where such statements are often placed. Many of the Conventions standards are as appropriate to formal spoken English as they are to formal written English. Similarly, the matter of vocabulary—which the *Standards* define as determining word meanings, understanding word nuances, and acquiring new words—is larger than Reading alone. In particular, acquisition of vocabulary occurs as part of reading but also through students being taught words directly and (particularly in the earliest grades) as part of purposeful classroom conversations and discussions around rich content.

The Reading, Writing, and Speaking and Listening strands include references to many of the skills and understandings represented in more detail in the Language standards. For instance, CCR Reading Standard #4 focuses on students’ ability to understand words and phrases used in context. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are by and large inseparable from such contexts.

## Conventions

### Development of Grammatical Knowledge

Grammar and usage development in children and in adults rarely follows a linear path. Native speakers and language learners often begin making new errors and seem to lose their mastery of particular grammatical structures or print conventions as they learn new, more complex grammatical structures or new usages of English, such as in college-level persuasive essays. These errors are often signs of language development as learners synthesize new grammatical and usage knowledge with their current knowledge. Thus, students will often need to return to the same grammar topic in greater complexity as they move through K–12 schooling and as they increase the range and complexity of the texts and communicative contexts in which they read and write. For instance, instruction on verb tense in early elementary school (K–3) should focus on simple present, past, and future forms; later instruction on verbs should extend students’ knowledge of verb aspect (such as progressive and perfect verb forms) and voice (active and passive verb forms). The *Standards* handle the recursive nature of conventions mastery in a second way: while the Conventions standards should generally be considered cumulative in nature, those marked with an asterisk (\*) in the main document are particularly likely to need to be introduced in relatively simple forms at lower grades and revisited in later grades in more sophisticated contexts. The table on page 33 summarizes those “progressive” skills.

### Making Appropriate Grammar and Usage Choices in Writing and Speaking

Students must have a strong command of the grammar and usage of spoken and written standard English to succeed academically and professionally. Yet there is a tremendous amount of variety in the language and grammar features of spoken and written standard English, of academic and everyday standard English, and of the language of different disciplines. Furthermore, in the twenty-first century, students must be able to communicate effectively in a wide range of print and nonprint texts, each of which may require different grammatical and usage choices to be effective. Thus, grammar and usage instruction should acknowledge the many varieties of English that exist and explicitly address the differences in grammatical structure and usage between these varieties in order to help students make purposeful language choices in their writing and speaking. Students must also be taught the *purposes* for using particular grammatical features in particular disciplines or texts; if they are taught simply to vary their grammar and language to keep their writing “interesting,” they may actually become more confused about how to make effective language choices.

## **Using Knowledge of Grammar and Usage for Reading and Listening Comprehension**

Grammatical knowledge can also aid reading comprehension and interpretation. Researchers recommend that students be taught to use knowledge of grammar and usage, as well as knowledge of vocabulary, to comprehend complex academic texts. At the elementary level, for example, students can use knowledge of verbs to help them understand the plot and characters in a text. At the secondary level, learning the grammatical structures of nonstandard dialects can help students understand how accomplished writers, such as Harper Lee, Langston Hughes, and Mark Twain, use various dialects of English to great advantage and effect, and can help students analyze setting, character, and writer's craft in great works of literature. Teaching about the grammatical patterns found in specific disciplines has also been shown to help English language learners' reading comprehension in general and reading comprehension in history classrooms in particular.

As students learn more about the patterns of English grammar in different communicative contexts throughout their K–12 academic careers, they can develop more complex understandings of English grammar and usage. Students can use this understanding to make more purposeful and effective choices in their writing and speaking and more accurate and rich interpretations in their listening and speaking.

# English Language Arts Conventions: Progressive Skills, By Standard

The following standards, marked with an asterisk (\*) in the main document, are skills and understandings that require continued attention in higher grades (after their introduction in lower grades) as they are applied to increasingly sophisticated writing and speaking.

Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grades 9–10
<p><b>1c.</b> Ensure subject-verb and pronoun-antecedent agreement.</p> <p><b>3a.</b> Choose words for effect.</p>						
<p><b>1b.</b> Form and use adjectives and adverbs (including comparative and superlative forms), placing them appropriately within sentences.</p> <p><b>1c.</b> Produce complete sentences, avoiding rhetorically poor fragments and run-ons.</p> <p><b>1d.</b> Correctly use frequently confused words (e.g., <i>effect/affect, to/too/two</i>).</p> <p><b>3a.</b> Use punctuation for effect.</p> <p><b>3b.</b> Maintain consistency in style and tone.</p> <p><b>3c.</b> Choose words and phrases to convey ideas precisely.</p>						
<p><b>1b.</b> Recognize and correct inappropriate shifts in verb tense and aspect.</p> <p><b>2a.</b> Use punctuation to separate items in a series.</p> <p><b>3a.</b> Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.</p>						
<p><b>1b.</b> Recognize and correct inappropriate shifts in pronoun number and person.</p> <p><b>1c.</b> Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).</p> <p><b>2a.</b> Use commas, parentheses, or dashes to set off nonrestrictive/parenthetical elements.</p> <p><b>3a.</b> Vary sentence patterns for meaning, reader/listener interest, and style.</p>						
<p><b>1c.</b> Place phrases and clauses within a sentence, avoiding misplaced and dangling modifiers.</p> <p><b>3b.</b> Choose words and phrases that express ideas concisely, eliminating wordiness and redundancy.</p>						
<p><b>1c.</b> Recognize and correct inappropriate shifts in verb voice and mood.</p>						
<p><b>1a.</b> Use parallel structure in writing.</p>						

## Vocabulary

Words are not just words. They are the nexus—the interface—between communication and thought. When we read, it is through words that we build, refine, and modify our knowledge. What makes vocabulary valuable and important is not the words themselves so much as the understandings they afford.

Marilyn Adams

The importance of students acquiring a rich and varied vocabulary cannot be overstated. Research suggests that if students are going to grasp and retain words and comprehend text, they need incremental, repeated exposure in a variety of contexts to the words they are trying to learn. When students make multiple connections between a new word and their own experiences, they develop a nuanced and flexible understanding of the word they are learning. In this way, students learn not only what a word means but also how to use that word in a variety of contexts, and they can apply appropriate senses of the word’s meaning in order to understand it in different contexts.

Initially, children readily learn words from oral conversation because such conversations are context rich in ways that aid in vocabulary acquisition: in discussions, a small set of words (accompanied by gesture and intonation) is used with great frequency to talk about a narrow range of situations children are exposed to on a day-to-day basis. Yet as children reach school age, new words are introduced less frequently in conversation, and, consequently, vocabulary acquisition eventually stagnates by grade 4 or 5 unless students acquire additional words from written context.

Written language contains literally thousands of words more than are typically used in conversational language. Yet writing lacks the interactivity and nonverbal context that make acquiring vocabulary through oral conversation relatively easy, which means that purposeful and ongoing concentration on vocabulary is needed. In fact, at most, between 5 and 15 percent of new words encountered upon first reading are retained, and the weaker a student’s vocabulary is the smaller the gain. Yet research shows that if students are truly to understand what they read, they must grasp upward of 95 percent of the words.

As this “tipping point” for what we might call *lexical dexterity* is quite challenging for students to reach, every classroom needs to focus on providing students with high-quality, context-rich encounters with vocabulary words that epitomize the kinds of words often found in written texts—and often found *only* there. The aim should be to expose students to words that have the widest application—ones representing concepts that students are likely to meet again and again, not just in classroom settings but beyond the school walls as well. Often referred to as Tier 2 words, these highly transferable general academic words (for example, qualifying adjectives and adverbs such as *important* and *typically*) are used broadly across domains (areas or fields of knowledge) and in situations outside of the classroom.<sup>5</sup> However, the meanings of many words are specific to their domains, and students typically learn these words—often referred to as Tier 3 words—either by being taught them directly or by reading multiple selections from multiple authors within those domains.

The challenge in reaching lexical dexterity is that, in any given instance, it is not the entire spectrum of a word’s history, meanings, usages, and features that matters but only those aspects that are relevant at that moment. Therefore, for a reader to grasp the meaning of a word, two things must happen: first, the reader’s internal representation of the word must be sufficiently complete and well articulated to allow the intended meaning to be known to him or her; second, the reader must understand the context well enough to select the intended meaning from the realm of the word’s possible meanings (which in turn depends on understanding the surrounding words of the text).

Key to students’ vocabulary development is building rich and flexible word knowledge. Students need plentiful

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<sup>5</sup> The fact that these words transcend specific domains argues for them being taught and used across the curriculum by all teachers.

opportunities to use and respond to the words they learn through playful informal talk, discussion, and reading or being read to and responding to what is read. Along with attention to general academic (Tier 2) and domain-specific (Tier 3) words, students benefit from instruction about the connections and patterns in language. Developing in students an analytical attitude toward the logic and sentence structure of their texts, alongside an awareness of word parts, word origins, and word relationships, provides students with a sense of how language works such that syntax, morphology, and etymology can become useful cues in building meaning as students encounter new words and concepts. Although direct study of language is essential to student progress, most word learning occurs indirectly and unconsciously through normal reading, writing, listening, and speaking. This normal process of word acquisition occurs up to four times faster for Tier 3 words when students have become familiar with the domain of the discourse and encounter the word in different contexts. Hence, vocabulary development for these words occurs most effectively through a coherent course of study in which subject matters are integrated and coordinated across the curriculum and domains become familiar to the student over several days or weeks.

As students are exposed to and interact with language throughout their school careers, they are able to acquire understandings of word meanings, build awareness of the workings of language, and apply their knowledge to comprehend and produce language.

# Notes

## Reading

### Why Text Complexity Matters, pp. 2–4

#### College, Careers, and Citizenship: Steady or Increasing Complexity of Texts and Tasks

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