

Lexile Text Measures for State or District Adoption Programs



This document provides textbook publishers with an introduction to Lexile measures and their interpretations, suggestions for their use, and information about how they may be obtained.

Overview and Introduction

The Lexile Framework for Reading[®], developed by MetaMetrics, Inc., is a scientific, proven approach to reading and text measurement. Recognized as the most accurate way to match readers with text, there are currently Lexile measures for more than 100,000 books, 80 million articles, and 60,000 Web sites. More than 20 million students received a Lexile measure during the 2005-2006 school year. The Lexile measure provides educators with a powerful tool to forecast expected comprehension rates and match readers with text.

Some states and districts encourage publishers to provide information about a textbook's Lexile measure as part of their adoption process. Providing a Lexile measure for a textbook is a concrete way to show that the reading difficulty of the text is appropriate for the book's intended readers. State textbook adoption committees and district or school textbook selection committees may use the Lexile measure as an initial selection criterion to ensure that textbooks considered for purchase are written at the desired difficulty level. The Lexile measure is also useful for teachers as they determine when students will need additional reading support or more challenging supplemental materials.

What is the Lexile Framework for Reading?

The Lexile Framework for Reading consists of two main components: a Lexile measure and the Lexile scale. A Lexile measure is the numeric representation of a reader's ability or a text's difficulty, both followed by an "L" (for Lexile). The Lexile scale is a developmental scale for reading that ranges from below 0L for emerging readers and beginning texts to above 1700L for advanced readers and texts. Values at or below 0L are reported as Beginning Reader (BR).

A Lexile text measure is obtained through analyzing the text difficulty of a piece of text. The Lexile Analyzer, a software program specially designed to evaluate the reading demand of text, analyzes the text's semantic and syntactic characteristics and assigns it a Lexile measure. A multi-step process is required to prepare the text before it is submitted to the Lexile Analyzer for a measure.

A Lexile reader measure is typically obtained by administering a test of reading comprehension to a reader. When a test has been linked with the Lexile Framework for Reading through a field study, a Lexile measure for the reader can be reported.

A unique feature of the Lexile Framework is that both reader ability and text difficulty are reported on the same scale, in the same unit—the Lexile. This feature of the Lexile Framework drives the interpretation of the Lexile measure and provides educators with a powerful tool to match readers with text.

Extensive information about the development of the Lexile Framework for Reading can be found in the Researchers section of the Lexile website (www.Lexile.com). In particular, a white paper entitled *The Lexile Framework as an Approach for Reading Measurement and Success* (www.lexile.com/PDF/Lexile-Reading-Measurement-and-Success-0504.pdf) provides detailed descriptions of each component of the Lexile Framework for Reading.

What does a Lexile text measure mean?

There are two primary interpretations of a Lexile text measure. First, a Lexile text measure provides information about the difficulty of one text relative to another. For example, a text with a Lexile measure of 1000L will most likely be more difficult for a reader to comprehend than a text with a lower Lexile measure. However, it is important to keep in mind that factors other than text demand contribute to how well a reader will comprehend a piece of text. Factors such as reader motivation, background knowledge, and instructional support may also affect a reader's comprehension.

Because the Lexile Framework places the reader and the text on the same scale, a Lexile text measure also provides information about how well a specific reader is likely to comprehend a text. For example, a reader with a Lexile measure of 1000L is forecasted to comprehend a text with the same Lexile measure (1000L) with a 75-percent comprehension rate. The same reader (1000L) could expect a 90-percent comprehension rate if reading a text with a 750L measure. By using information about a reader's Lexile measure and a text's Lexile measure, an educator can better understand the likely comprehension rate for a specific reader of a specific text and determine when additional reading support or challenge is needed.

What are the benefits of Lexile text measures?

A Lexile measure for a textbook provided as part of a state or district adoption process may be evidence that the reading difficulty of the text is appropriate for the book's intended readers. The Lexile measure may be used as an initial selection criterion to ensure that textbooks considered for purchase are written at the desired difficulty level. The Lexile measure is also helpful to share with teachers so they have an important piece of information as they choose which textbook is most appropriate for a particular course or group of students.

The Lexile measure is a measure of general text difficulty and not a measure of specific content material, so it is useful for evaluating the accessibility of content-area text. For example, a science textbook may have been designed and developed for struggling science students. These struggling students may benefit from having science content presented to them through text that has a relatively low readability level. If the text is written at a low difficulty level, the students will be less likely to stumble over the basic reading demands of the material and, as a result, will be more likely to understand the science concepts being taught. A Lexile measure for the textbook that falls in a range at or below the typical Lexile measure for grade-level textbooks can be a helpful marketing tool to use in the textbook selection process. The Lexile measure can provide evidence to support the readability of the text.

The ability to moderate expected comprehension rates by choosing text with specific Lexile measures is another important benefit of the Lexile Framework for Reading. Because the Lexile Framework places the reader and the text on the same scale, the relationship between the two measures can be used to forecast the comprehension rate for a specific text. Reading support can then be provided to students whose Lexile measure is well below the text's Lexile measure. More challenging readings can be provided for students whose Lexile measure is well above the text's

Lexile measure. The Lexile measure is a powerful tool to help educators maximize the benefits of reading instruction and practice.

What should be submitted to MetaMetrics for Lexile analysis?

Trade books and textbooks in all subject areas can be assigned a Lexile measure. The Lexile Framework for Reading is based upon measures of professionally edited, complete, conventional prose text. The text of any such book, selection, or article can be analyzed and given a meaningful Lexile measure. Text that contains a large proportion of non-prose, unpunctuated, or unconventional content should not be submitted for Lexile analysis. Some examples of non-conforming or non-prose text that should not be measured include headings, incomplete sentences, poetry, drama, and song lyric excerpts. If a majority of a book is non-conforming or non-prose text, the book may be assigned a non-prose (NP) code. If the non-conforming or non-prose text is a smaller portion of an overall text (e.g., a drama excerpt in a literature anthology), it is simply not included in the text that is submitted for Lexile analysis. Publishers should consider the purpose of the text measure and the text format and content prior to submitting a text for analysis.

Some books, such as workbooks or practice books, may contain very little instructional material; the majority of the text may be composed of simple directions and practice activities. In these cases, the publisher must determine whether a Lexile measure for the book will provide useful information for targeting the text to a student's reading ability. For example, in addition to the sheet music, one music workbook series may contain instructional information about composers, musical styles, historical trends, and other topics related to music. A Lexile measure for the instructional text may be useful to educators as they choose music workbooks for their students. Another music workbook series may provide much more sheet music and much less instructional text about the music. If there is minimal reading in the workbook, the decision about appropriateness for a given student may be made solely on the content and difficulty of the music, and a Lexile measure for the workbook might not be as useful. Although the desired proportion of prose may vary depending on the specific content of a book, generally a minimum of 50-percent prose text is suggested. If a book is submitted for a measure, and MetaMetrics staff determines that the proportion of text is too small to provide a meaningful measure for the overall book, a non prose (NP) code may be assigned to the book.

What is the effect of specialized vocabulary on the Lexile measure?

Although some subject-specific books contain specialized vocabulary, the Lexile Analyzer utilizes a corpus of approximately 600 million words and can assign appropriate difficulty values to most words. If a word is not found in the corpus, a default value is assigned. This procedure ensures that the few words not found in the corpus do not inappropriately affect the text's Lexile measure. MetaMetrics analyzed the text demand of textbooks used at various high school grade levels and found that subject-specific vocabulary does not have a substantial impact on the Lexile measure of the text. Table 1 provides results for a sample of high school textbooks.

Table 1. Results of MetaMetrics' 2005 High School Text Demand Survey¹

Category	Lexile Range	Total Books	Median Lexile
High School (Grades 9-12)	650L-1510L	161	1080L
Health	1050L-1130L	6	1080L
Language Arts	650L-1110L	5	1030L
Literature ²	850L-1200L	26	1060L
Mathematics	850L-1510L	36	1030L
Science	840L-1330L	49	1130L
Social Studies	890L-1350L	39	1140L

*Notes:*¹ Adoption states surveyed include IN, FL, NC, OR, and TX² Literature values include remedial reading books.

To further examine the differences in specialized vocabulary across subjects, the percentage of words assigned a default frequency value in each subject area was calculated. The analysis was performed on a sample of 161 textbooks distributed across high school grade levels and content areas. Common categories of words “not found” during Lexile analysis and assigned a default value include proper names (e.g., towns, people); typesetting errors; idiosyncrasies (e.g., dialect, non-standard spacing and punctuation); and extremely rare words (those which lack sufficient representation in the Lexile corpus). The results of this analysis are shown in Table 2.

Table 2. Percentage of Words Assigned the Default Frequency Value during Lexile Analysis of High School Textbooks

High School (Grades 9-12)	Average Number of Analyzed Words per Book	Average Number of Words Receiving the Default Value	Average Percentage of Words Receiving the Default Value ¹
Health (6)	169,885	4,901	2.9%
Language Arts (5)	133,702	4,729	3.54
Literature (26)	252,792	10,089	3.99
Mathematics (36)	91,323	11,164	12.23
Science (49)	165,619	11,343	6.85
Social Studies (39)	225,349	12,023	5.34
TOTAL (N=161)	173,107	9,041	5.80%

*Notes:*¹ These values include every occurrence of each “not found” word.

What portion of a text receives a Lexile measure?

Generally, all of the text that makes up the main portion of a book or instructional material of a textbook is analyzed to determine one overall Lexile measure. Examples of text that typically is not measured include editor's notes, appendices, glossaries, review questions, and assessments. With the exception of literature anthologies, textbooks typically receive one overall text measure only. Literature anthologies are composed of separate reading selections that are written by different authors, and the selections can often stand alone as separate texts. Therefore, it is appropriate to provide the option of measuring each reading selection separately.

Content area textbooks such as social studies and science books are usually written to have a fairly consistent readability across chapters. A Lexile measure for the overall text provides an educator with the readability of the combined chapters. Separate measures for chapters or sections would provide little additional instructional value. The overall textbook measure enables the educator to identify which readers will need additional content support in the form of supplemental content-area reading at a lower difficulty level. In addition, an educator could provide more challenging supplemental reading to students who have Lexile measures well above the textbook measure.

How do Lexile measures relate to grade levels?

There is no direct correspondence of a specific Lexile measure to a specific grade level. Within any classroom or grade there will be a range of readers and a range of reading materials. For example, in a fifth-grade classroom there will be some readers who are ahead of the typical reader (about 250L above) and some readers who are behind the typical reader (about 250L below). To say that some books are "just right" for fifth graders assumes that all fifth graders are reading at the same level. The Lexile Framework for Reading is intended to match readers with texts at whatever level the reader is reading.

MetaMetrics has studied the ranges of Lexile reader measures and Lexile text measures at specific grades in an effort to describe the typical Lexile measure of students and the typical Lexile measure of texts of a given grade level. *This information is for descriptive purposes only and should not be interpreted as a prescribed guide about what an appropriate reader measure or text measure should be for a given grade.* Data for the reader measures came from a national sample of students. Data for the text measures came from collections of texts found in various grade-level classrooms. The table below shows approximately the middle 50 percent of reader measures and text measures for each grade (the interquartile range). The lower number in each range marks about the 25th percentile of readers or texts and the higher number in each range marks about the 75th percentile of readers or texts. It is important to note that approximately 25 percent of students and texts had measures below the lower number and approximately 25 percent had measures above the higher number.

Table 3. Typical Reader and Text Measures by Grade

Grade	Reader Measures (Interquartile Range, Mid-Year)	Text Measures (from the Lexile Map)
1	Up to 300L	200L to 400L
2	140L to 500L	300L to 500L
3	330L to 700L	500L to 700L
4	445L to 810L	650L to 850L
5	565L to 910L	750L to 950L
6	665L to 1000L	850L to 1050L
7	735L to 1065L	950L to 1075L
8	805L to 1100L	1000L to 1100L
9	855L to 1165L	1050L to 1150L
10	905L to 1195L	1100L to 1200L
11 and 12	940L to 1210L	1100L to 1300L

Notice that there is considerable overlap between the grades. This is typical of student reading levels and materials published for each grade.

The real power of The Lexile Framework is in matching readers to text—no matter where the reader is in the development of his or her reading skills—and in examining reader growth. When teachers know Lexile reader measures and Lexile text measures, they can match their students with the texts that will maximize learning and growth.

What are inappropriate interpretations of the Lexile text measure?

Because Lexile measures are not directly linked to grade levels, it is inappropriate to say, for example, that a 700L text is a seventh-grade text. The numbering system of the Lexile scale should not be confused with grade levels. A specific 700L text may be appropriate for an advanced reader in second grade. Another 700L text may be appropriate for a struggling reader in eleventh grade. In fact, 700L text is in the middle of the range of books typically found in fourth-grade classrooms.

Factors in addition to text difficulty such as the developmental level of the content should inform decisions about appropriate grades for a textbook. For example, a literature book developed to challenge advanced readers in third grade may have a Lexile measure of 900L, which is above the typical range for third grade. However, because the content is at the developmental level appropriate for third grade, it may be the best choice for some groups of advanced readers.

A common misconception about Lexile measures is that when choosing a text, the one with the lower Lexile measure is always the best choice. In reality, the best choice of a text depends on many factors in addition to the reading difficulty of the text (e.g., content quality and organization,

page layout, text support, visual support). Decisions about texts should never be made in the absence of information about the reader and the purpose for the text. If a text is intended for use by skilled readers who are motivated and would benefit from challenging reading material, the text with the higher Lexile measure may be preferable.

How much do differences in Lexile text measures affect forecasted comprehension rates?

The difference between a Lexile reader measure and a Lexile text measure can be used to forecast the reader's comprehension of a specific text. Table 4 provides some examples of how differences in the reader-text match affect forecasted comprehension. These calculations assume that the reader is reading the text independently. When the difference between the reader measure and text measure is 0L, the forecasted comprehension rate is 75 percent. The forecasted comprehension rate changes when the difference between the reader measure and the text measure is not 0L. However, relatively small differences have little impact on the forecasted comprehension rate. As shown below, a difference of 30L between the reader measure and text measure results in a change of approximately 2.5 percent in the forecasted comprehension rate. A 60L difference results in a 5-percent change in the forecasted comprehension rate. MetaMetrics defines a targeted reading range for independently-read texts as 100L below to 50L above the reader's Lexile measure. This range helps account for uncertainty in both the text measures and the reader measures.

Relatively large differences between the reader measure and the text measure are required to change the forecasted comprehension rate enough to be meaningful in the instructional context. As shown below, when the reader measure is 250L lower than the text measure, the forecasted comprehension rate drops to 50 percent. A student who is forecasted to comprehend independently-read text with a 50-percent comprehension rate will require instructional intervention/support to understand the material adequately. In contrast, when the reader measure is 250L above the text measure, the forecasted comprehension rate rises to 90 percent. These readers may benefit from additional, more challenging supplemental reading material.

Table 4. Effect of Reader-Text Difference on Forecasted Comprehension Rate

Reader Lexile Measure	Text Lexile Measure	Difference	Forecasted Comprehension Rate ¹
1000L	750L	250L	90%
1000L	970L	30L	77.4%
1000L	990L	10L	75.8%
1000L	1000L	0L	75%
1000L	1010L	-10L	74.2%
1000L	1030L	-30L	72.4%
1000L	1250L	-250L	50%

Note:

¹ Comprehension rate is determined from both a reader measure and a text measure. Consequently, error variation (uncertainty) in comprehension rate derives from error variation in those two measures. Reader measures (often obtained from a single test) are a far greater source of error than text measures when estimating forecasted comprehension.

In many classrooms, one textbook serves as the primary instructional text. Because the range of Lexile measures for the students in a given classroom may vary widely, the forecasted comprehension rate of the classroom textbook may also vary widely among the students. It is helpful for educators to know both the Lexile text measure and the Lexile reader measure so additional reading support or challenge can be provided to students as needed. By using the Lexile measures to anticipate needs, educators can optimize learning for all students.

How can a publisher get a Lexile measure for a book?

MetaMetrics offers publishers a suite of service options to obtain certified Lexile measures for books and other instructional materials. For information on the process, terms, and pricing for Lexile text measurement services, contact MetaMetrics at 1-888-Lexiles or partners@lexile.com.

Where can I find more information about Lexiles?

The Lexile website (www.Lexile.com) contains information for educators, parents, researchers, and partners. Background information and research about Lexiles can be found on the Researchers page. Below is a sample of the papers available on the Lexile website.

- How Accurate are Lexile Text Measures?
A. Jackson Stenner, Hal Burdick, Eleanor E. Sanford, and Donald S. Burdick, *Journal of Applied Measurement* (Volume 7, Number 3, 2006).
- Does the Reader Comprehend the Text Because the Reader Is Able or Because the Text Is Easy?:
A. Jackson Stenner and Mark Stone, April 2004 (184 KB, PDF)
- Toward a Theory of Construct Definition
A. Jackson Stenner, Malbert Smith III, Donald S. Burdick, *Journal of Education Measurement*, 1983. (1.8 MB, PDF)
- Measuring Reading Comprehension with The Lexile Framework
A. Jackson Stenner, presented at the California Comparability Symposium, October 1996 (7.1 MB, PDF)

White Papers

- *Aligning the Journey with a Destination*
- *Student Readiness for Postsecondary Options*
- *The Need for Objective Measurement Under the No Child Left Behind Act*
- *The Lexile Framework as an Approach for Reading Measurement and Success*