



Readability Scoring

Engage students and build comprehension skills with materials leveled to ensure all readers receive the proper support and challenge.

I. Readability Defined

What do we mean by the word “readability”?

The term “readability” refers to all the factors that affect success in reading and understanding a text. These factors include:

- The interest and motivation of the readers
- The legibility of the print and illustrations
- The complexity of words and sentences in relation to the reading ability

Though all of these factors combined affect the readability of a text, the last factor is the only factor that is calculated by common “Readability Formulas.” Detriments to readability can include material that is poorly printed, contains complex sentence structures, long words, or too much material containing entirely new ideas.

II. Calculating and Identifying Types of Readability Scores

How can I calculate a “readability score” for a text that I’m reviewing?

There are many methods by which a “readability score” is determined for a text. The tests most commonly used for educational texts are described below.

Spache Readability Formula (1953) — This formula calculates the grade level of a text sample based on sentence length and number of unfamiliar words. The Spache Formula considers “unfamiliar words” as words that 3rd grade students and below do not recognize. The Spache Formula is best used to calculate the difficulty of text that falls at the 3rd grade level or below.

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Original Dale-Chall Formula and Modified Dale-Chall Formula (1948) — This formula calculates the number of “unfamiliar” words. Unfamiliar are those not on a list of 3,000 common words. To calculate, count the unfamiliar words and the average sentence length of a sample of text (sample size will often vary; many readability tests suffer from “sampling error” – trying to estimate the whole of something by just measuring part of it), sum the two scores, add a constant, and look up the raw scores on a reading grade-level chart.

A “**modified**” Dale-Chall score is calculated by removing proper nouns from the text sample. It is important to remember, however, that the Dale-Chall Formula, based on a list of 3,000 common words, ignores the fact that such a list is highly subjective, and, in many cases, outdated. In addition, “common words” could differ widely depending on the region or population of any given community.

New Dale-Chall (1995) was revised by *Readability Revisited: The New Dale-Chall Readability Formula* in 1995—expanding the list of familiar words to 3000, as the original Dale-Chall Formula had a list of 763 non-hard or familiar words. The formula now results at a grade level or grade level range instead of the original floating decimal point score. New Dale-Chall can be run with and without a textbook glossary to have a corresponding “raw” and “modified” score.

Degrees of Reading Power (1970’s) — Calculating a DRP score requires between three and fifteen 300-word samples, depending on the length of the book. DRP utilizes the two factors used in the original Dale-Chall formula and adds a third factor: word length. Again, this test does not take into account the fact that syllables and sentence length often have no connection to the readability of a passage.

Lexile® (1996) — This is a number indicating the reading demand of the text in terms of the semantic difficulty (vocabulary) and syntactic complexity (sentence length). The Lexile scale ranges from 200 to 1700. Lexile is a readability test to determine how well students can comprehend materials found in the classroom—textbooks, literature, etc. Lexile assigns a number, which acts as a difficulty level of a reading passage. This level is meant to be understood at a 75% rate, so that readers are engaged and somewhat challenged by the reading passage. Students can be tested to find their optimal Lexile readability score. Schools can then match textbooks and other reading materials to students’ scores for optimal reading comprehension.

III. Lexile Scoring In-Depth

How does it work and who determines Lexile scores?

Completely automated, Lexile scores have to be determined by the company MetaMetrics®. Their computers randomly select up to 20 pages from the book and measure the number of words per sentence and the frequency of words in the American Heritage® Intermediate Corpus, a collection of about 5 million words determined to be familiar to school children from the ages of 7 to 15. Lexile scores are on a 0 to 2000 point scale; the higher the score, the higher the readability.

What do the Lexile scores mean?

Scores do not equal grade levels. There is a tremendous variance in reading ability from student to student within a classroom, much less a grade. Lexile scores allow teachers to select age-appropriate materials for varying reading abilities. Schools use materials tested above and below the average student readability; up to 50% of students read above and below these average ranges.

How has Common Core affected Lexile scoring?

The Common Core State Standards focus on what students read and how they read. As students matriculate, they develop reading comprehension skills upon encountering more complex text. In addition, students must interact more fully and more in-depth with the text as they grow and encounter (to a greater degree) more text complexity in subsequent grade levels.

The Common Core State Standards Initiative uses Lexiles to determine text complexity. Common Core designates grade level Lexile Bands (or Lexile ranges) for reading comprehension development to ensure students are on track to meet the rigorous demands of college and career readiness. Due to the advent of Common Core, MetaMetrics has realigned their Lexile ranges to match the Common Core Standards text complexity grade bands, as well as raised the higher end of the band so that students are prepared for reading at the college and career-readiness level at the end of high school. This is why you will see two columns in the chart below: the original Lexile band and the new “Stretch” Lexile band (aptly named as students must “stretch” to read texts from the higher complexity band).

Original and Stretch Lexile Band Comparison:

Grade Band	Current Lexile Band	“Stretch” Lexile Band
K-1	N/A	N/A
2-3	450L-725L	450L-790L
4-5	645L-845L	770L-980L
6-8	860L-1010L	955L-1155L
9-10	960L-1115L	1080L-1305L
11-CCR	1070L-1220L	1215L-1355L

Where can I find more information?

<http://www.metametricsinc.com/lexile-framework-reading/>

IV. Over-Dependence on Readability Scores

What are the drawbacks to relying solely on a readability score determined by a formula?

Readability Formulas were created in order to quickly determine the readability level of a textbook, for those times when it is impossible to review the textbook in its entirety; as such, they certainly serve a purpose. However, there are drawbacks involved in relying heavily on any readability formula to choose a textbook:

- All readability formulas are designed to calculate the readability of a text for an “average” student; as an educator, of course, it is more important to determine the readability of a text for each of your “real” students.
- Actual readability of a textbook is also affected by book length; length of a selection; peer, parent, and teacher attitudes; type of material; individual student motivation; and previous success in reading.
- Reading formulas do not take into account grammar, punctuation, clarity of writing, the repetition of certain words and phrases, the density of information, or whether the text is fiction or nonfiction.
- The information regarding word frequency in most of the readability texts is dated.
- Ease of use and incorporation of grade-level scale (Flesch-Kincaid, Fry Index, etc.) – not a particular effectiveness – are often the sole reasons that a particular readability is chosen.

How can I, as an educator, avoid falling into the trap of judging a textbook simply by a blanket “readability score”?

Look for the following factors, which reading experts agree serve to make a text more readable for students:

- Size of type and length of a line
- The use of color
- The use of diagrams or charts
- Page layout
- The number of concepts per paragraph
- An “interactive” text
- Length of text
- Student interest

V. Readability Conversion Table

Dale-Chall Grade Level	DRP Score	Lexile Score
3.0–3.5	41–50	260–470
3.6–4.0	47–51	480–640
4.1–4.5	47–51	480–660
4.6–5.0	47–53	510–690
5.1–5.5	53–55	610–750
5.6–6.0	55–56	660–840
6.1–6.5	56–58	750–930
6.6–7.0	59–60	800–1040
7.1–7.5	61–62	800–1060
7.6–8.0	63–64	900–1140
8.1–8.5	65–66	960–1140
8.6–9.0	66–67	1050–1210
9.1–9.5	68–69	1050–1350
9.6–10.0	69–70	1050–1350
10.1–10.5	70–71	1150–1400
10.6–11.0	71–72	1150–1450
11.1–11.5	72–73	1200–1450
11.6–12.0	73–74	1250–1450

DRP and Lexile equivalents represent the 25th to 75th percentile range of a total of 514 samples. Some figures have been modified slightly to reflect other sources of information or to correct for very small numbers of samples in a particular grade-level range.

VI. Harcourt Social Studies Programs

Grade Level	Program Title	Lexile	Guided Reading	Spache	New Dale Chall
K	Harcourt Social Studies: Our World, Now and Long Ago, Student Edition	N/A	N/A	N/A	NA
1	Harcourt Social Studies: A Child's View, Student Edition	610	N/A	1.8	N/A
2	Harcourt Social Studies: People We Know, Student Edition	700	N/A	2.2	NA
3	Harcourt Social Studies: Our Communities, Student Edition	760	N/A	NA	3.1
3	Harcourt Social Studies: World Communities, Student Edition	860	N/A	NA	NA
4-6/7	Harcourt Social Studies: States and Regions, Student Edition	810	N/A	NA	4.0
4-6/7	Harcourt Social Studies: Canada and Latin America, Student Edition	840	N/A	NA	NA
4-6/7	Harcourt Social Studies: The United States: Making a New Nation, Student Edition	860	N/A	NA	4.5
4-6/7	Harcourt Social Studies: The United States, Student Edition	860	N/A	NA	5.0
4-6/7	Harcourt Social Studies: The United States: Civil War to Present, Student Edition	890	N/A	NA	NA
4-6/7	Harcourt Social Studies: World History, Student Edition	940	N/A	NA	6.0
4-6/7	Harcourt Social Studies: World Regions, Student Edition	960	N/A	NA	6.0
4-6/7	Harcourt Social Studies: Ancient Civilizations, Student Edition	940	N/A	NA	6.0

VII. Harcourt Social Studies Leveled Readers

Grade K, Our World, Now and Long Ago

Leveled Reader Title	Lexile	Guided Reading	Spache	New Dale Chall
Animal Helpers	260	E-F	N/A	N/A
Celebrate the Seasons	270	D-E	N/A	N/A
Changes	NP	E-F	N/A	N/A
From Here to There	290	E-F	N/A	N/A
Highest and Lowest	200	E-F	N/A	N/A
Honoring Heroes	220	E-F	N/A	N/A
Hospital Workers	210	D-E	N/A	N/A
I Follow the Rules	NP	E-F	N/A	N/A
Learning From the Past	NP	H-I	N/A	N/A
Let's Visit a Museum	150	D-E	N/A	N/A
Look Out!	60	D-E	N/A	N/A
My Mom the Mayor	110	E-F	N/A	N/A
Off to Work We Go	NP	E-F	N/A	N/A
People and Places	NP	D-E	N/A	N/A
Proud to be an American	NP	E-F	N/A	N/A
Safety is Our Job	100	D-E	N/A	N/A
The Pilgrims	260	D-E	N/A	N/A
Time Keepers	260	E-F	N/A	N/A

Grade 1, A Child's View

Leveled Reader Title	Lexile	Guided Reading	Spache	New Dale Chall
All Kinds of Markets	430	H-I	1.9	N/A
All Twisted Up: Making Pretzels	390	J-K	2.3	N/A
Boomtowns and Ghost Towns	500	J-K	2.3	N/A
Fighting Back the Sea	260	J-K	1.9	N/A
Games People Play	320	J-K	1.9	N/A
Going Shopping	300	G	1.7	N/A
Hall of Heroes	480	I-J	2.4	N/A
Let's Vote!	220	G-H	1.4	N/A
Many Cultures	360	G	1.8	N/A
Moving Ahead	270	G	1.8	N/A
My Town	440	G	2.0	N/A
News Travels Fast	440	G-H	2.5	N/A
Red, White, and Blue	370	G	2.1	N/A
Rules and Laws Keep Me Safe	410	F-G	2.2	N/A
Strange Laws	450	H-I	2.1	N/A
Tell Me a Story	60	H-I	1.5	N/A
The Star-Spangled Banner	380	E-F	2.0	N/A
We Live Here	240	F-G	1.7	N/A

Grade 2, People We Know

Leveled Reader Title	Lexile	Guided Reading	Spache	New Dale Chall
At the Bottom of the World	560	J-K	2.7	N/A
Bartering	550	K-L	3.2	N/A
Businesses Depend on Each Other	520	H-I	2.2	N/A
Buying and Selling	430	L-M	1.9	N/A
Different Kinds of Deserts	390	K-L	2.0	N/A
Fact or Fiction: American Folk Heroes	560	M-N	2.6	N/A
Government on the Move	480	M-N	2.1	N/A
Linking Communities	380	J-K	2.1	N/A
Living Off the Land	220	J	1.9	N/A
Many People, Many Cultures	300	J	1.9	N/A
North, South, East, West	300	J	1.7	N/A
Our Government at Work	250	I-J	1.9	N/A
Recording History	390	L-M	2.2	N/A
Regional Festivals	400	K-L	2.0	N/A
Sticks and Stones Can Make Our Homes	450	M-N	2.6	N/A
Talk to Me	570	M-N	2.2	N/A
The President's Helpers	490	J-K	2.8	N/A
Visiting Our Past	220	J	1.9	N/A

Grade 3, Our Communities

Leveled Reader Title	Lexile	Guided Reading	Spache	New Dale Chall
Chill Out! The Story of Air-Conditioning	630	L-M	N/A	3.6
Citizens Lead the Way	400	J-K	N/A	2.6
Communities of the Future	660	J-K	N/A	4.3
Community History	490	I-J	N/A	2.8
Designing Currency	680	L-M	N/A	3.2
Designing Our Capitol	640	J-K	N/A	3.2
Frozen in Time	630	L-M	N/A	4.5
Making Money, Saving Money	470	H-I	N/A	2.5
New Frontiers	720	O-P	N/A	4.7
Old Sturbridge Village	550	J-K	N/A	2.9
People and the Land	430	I-J	N/A	2.5
People from Many Places	380	J-K	N/A	2.3
People Who Care	700	L-M	N/A	4.7
Risky Business	700	L-M	N/A	4.7
Shaking Things Up: Cultural Revolutions	690	M-N	N/A	4.5
Sister Cities	580	J-K	N/A	3.4
The Nation's Attic: The Smithsonian	640	L-M	N/A	3.4
We Live in Communities	440	J-K	N/A	2.1

Grade 4, States and Regions

Leveled Reader Title	Lexile	Guided Reading	Spache	New Dale Chall
A Musical Heritage	780	Q	N/A	4.7
Central Park: New York City's Backyard	760	O-P	N/A	4.5
Chicago: Birthplace of Skyscrapers	860	R	N/A	5.5
Destination: The Southeast	520	L-M	N/A	3.1
Finding Your Way Around	880	Q	N/A	5.8
Gold Fever	730	O-P	N/A	4.4
Greetings from the Northwest	480	M-N	N/A	3.7
Hang Ten: The History of Surfing	860	R	N/A	5.6
Home on the Range: The Story of Cowboys	800	P-Q	N/A	4.3
I Want to be an Astronaut!	780	R	N/A	5.8
Introducing the Midwest	460	L-M	N/A	3.1
John Wesley Powell and the Colorado River	810	R	N/A	5.8
Looking at the United States	630	O	N/A	3.4
Road Trip U.S.A.	650	O-P	N/A	4.6
Stories from the Northeast	830	Q-R	N/A	5.7
The Gateway Arch	740	Q	N/A	4.6
This is the West	480	M-N	N/A	3.3
Welcome to the Southwest	540	O	N/A	3.6

Grades 4-6/7, The United States

Leveled Reader Title	Lexile	Guided Reading	Spache	New Dale Chall
A Changing World	700	P-Q	N/A	4.8
Building a Government	660	P-Q	N/A	4.4
Destination Freedom	850	R	N/A	5.6
Discovering America and Its Early People	600	O-P	N/A	3.8
Extreme U.S	850	Q-R	N/A	5.0
Mapping The World	870	X	N/A	6.6
Mr. Madison's War	770	R-S	N/A	5.8
New Technology in the Civil War	920	T-U	N/A	6.4
Pandemics	820	X-Y	N/A	6.9
Political Parties in the United States	840	U-V	N/A	7.0
Settling a Continent	630	P-Q	N/A	3.8
Spying in the American Revolution	970	S-T	N/A	6.8
The Atomic Age	840	V	N/A	5.9
The Mysterious Olmecs	870	V	N/A	6.7
The Struggle for Independence	670	P-Q	N/A	4.3
Valley Forge	950	S-T	N/A	5.1
War Between the States	650	O-P	N/A	4.2
Young Colonists	790	Q-R	N/A	5.3

Grades 4-6/7, The United States: Making a Nation

Leveled Reader Title	Lexile	Guided Reading	Spache	New Dale Chall
Ben Franklin: Colonial Genius	880	R-S	N/A	6.4
Building a Government	660	P-Q	N/A	4.4
Destination Freedom	850	R	N/A	5.6
Discovering America and Its Early People	600	O-P	N/A	3.8
Extreme U.S.	850	Q-R	N/A	5.0
Life in the Colonies	560	P-Q	N/A	4.6
Mapping The World	870	X	N/A	6.6
Mr. Madison's War	770	R-S	N/A	5.8
New Technology in the Civil War	920	T-U	N/A	6.4
Newcomers Arrive	620	P-Q	N/A	4.3
Political Parties in the United States	840	U-V	N/A	7.0
Spying in the American Revolution	970	S-T	N/A	6.8
The Mysterious Olmecs	870	V	N/A	6.7
The Struggle for Independence	670	P-Q	N/A	4.3
Treasure Hunt	850	Q-R	N/A	5.6
Valley Forge	950	S-T	N/A	5.1
War Between the States	650	O-P	N/A	4.2
Young Colonists	790	Q-R	N/A	5.3

Grades 4-6/7, The United States: Civil War to Present

Leveled Reader Title	Lexile	Guided Reading	Spache	New Dale Chall
Changes After the Civil War	580	J-K	N/A	3.6
Civil War Spies	840	S-T	N/A	6.5
Code Breakers	970	X-Y	N/A	6.4
Difficult Times	770	Q	N/A	3.8
Escape to Freedom	950	T	N/A	6.3
Gettysburg	840	R	N/A	4.8
How the West Got Wild	910	R	N/A	6.1
Into the Twentieth Century	700	P	N/A	4.0
Our Nation Today	780	Q	N/A	4.6
Pandemics	820	X-Y	N/A	6.9
Taking to the Sky	810	R	N/A	5.8
The Atomic Age	840	V	N/A	5.9
The End of a Century	750	O-P	N/A	4.4
The Gilded Age	870	Q-R	N/A	5.5
The Land and the Civil War	750	P	N/A	4.5
The Tuskegee Airmen	920L	S-T	N/A	4.8
Travelling with the President	870L	S-T	N/A	6.3
Young Entrepreneurs	810L	R	N/A	5.0

Grades 4/6-7, Ancient Civilizations

Leveled Reader Title	Lexile	Guided Reading	Spache	New Dale Chall
All Roads Lead to Rome	830	R	N/A	4.9
Ancient Chinese Inventions	890	S-T	N/A	6.4
Artists, Thinkers, and Rulers	680	Q	N/A	4.7
Built to Last	840	S-T	N/A	6.0
Decoding the Past	910	U-V	N/A	6.1
Early Artists	870	R-S	N/A	5.8
Early People in the Holy Land	610	Q-R	N/A	4.7
Everyday life in Ancient Greece	880	U-V	N/A	6.6
Great Civilizations Develop	740	Q-R	N/A	4.9
Great Empires of Asia	750	R	N/A	4.8
Hindu Gods and Goddesses	890	Y	N/A	7.8
Holy Places	860	V	N/A	5.5
Join the Roman Army	950	Y+	N/A	7.3
Our Ancestors	830	R	N/A	4.9
Rest in Peace: Egyptian Tombs	930	X-Y	N/A	7.4
Sailing Ancient Seas	950	V-W	N/A	7.8
Searching for Noah's Ark	980	V-W	N/A	7.5
Trapped in Time	930	V-W	N/A	7.6

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