EXAMPLE LEXILE FRAMEWORK FOR READING **QUANTILE** FRAMEWORK FOR MATHEMATICS

AN INTRODUCTORY GUIDE FOR STATE LEADERS



Introduction

What are the *Lexile*[®] Framework for Reading and the *Quantile*[®] Framework for Mathematics?

The Lexile Framework for Reading places readers and texts on the same developmental scale enabling educators to match students to books and monitor their students' reading growth over time.

Like the Lexile Framework, the **Quantile** Framework for Mathematics allows both students and skills and concepts to be placed on the same scale. Having a common scale to measure students' math skills, as well as math content, provides a critical link for supporting personalized learning in math.

By providing Lexile[®] and Quantile[®] measures for their students, state education agencies are providing actionable information to educators, families and students.

Our Mission

Connect educators, families and students with resources for accelerating learning, improving achievement and providing a means to monitor growth across assessments throughout each student's journey toward college and career readiness.





About This Guide

This introductory guide is designed to help state education agency staff understand the Lexile and Quantile Frameworks.

Your state is one of a growing number of state education agencies that leverage proven, scientific measures to accelerate learning and help students graduate ready for success in college and careers. As our partner, we strive to provide you with the support you need to understand and utilize the full benefits of the Frameworks.

This introductory guide is part of a toolkit that provides your teams with resources you need to communicate with families and educators across your state. To access the rest of the toolkit, including the resources referenced in this and the Communications Guide, please visit **metametricsinc.com/state-toolkit**.



Already familiar with Lexile and Quantile measures?

Read the *Communications Guide for State Leaders* at **metametricsinc.com/state-communications**.

ACCESS THE TOOLKIT

Visit **metametricsinc. com/state-toolkit** to access the toolkit.

VISIT OUR WEBSITE

Visit **MetaMetricsInc.com** to learn more about us, our offerings and the research behind our actionable metrics.



5 Lexile & Quantile Measures: What You Need To Know

A Deeper Dive: Links to Additional Information

What's Inside

- 6 Overview of Lexile & Quantile Measures
- 7 The Lexile Framework for Reading
- 8 El Sistema Lexile® Para Leer
- 9 The Quantile Framework for Mathematics
- 10 The Lexile & Quantile Footprint
- 11 Making Assessment Results Actionable
- 13 Using Lexile Measures in the Early Grades
- 13 Tracking & Forecasting Reading & Math Growth
- 14 Access to Lexile Measured Text
- 14 Using Lexile & Quantile Measures Within Accountability
- 15 Using Lexile & Quantile Measures to Inform Textbook Selection
- 15 Explaining Variance in Test Scores
- 16 Grade-level Ranges
- 16 College & Career Readiness
- 17 Navigating Text Complexity
- 17 Professional Learning Opportunities
- 18 Further Reading

19 Online Tools & Resources

> **23** Contact Your Team

- 20 Free Lexile Learning Tools
- 21 Free Quantile Learning Tools
- 22 Communications Resources

23 Our Team Members

LEXILE & QUANTILE MEASURES: WHAT YOU NEED TO KNOW

In this section, we provide basic information about our reading and math metrics. Topics covered include:

- Overview of Lexile & Quantile Measures
- \bigcirc The Lexile Framework for Reading
- El Sistema Lexile Para Leer
- The Quantile Framework for Mathematics
- The Lexile & Quantile Footprint
- Aking Assessment Results Actionable



Overview of Lexile & Quantile Measures

Consider this scenario: A parent takes her child to the store to buy shoes. The salesperson asks her, "What kind of shoes do you need?" The parent replies, "He needs sneakers." As the salesperson leads her to the sneakers, he asks, "How old is your child?" The parent answers, "12." The salesperson then points to 10 pairs of sneakers on the wall and says, "These are our sneakers for age 12."

Not likely, right? We don't buy shoes by age; we buy them by size. Shoe sizes among 12-year-olds vary a great deal. Their reading and mathematical abilities vary a great deal as well. For years we have matched students to books and other learning materials based on age or grade level. If a student likes science fiction books and is nine years old or in fourth grade, he is given "fourth-grade science fiction" to read. But what if that fourth grader's reading ability is far higher than the "average" student or he's not quite reading on a fourthgrade level?

As with shoe shopping, it's important to recognize that **one size does not fit all** and ensure that each student is matched with ability-appropriate reading materials, math activities and resources that accelerate a student's learning and provide the best academic support possible.

Meaningful Measures

With Lexile and Quantile measures, state education agencies can enhance the value of state assessments to stakeholders throughout their states, better interpret assessment data and better connect state assessments to classroom achievement.





The Lexile Framework for Reading

The Lexile Framework for Reading is a developmental scale that indicates the complexity of a given text and the reading ability of a student. Unlike other measurement systems, the Lexile Framework determines reading ability based on assessment performance, rather than age or grade levels.

A Lexile reading measure represents a person's reading ability on the Lexile scale. A Lexile text measure represents a text's difficulty level on the Lexile scale. When used together, they can help a reader choose a book or other reading material that is at an appropriate difficulty level. The Lexile reading measure can also be used to monitor a student's growth in reading ability over time.

Students are given a Lexile reading measure after taking one of the many assessments linked with the Lexile Framework or specifically developed to report Lexile reading measures. Lexile reading measures range from below OL to above 1800L. When Lexile reading and text measures are used together, we can predict how well a student will likely comprehend given text. For independent reading (without the help of a parent, teacher or other adult), students should look for materials with a reading comprehension "sweet spot" of 100L below to 50L above their reported Lexile measure.





El Sistema Lexile® Para Leer

The number of English Language Learners (ELLs) in the United States continues to rise. Among the more than 4.5 million students who are ELL in this country, more than 75 percent speak Spanish at home.¹

Many state education agencies are enhancing their efforts to meet the educational needs of Spanish-speaking students. Consequently, MetaMetrics has developed El Sistema Lexile para Leer to provide its own scientific, universal scale and metrics to connect Spanish-speaking readers with resources at the right level of difficulty and in their native language.

Many state education agencies link their Spanish reading assessments to El Sistema Lexile to provide progress monitoring and learning resources for Spanish readers similar to those provided to English readers through the Lexile Framework.

With the implementation of this Framework, a Spanish assessment is linked to El Sistema Lexile, making students' test scores immediately actionable. Like its Englishlanguage counterpart, El Sistema Lexile measures give educators, families and librarians a powerful tool for personalizing instruction by taking the guesswork out of selecting materials that can help to improve student reading ability. If you're looking to begin reporting student reading assessment results in Spanish Lexile measures, learn more at metametricsinc.com/departmentsof-education/products-and-services/lexilestate-assessment.

1 U.S. Department of Education, National Center for Education Statistics. (2017). *The Condition of Education 2017* (2017-144), **English Language Learners in Public Schools**.





The Quantile Framework for Mathematics

The Quantile Framework for Mathematics is a unique measurement system that uses a common scale and metric to assess a student's mathematical ability and the difficulty of specific mathematical skills and concepts.

A Quantile measure represents the difficulty level of a mathematical skill or concept and a student's understanding of these mathematical skills and concepts in the areas of Geometry, Measurement, Number Sense, Numerical Operations, Algebra and Algebraic Thinking, Data Analysis, Statistics and Probability. Quantile measures are expressed as numeric measures followed by a "Q" (for example, 850Q), and represent a position on the Quantile scale. The Quantile Framework spans the developmental continuum from kindergarten mathematics to pre-calculus, from below OQ (Emerging Mathematician) to above 1600Q.

Quantile measures provide seamless determination of which mathematical skills a student has learned and which ones require future instruction. They inform mathematics teaching and learning by helping educators target instruction and monitor student growth toward a state's proficiency standards and the mathematical demands of college and careers.

With Quantile measures, state education agencies, school districts, educators and families have a powerful tool for supporting learners as they navigate the path to academic success in mathematics.

MATH SKILLS 1350Q TO BE COLLEGE- AND CAREER-READY 850Q Measure angles using a	ADVANCED 1300Q 1200Q 1000Q 900Q
68000 Use side and angle properties in quadrilaterals.	8000 8000 7000 That makes my Quantile range, or math "sweet spot," 6200 to 7200. I'm ready to learn about properties of sides and angles in quadrilaterals (6800).
450Q Divide Whole Numbers 150Q Find A Missing Number	400Q 300Q 200Q 100Q 0Q EM100Q EM200Q EM200Q EM200Q



The Lexile & Quantile Footprint

Recognized as the standard for matching students with "just right" learning resources, more than 35 million students in all 50 U.S. states receive a Lexile measure or Quantile measure. Today more than 75 popular reading and math assessments and programs report Lexile and Quantile measures.



Lexile and Quantile measures help connect students with ability-appropriate materials, creating an ecosystem that facilitates learning and growth. With more than half of students in the United States now receiving Lexile and Quantile measures, students have powerful tools to fuel their educational journey.



Making Assessment Results Actionable

With the Lexile and Quantile Frameworks, you help to connect assessment results with resources, materials and ongoing instruction to accelerate students' learning and instill greater confidence in their ability to succeed.

> MetaMetrics provides you with measures and data that can be used to better evaluate, differentiate and communicate.



Evaluate

Use a scientific, universal scale to assess longitudinal student growth toward college and career readiness. Provide an interpretive framework for reviewing and documenting assessment data.



Differentiate

Provide teachers with a powerful tool to differentiate instruction and guide scaffolding to help students grow. Results from state assessments become a catalyst for unique instructional improvement in the classroom.



Communicate

Easily quantify and share student growth for districts, schools and individual students on their trajectory toward college and career readiness. Better engage parents with an easyto-understand metric, giving them more ways to support their child's exploration and learning outside of the classroom.



A DEEPER DIVE: LINKS TO ADDITIONAL INFORMATION

In this section, we highlight links to additional information on how Lexile and Quantile measures can enhance your work at the department. Topics include:

• Using Lexile Measures in the Early Grades

- Tracking & Forecasting Reading & Math Growth
- Access to Lexile Measured Text
- Using Lexile & Quantile Measures Within Accountability
- Using Lexile & Quantile Measures to Inform Textbook Selection

- Explaining Variance in Test Scores
- Grade-level Ranges
- Ocllege & Career Readiness
- → Navigating Text Complexity
- Professional Learning Opportunities
- → Further Reading



Using Lexile Measures in the Early Grades

Looking for tools to support phonics instruction? *Lexile*® Find a Decodable Book and *Lexile*® Decodable Passages can help! Find a Decodable Book is a resource that helps readers crack the alphabetic code by finding books that match instruction. Decodable Passages provides access to online passages students can read to practice specific phonics skills.



These decodable resources are available in *Lexile*[®] & *Quantile*[®] Hub at Hub.Lexile.com.

Tracking & Forecasting Reading & Math Growth

Lexile and Quantile measures provide invaluable data on student growth over time, from kindergarten through high school. Educators and parents now have the ability to chart growth, forecast achievement and compare forecasted reading and math growth with the demands of college and specific careers.

With the *Lexile*[®] and *Quantile*[®] Growth Planners, you can:

- Compare individual student results to national student performance.
- Explore the reading/math entry-level demands of hundreds of occupations.
- View descriptive national level career information and trends from O*NET, the premier online career search database designed for the U.S. Department of Labor.
- View regional career information including median pay and projected career openings with access to real-time job market data.

Access the Growth Planners

Access the Lexile and Quantile Growth Planners at **Hub.Lexile.com**.



Access to Lexile Measured Text

More than 100 million articles, books and websites have Lexile measures to help educators easily find reading materials to match student reading abilities. Many of these resources — both fiction and informational text — are available for free to educators through state and local library databases.

Nearly every state across the country offers free access to periodical database services for educators, parents, students and others. These periodical database services provide Lexile measures for millions of newspaper and magazine articles, as well as encyclopedia and reference content. Database providers include EBSCO, Gale, Grolier, ProQuest and others.



ONLINE PERIODICAL DATABASES OFFERING LEXILE MEASURES

For a list of available databases containing Lexile text measures by state, access our *Guide to Online Periodical Databases Offering Lexile Measures* at **lexile.com/free-text-resources.**

Using Lexile & Quantile Measures Within Accountability

The Lexile and Quantile Frameworks provide states with a way to measure growth in reading and mathematics based on actual student scores versus statistical growth models that may not be well understood by educators and parents. These measures of student performance can be used by states to inform policy decisions regarding setting growth targets for accountability.

When improvements in student reading and mathematics achievement are tracked over time with the Lexile and Quantile Frameworks, there are two simultaneous benefits:

Student achievement can be interpreted in relation to the reading and mathematics demands of future courses and careers; and The rate of change in student achievement over time can be compared with the reading and mathematics pathways leading to college and career readiness.

When states link their reading and mathematics achievement scales with the Lexile and Quantile Frameworks, the states' grade-level performance standards can also be understood in relation to the reading and mathematical demands of instructional and occupational materials. These benefits help ensure that accountability aligns more closely with instruction, while providing increased transparency for educators, parents and students.

Using Lexile & Quantile Measures to Inform Textbook Selection

The complexity of instructional materials students encounter in school is important. To help provide students with the best instructional resources, textbook review committees — at the state or local level — can establish Lexile and Quantile criteria to inform their textbook selection process. Our team can provide you with letters that encourage or require publishers to submit materials with Lexile and Quantile measures for committee reviews.

Explaining Variance in Test Scores

Test results offer an estimate of a student's ability. It's normal to see a student's tested measures go up and down. Each test result is just one data point at one moment in time and susceptible to a host of factors that impact test performance. Just as measurements like weight and blood pressure can fluctuate based on a variety of circumstances, so too can test scores.



Access these websites to help educators and parents better understand

FOR EDUCATORS:

- Lexile.com/managing-multiplemeasures
- Quantiles.com/managing-multiplemeasures

FOR FAMILIES:

- Lexile.com/test-results
- Quantiles.com/test-results





Use the *Lexile®* Measures Manager and *Quantile®* Measures Manager to determine a student's optimal reading or math measure when two assessments have resulted in significantly differing Lexile or Quantile measures. Available in the Hub at Hub.Lexile.com!



Grade-level Ranges

Families and educators often want to know if a student's Lexile or Quantile measure is at, above or below grade level. To help interpret their measures and provide guidance on where they should be to graduate college- and career-ready, we offer two types of grade-level ranges.

- Typical Lexile or Quantile measures for students by grade.
- Lexile text complexity and Quantile lesson complexity by grade.



ACCESS THE GRADE RANGE INFORMATION

FOR LEXILE MEASURES: Lexile.com/educators/grade-range

FOR QUANTILE MEASURES: Quantiles.com/educators/grade-range

College & Career Readiness

Reading ability and mathematical understanding are two student attributes at the heart of college and career readiness. Lexile and Quantile measures quantify these abilities and can help monitor student growth toward evidence-based, grade-level benchmarks of college and career readiness. Lexile and Quantile measures are the only metrics available to compare and describe the reading and mathematics demands of careers.

COLLEGE AND CAREER READINESS

Use the *Lexile*[®] and *Quantile*[®] Career Database to identify the Lexile level and/or Quantile level associated with entry-level reading and/or math demands of a particular career in this new tool. Use the reading and math demands associated with hundreds of careers to inform goal setting. Available in the Hub at **Hub.Lexile.com**! Research indicates that the materials students will first encounter in college and careers are around 1300L for reading and 1350Q for mathematics.



February 2023 | An Introductory Guide for State Leaders 17

Navigating Text Complexity

A Lexile measure serves as a starting point in measuring the complexity of a text. It's important to note that a Lexile measure does not address the subject matter, text quality, age-appropriateness of the content or a reader's interests. Although the Lexile measure is an important component in evaluating text complexity, it is but one consideration parents, caregivers, librarians and educators should use when helping a child select books to read.



Explore text complexity and determine text readability with the *Lexile*® **Text Analyzer**. Available in the Hub at **Hub.Lexile.com**!

Professional Learning Opportunities

As you begin working with Lexile and Quantile measures, you'll likely want a deeper dive to broaden your understanding of the Frameworks and how to make use of Lexile and Quantile measures to accelerate learning for students toward college and career readiness. Our professional learning sessions can be delivered in-person or online via web conference and are personalized for your audiences and contexts. Web conference sessions also can be recorded and shared asynchronously for those unable to attend the live event. Below is a sampling of just a few session titles for which we have customized content based upon the needs of individual state leaders.

- An Introduction to the Lexile Framework for Reading
- An Introduction to the Quantile Framework for Mathematics
- Ensuring Students Are Math & Reading Ready for College & Careers
- Addressing Text Complexity in College & Career Ready Standards
- Differentiating Instruction Using the Lexile & Quantile Frameworks
- Reading & Mathematical Demands of High-Interest, High-Growth Careers
- Finding the Complexity Within a Text: Introducing Lexile by Chapter Guides



LEARN MORE

Visit metametricsinc.com/ state/professional-learning.



Our research interests include:

- College and Career Readiness
- Early-Reading
- Growth Modeling
- Summer Learning
- Text Complexity
- Rasch Modeling
- Reading Instruction for English Language Learners
- Language Assessment
- Learning Progressions & Promoting a Growth Mindset
- Vocabulary
- Machine Learning
- Data Analytics

Further Reading

Lexile and Quantile measures were developed based on years of research. Here at MetaMetrics, we continue to explore and research how our measures can be used by educators to transform learning and accelerate student achievement. Exploring the relationships between learning, policy, measurement and instruction enables us to continue to advance the effectiveness of Lexile and Quantile measures.

Our research explores topics such as bridging the readiness gap, achieving academic success for college and beyond, and communicating success to parents and other stakeholders.

READ MORE

Browse the hundreds of articles and publications that discuss our research at **metametricsinc.com/research**.

Online Tools & Resources

The *Lexile*[®] **&** *Quantile*[®] **Hub** is an online platform that provides easy access to reading and math tools. We listened to feedback from educators, families and students to develop our tools.



The Hub has something for everyone. The Lexile and Quantile Hub's tools (listed on the following pages) are available at three levels of access:

FOR EDUCATORS	Your state's partnership allows educators FREE ACCESS to all of Hub's Premium features – a \$17.99 value annually for every educator in your state!
FOR FAMILIES	Basic+ level members access enhanced tool features by registering.
FOR STUDENTS	Basic level guests access core features of the Hub's tools.

For the most up-to-date details on the Hub's membership options, visit hub.lexile.com/membership-options.

VISIT THE SUPPORT CENTER

Access Quick Start Guides, video tutorials and more at **hubsupport.lexile.com**.



Lexile Tools



TOOL @ HUB.LEXILE.COM	WHAT IT DOES
	 Determine the Lexile text measure range for text that is pasted in, typed in or downloaded. Display key vocabulary and text indicators. Save and store recently measured texts.
	 Identify the Lexile level associated with entry-level reading demands of a particular career. Use the reading demands associated with hundreds of careers to inform goal setting.
FIND A BOOK	 Search among nine categories of interest filters aligned with other popular book browsers to find books at a student's reading level and interests. Search filters include dozens of interest sub-categories, books in a series and award winning books. Display key vocabulary in a book with definitions, parts of speech and example sentences. Identify the reading level by chapter for over 1,200 popular chapter books.
GRADE LEVEL CHARTS	 Discover how a student's Lexile measure compares to peers nationally for grades K-12 at the beginning of the year, middle of the year and end-of- year state reading assessments.
GROWTH PLANNER	 Compare individual Lexile student results to national student performance. Explore the reading entry-level demands of hundreds of occupations. View descriptive national level career information and trends from O*NET, the premier online career search database designed for the U.S. Department of Labor. View regional career information including median pay and projected career openings with access to real-time job market data.
	 Determine a student's optimal Lexile measure when two assessments have resulted in significantly differing Lexile measures within 30 days of each other.
	 Help students learn the right words at the right time by creating customized lists of consequential words. Select according to: Grade level for grades 1-12 High utility words across domains Vocabulary specific to social studies, math or science
FIND A DECODABLE BOOK	 Search for decodable books by vowel sound(s). View a book's percentage of vowel sounds and words grouped by spelling patterns.
căt LEXILE DECODABLE PASSAGES	 Select decodable passages by instructional focus. Download and print passages for classroom use and sharing.



Quantile Tools



TOOL @ HUB.LEXILE.COM	> WHAT IT DOES
CAREER DATABASE	 Identify the Quantile level associated with entry-level math demands of a particular career. Use the math demands associated with hundreds of careers to inform goal setting.
TEACHER ASSISTANT	 Differentiate student instruction based on an individual's or classroom's Quantile measure according to each state's standards. Use the slider tool to identify the Quantile measure of your student or student group. Save and share favorite resources.
GRADE LEVEL CHARTS	• Discover how a student's Quantile measure compares to peers nationally for grades K-12 at the beginning of the year, middle of the year and end-of-year state math assessments.
GROWTH PLANNER	 Compare individual Quantile student results to national student performance. Explore the math entry-level demands of hundreds of occupations. View descriptive national level career information and trends from O*NET, the premier online career search database designed for the U.S. Department of Labor. View regional career information including median pay and projected career openings with access to real-time job market data. Our career planning features are powered by the world's leading providers of job market data and analytics, Projections Managing Partnership, Bureau of Labor and Statistics and O*NET.
	 Find free resources aligned to a student's state, grade, mathematical topic and Quantile measure. Save and share favorite resources.
QUANTILE MATH SKILLS DATABASE	 Find math skills associated with each state standard. Search for math skills and resources by keyword. Access free resources aligned to Quantile Skills and Concepts, state standards, keywords, Quantile measure or content strand. Save and share favorite resources.
A WEASURES MANAGER	 Determine a student's optimal Quantile measure when two assessments have resulted in significantly differing Quantile measures within 30 days of each other.



Communications Resources

As you develop a communications plan to roll out implementation of the measures, we provide messaging support and templates to help you explain Lexile and Quantile measures to your key audiences.







Contact Your Support Team

Our team at MetaMetrics shares your vision for each student being ready for and succeeding in college and career. As partners in that work, we are here to support your efforts in understanding and using the Lexile and Quantile Frameworks to help meet your goals.

Three of our MetaMetrics team members will serve as your primary support team. Please reach out to them with any questions and feedback you have.

See something missing or want to help us make this toolkit better? Please send us an email!

Our team of experienced educators and researchers are here to help.



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