



A Peek into the *i-Ready Diagnostic* Assessment

Curriculum Associates Assessment Brief
October 2024



An Assessment That Puts Educators and Students First

Educators often wonder what kind of assessment is best for their students.

Assessment and pedagogical practices such as computerized adaptive testing (CAT), measuring growth, and individualizing learning paths should support educators in focusing less time on testing and more time on student learning. The *i-Ready Diagnostic* was designed to help educators prioritize instruction and student success. Results from the *i-Ready Diagnostic* can be used to track student growth consistently and continually over a student's entire Grades K–12 career.

Reliable and Valid

- Developed and reviewed by experts in educational measurement, assessment development, and education and instruction in both mathematics and reading
- Adheres to the Standards for Educational and Psychological Testing
- Sound psychometric characteristics including low standard errors of measurement, efficient adaptive algorithm, and a robust set of validity-related evidence
- Highly correlated to state assessments

Backed by Research

Reliability and validity are cornerstones of educational measurement. With reliable scores that have valid interpretations, educators can confidently rely on assessment results. The *i-Ready Diagnostic* has evidenced that it is a reliable measure that produces valid score interpretations.

Curriculum Associates ensures reliability by developing high-quality items and adhering to research-based test development and psychometric procedures. Validity work that supports using the Diagnostic as a strong measure of student proficiency in Mathematics and Reading includes the following:



Extensive embedded field testing with millions of students has enabled the Diagnostic to have more than 10,000 rigorous questions in its item bank. This allows for the selection of the highest-quality items on the adaptive *i-Ready Diagnostic*.



Participation and review by many experts in the field of education—including educators, measurement professionals, and specialists in reading and mathematics in elementary and high school—ensures alignment to standards and the valid interpretation of results.

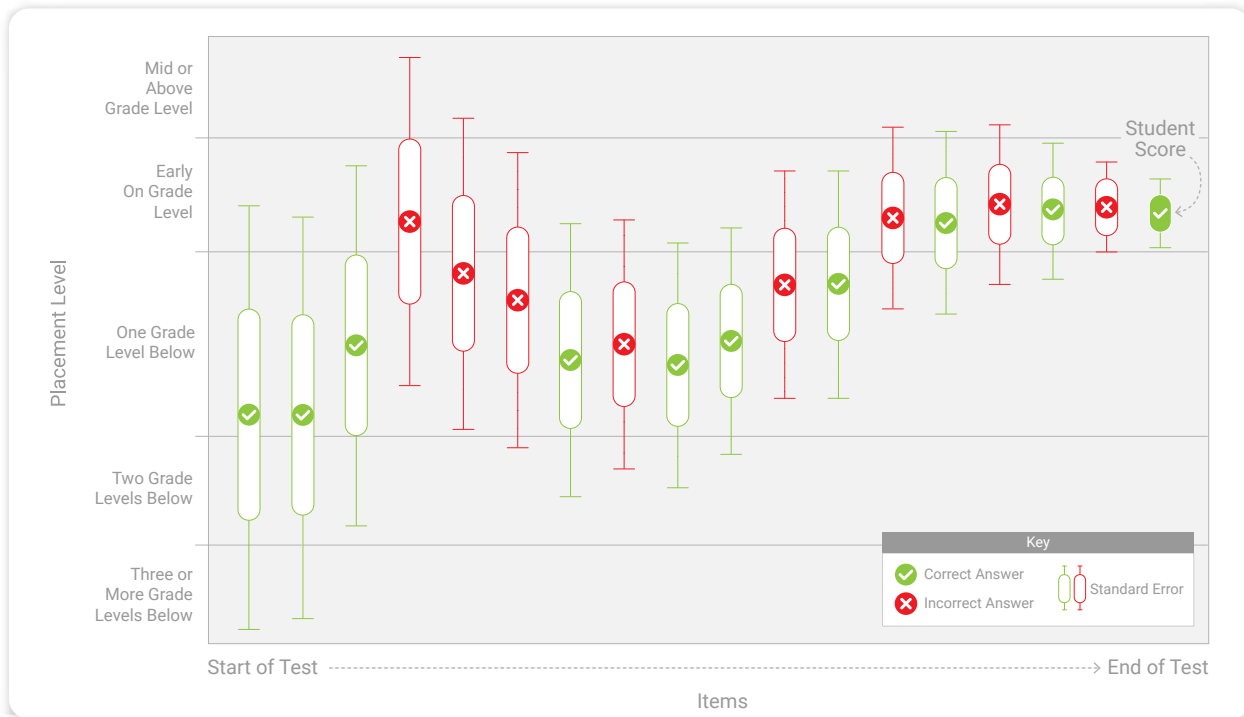


Psychometric research promotes the strong technical characteristics of the assessment, including high correlations with state summative assessments indicating that *i-Ready* is highly related to what students are learning in the classroom.

Precise Scores and Efficient Testing

The *i-Ready Diagnostic's* computer-adaptive assessment can pinpoint student performance levels more accurately—and in less time—than traditional fixed-form assessments. The online Diagnostic assesses down to the subskill level in Reading and Mathematics. The Diagnostic's sophisticated, computer-adaptive algorithm ensures learners are assessed efficiently across content domains.

Understanding How the Diagnostic Adjusts in Difficulty



A significant advantage of the *i-Ready Diagnostic's* design is the ability of the assessment to adapt to performance levels that are below and above a student's chronological grade level. As students answer questions correctly or incorrectly, the Diagnostic responds by adjusting the difficulty of future questions to match the students' current performance level as shown in the above image. This means students see an assessment that is most appropriate for their individual performance.

The *i-Ready Diagnostic* adapts, or adjusts, until it finds exactly the level at which students need to receive instruction.

- As students answer questions correctly, the Diagnostic gives them more challenging questions.
- As students answer questions incorrectly, the Diagnostic gives them less challenging questions.
- This process continues until the Diagnostic can reliably pinpoint which skills each student has mastered and which skills may benefit from more targeted instruction.

The science behind CAT is based on Item Response Theory (IRT), a testing model that uses the difficulty of test items to arrive at results. IRT can significantly improve measurement accuracy and reliability while generally providing reductions in assessment time.

This means less time for testing and more time for instruction.

Assessing the Right Content for Students

Because the *i-Ready Diagnostic* is a computer-adaptive assessment, it is not designed to assess every student on all the skills they may be expected to know. The *i-Ready Diagnostic* strikes a balance between content representation and measurement efficiency. The test is structured so students will see questions from each of the major content domain areas but will not be required to answer items about skills that may not be appropriate for their proficiency level and may, in turn, waste their time. Instead, the Diagnostic presents each student with questions that are close to their demonstrated proficiency, which enables a more precise understanding of their skills than a fixed-form assessment of the same length.

The assessment also uses information from prior items to help determine which items to sample next. Sampling allows inferences to be made about student performance in the domain without having to present the student with hundreds of items. The adaptivity of the test, coupled with domain sampling, gives educators a precise understanding of student performance within a domain without having to present students with a very long, redundant assessment.

Content Sampling in the Real World



A food critic who evaluates a restaurant doesn't have to try every item on the menu to make a judgement about the quality of the food. Instead, they can strategically sample the items across the menu to make the best evaluation!

Test Design and Development

The *i-Ready Diagnostic* is designed with teachers in mind. The assessment reflects the core belief that all students can grow and achieve grade-level expectations. This Diagnostic assessment helps educators see where students are, set expectations for growth, and connect the right instructional tools to help them get there.

Reading

Reading skills are assessed in up to six key domains on the *i-Ready Diagnostic* for Reading based on a student's grade. Those six domains are:

- Phonological Awareness
- Phonics
- High-Frequency Words
- Vocabulary
- Comprehension: Literature
- Comprehension: Informational text


Domain: Phonological Awareness

The interface for the Phonological Awareness domain is displayed on a green background. At the top, there is a white horizontal bar with a speaker icon in the center. Below this bar, there are three white rectangular boxes arranged horizontally. Each box contains a speaker icon in its top-left corner and a central illustration: a red ladybug, a stack of books, and a yellow paper bag. In the bottom right corner of the green area, there is a rounded button labeled "Done" with a right-pointing arrow.

Domain: Phonics

The interface for the Phonics domain is displayed on a green background. At the top, there is a white horizontal bar with a speaker icon in the center. Below this bar, there are four white rectangular boxes arranged horizontally. Each box contains a speaker icon in its top-left corner and a word: "hilltop", "hunter", "helpful", and "helmet". In the bottom right corner of the green area, there is a rounded button labeled "Done" with a right-pointing arrow.

Domain: High-Frequency Words



too who how

Done →

Domain: Vocabulary

Read the paragraph.

The family stood on the railroad platform surrounded by a pile of luggage. The train would transport them all the way across the country. The voyage would take a week, and they were excited to see the sights along the way.

The prefix *trans-* means “across,” and the root *port* means “carry.” Based on this information, what does the word transport mean in the paragraph?

to move to a another part of the country

to go on a journey to a place far away

to travel for a long amount of time

to bring things from one place to another

Comprehension: Literature

A Grand Journey

I wait for children to see me
as more than a purple balloon.
I travel through the breezy air.
The wind and I sing a cheerful tune.

Below me the children all scatter,
playing their joyful games of fun.
From above, my heart quietly wishes
to be included in even just one.

A little red bird flies by me,
as the clouds fade to gray.
The sun hides quickly behind them,
but I keep climbing up, up, and away!

1 2

Drag to the box TWO things the balloon does in the poem.

What the Balloon Does

plays outside grabs a friend
shines brightly sings a song

Comprehension: Informational text

Passage 1 Passage 2

School Newspapers

Working on a school newspaper staff can be an exciting part of the high school experience. Whether as elective courses or student-interest clubs, school newspapers are an excellent way for students to sharpen important skills. The production of these routine publications supports establishing school environments that offer students boosts in creativity, partnerships, community-building, and critical thinking.

Students who choose to work on the school newspaper have the opportunity to open doors in multiple areas of journalism. For example, students practice reporting, which provides regular chances for them to develop

1 2 3 4

In **Passage 2**, review the paragraph that begins at the bottom of page 1 and continues on page 2.

Click or tap **ONE** sentence in the paragraph that **BEST** shows how the author appeals to the reader's emotions.


Students are assessed on the domains that are most relevant to informing instruction at their grade levels. All students, regardless of grade level, are presented with a series of Vocabulary, Comprehension: Literature, and Comprehension: Informational Text items. Students in Grades K–2 or performing at lower levels of proficiency may also be assigned Phonics, Phonological Awareness, and High-Frequency Words items.

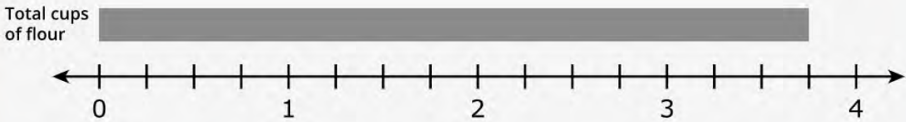
Mathematics


i-Ready Diagnostic organizes mathematical content into four domains:

- Number and Operations
- Algebra and Algebraic Thinking
- Measurement and Data
- Geometry



Domain: Number and Operations

 Alan used a total of $3\frac{3}{4}$ cups of flour to make cakes. He used $\frac{3}{4}$ cup of flour to make each cake. How many cakes did Alan make?


Total cups of flour 

 Type your answer in the box.





cakes

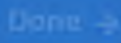
 

Domain: Algebra and Algebraic Thinking

 Solve the equation for x .

$$\sqrt{-10x + 31} = 4 - x$$

 $x = -5$ and $x = 3$  $x = -5$  $x = -3$ and $x = 5$  $x = 3$



Domain: Measurement and Data



Ric measures the length of his shoe with paper clips. He needs 6 small paper clips to measure his shoe. How many big paper clips does he need to measure the same shoe?



more than 7



exactly 7



exactly 6



less than 6

Domain: Geometry



Sofie has some big jars and some small jars. How many jars are small?



3

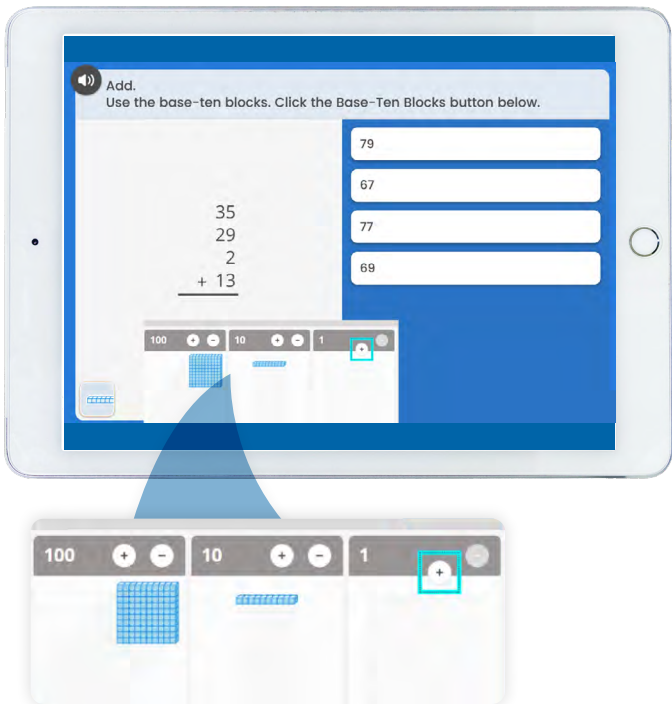
7

4

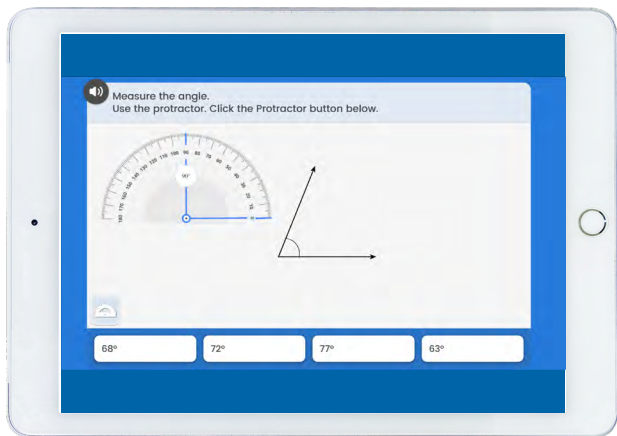
The intent of the *i-Ready Diagnostic* is to help identify the specific skills each student needs to develop, identify each student's areas of strength, and measure academic growth through the school year. The Diagnostic provides comprehensive insight into student learning across the multiple domains in Mathematics. The domains are evaluated using a variety of item types and item tools.

Base-Ten Blocks

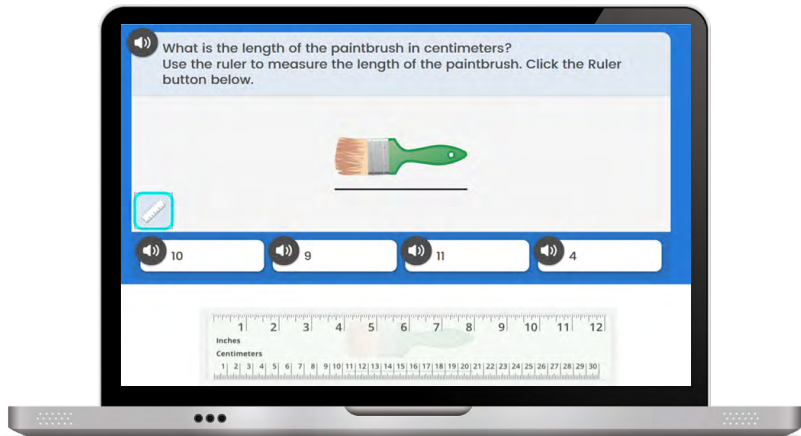
- Interactive tools are provided when required by the item. These tools include:
- Four-function calculator
 - Five-function calculator
 - Protractor
 - Ruler
 - Base-ten blocks
 - Hundreds chart
 - Coordinate grid
 - Unit squares
 - Counters



Protractor



Ruler



Additional information on what the Diagnostic measures can be found here: [i-Ready.com/What-the-Diagnostic-Measures](https://www.i-Ready.com/What-the-Diagnostic-Measures)

i-Ready Placement-Level Descriptors

Placement levels in the Diagnostic are criterion referenced, reflecting what students are expected to know at each grade level and in each content area. Educators were crucial in developing the cut scores that separate the placement levels on the Diagnostic. *i-Ready Diagnostic* assessments describe student performance in the following way:

Three or More Grade Levels Below	Two Grade Levels Below	One Grade Level Below	Early On Grade Level	Mid or Above Grade Level
<p>Students in this level are not close to meeting the expectations of college- and career-ready standards for their grade level.</p> <hr/> <p>These students likely need intensive intervention. Intensive intervention of foundational concepts is recommended.</p>	<p>Students in this level are not close to meeting the expectations of college- and career-ready standards for their grade level.</p> <hr/> <p>These students may need intensive intervention. Remediation focused on material that is two grade levels below is recommended to help fill in gaps in students' foundational knowledge.</p>	<p>Students in this level are not close to meeting the expectations of college- and career-ready standards for their grade level.</p> <hr/> <p>These students may benefit from review or remediation of material that is one grade level below.</p>	<p>Students in this level have only partially met these grade-level expectations.</p> <hr/> <p>These students will benefit from on-grade level instruction to help them meet the expectations of college- and career-ready standards for their grade level.</p>	<p>Students in this level have met the requirements for the expectations of college- and career-ready standards in their grade level.</p> <hr/> <p>This level consists of:</p> <ul style="list-style-type: none">• Mid On Grade Level: Students will benefit from instruction in late on-grade level topics.• Late On Grade Level: Students will benefit from late on-grade level enrichment and will be ready for instruction focused on topics typically covered in the beginning of the subsequent grade level.• Above Grade Level: Students will benefit from above-grade level instruction.

Learn more about [placement levels](#) on the *i-Ready Diagnostic*!

Criterion- and Norm-Referenced Scores

A standardized test score is generally represented as a number indicating how well a student performed on an assessment. There are different types of scores used in educational testing, and these scores provide different information. The *i-Ready Diagnostic* reports multiple types of scores to enable a well-rounded view of each student's performance:

- ***i-Ready Diagnostic* Scale Scores:** a common metric across grades and schools. *i-Ready Diagnostic* scale scores put performance on a single continuum, or vertical scale, for each subject so educators can compare student performance across grade levels. This enables educators to make meaningful comparisons over time—both within and across academic years.
- ***i-Ready* Placement Levels:** the practical day-to-day language that helps teachers determine which grade level of skills to focus on with a particular student. Placement levels indicate where students should most likely be receiving instruction.
- **Normative Scores:** percentiles identifying how students have performed relative to their peers nationwide. Based on a nationally representative sample of students taking the *i-Ready Diagnostic*, they compare a student's performance to students in the same grade who took the Diagnostic at a similar time of year. For example, if a student scored at the 90th percentile, this means the student scored at least as well as 90% of her national peers from the same grade level and time of year.

- **Lexile® Measures:** a widely used measure of text complexity and reading ability. Lexile measures allow a direct link between the level of reading materials and a student’s ability to read those materials.
- **Quantile® Measures:** a unique resource for estimating a student’s ability to think mathematically. Quantile measures enable educators to match a student with appropriate mathematical content.

Learn more about the characteristics of the *i-Ready Diagnostic* on the [i-Ready Assessment review site!](#)

The Power of Norm-Referenced AND Criterion-Referenced Assessments

Too often assessment scores tell educators a fraction of what they need to know in order to help all their students because they only give normative (i.e., “norm”) data or data that shows how students performed compared to their peers. Generally, this normative information is not enough to support educators in helping students. It doesn’t tell educators what each individual student needs or where they are relative to grade-level learning. To get this information, educators also need criterion-based assessment data.

Criterion-referenced scores measure student performance against predetermined criteria or grade-level standards—not how they compare to other students’ performance on the same assessment. Although assessments that are grounded in norms can be valid and reliable, used in isolation, they rarely produce instructionally relevant information. Specifically, an educator may still be left wondering, “How can I best help my student?”

The *i-Ready Diagnostic* sets high but attainable goals for students. The criterion-referenced placement levels reflect what students are expected to know at each grade level and in each content area. By providing these criterion-based scores, the Diagnostic helps educators maintain high expectations for all students.



Criterion-Referenced Data in the Real World

Before getting on a ride, it’s important that all riders meet the height requirement. It doesn’t matter how many riders meet the requirement—the requirement never changes.

Research-Based Growth Model

The growth model is informed by extensive longitudinal research on the real growth of millions of *i-Ready Diagnostic* test takers. The Diagnostic's approach to measuring student growth is based on research and what educators have long observed in the classroom: Students at different starting points often grow at different rates, and students who are behind need to grow more to reach proficiency.

The *i-Ready Diagnostic* growth model provides two empirically derived measures for understanding student growth: Typical Growth and Stretch Growth®. These two measures help educators understand what ambitious but realistic growth students should achieve. Stretch Growth helps students reach proficiency over time, while Typical Growth shows how students perform relative to average students with similar starting points.

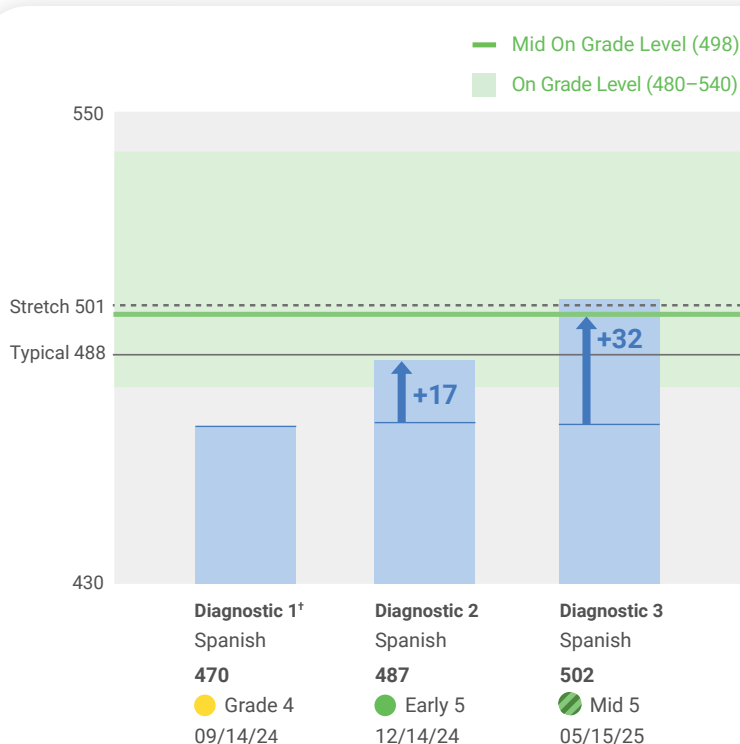
Growth in *i-Ready*

Clear Grade-Level Expectations:

Reaching grade-level proficiency means getting above the Mid On Grade Level line.

Typical Growth: The average annual growth for a student at this grade and starting placement level

Stretch Growth: An ambitious but attainable level of annual growth that puts students who are not yet proficient on a path toward proficiency

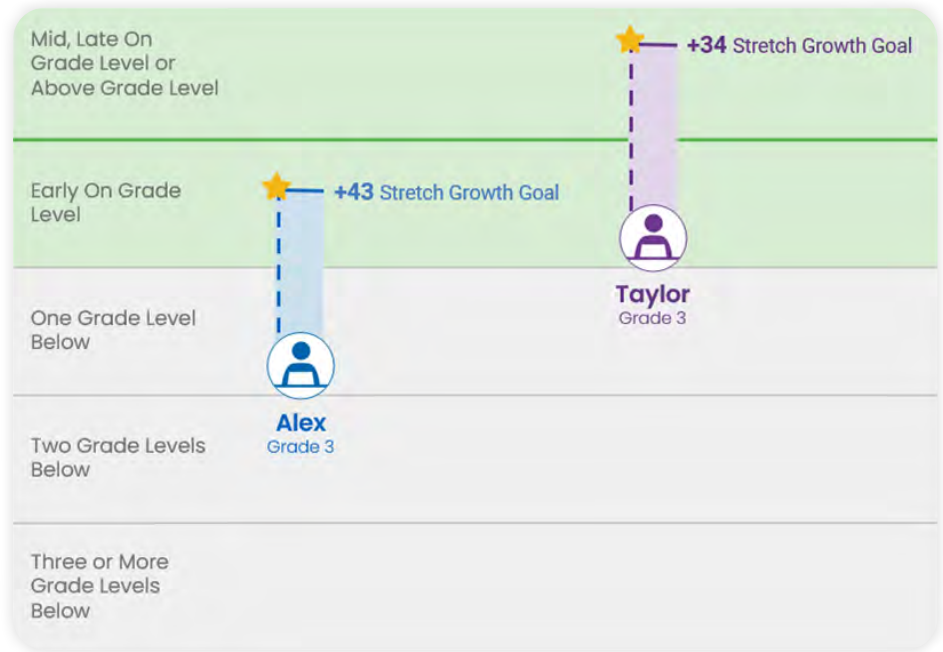


Typical Growth values were derived using the average student growth at each grade and placement level on the *i-Ready Diagnostic*.

Stretch Growth measures were derived by reviewing the growth of students who started at a given placement category, achieved grade-level proficiency over time, and attained or maintained a placement of Late Grade Level or above over time. Stretch Growth is based on the median growth in the first year for students who met their proficiency goals. Feedback from educators was also considered.

Both typical and stretch benchmarks are differentiated for students based on their chronological grade level and baseline placement on the Diagnostic. Students who start the year below grade level, for example, will have different growth measures in a subject than their peers who are on or above grade level as shown on the [next page](#).

Students who start the year below grade level will have different growth measures in a subject than their peers who are on or above grade level.



Both Typical Growth and Stretch Growth are provided for the current school year and reset based on a student's new Diagnostic each academic year. This ensures that a student's Typical Growth measure for each year reflects their chronological grade level and starting Diagnostic placement for the year. It also ensures that students on a multiyear path toward proficiency have the most relevant annual Stretch Growth target.

This growth model is made possible because of the *i-Ready Diagnostic* vertical scale. *i-Ready Diagnostic* uses a vertical scale to measure which skills a student has gained from one point in time to the next on a continuum of skills that spans Grades K–12. Educators can thereby measure student growth on a consistent scale throughout a student's entire career.

Score Reporting

Through extensive field testing of items with millions of students and the subject-matter expertise of reading and mathematics specialists, Curriculum Associates determines the items that are needed to represent a key skill and the difficulty of each item. Based on the number of items, the difficulty of items, and the performance of each individual student, the Diagnostic can make inferences about what students know and are likely able to do. Using this information, the assessment can accurately characterize the strengths and needs of a wide variety of students. Moreover, the *i-Ready Diagnostic* reports can provide teachers with actionable recommendations on what students should work on next.

Before using a test, especially an interim assessment designed to evaluate student proficiencies, educators should confirm that the assessment meets certain criteria: An assessment needs to assess the most important concepts of the grade, provide accurate and timely information about student performance, and provide clear recommendations for next steps in instruction. The *i-Ready Diagnostic* shows what students know, how much growth is needed to reach grade-level expectations, and what students need to do to get there. The below image shows an example of a report that meets the criteria for monitoring grade-level proficiency. The seven features of a student report are highlighted in the figure.

Diagnostic Results ▾ Danielle Baker ▾ Grade 5 PDF

Subject
Reading ▾

Diagnostic
Diagnostic 1 (09/14/24) ▾

● ● ● Key

Uses criterion-referenced grade-level placements to give teachers insight into the instructional strengths, areas of need, and annual growth expectations for each student

- 1 Student's Grade
- 2 Current Grade-Level Placement
- 3 Current Normative Percentile
- 4 Grade-Level Performance Range
- 5 Grade-Level Proficiency
- 6 Typical: Average Growth for Students at the Same Starting Point
- 7 Stretch: Ambitious Growth for Students That Puts Students on a Path toward Proficiency

— Mid On Grade Level (606)
— On Grade Level (579 - 640)

This Diagnostic is considered the baseline and is used to establish growth measures for this student.

Overall

●

Grade 4 (560)

Standard Error +/- 12

Domain	Placement (i)	Can Dos & Next Steps
Phonological Awareness*	● Tested Out	↓
Phonics*	● Grade 3	↓
High-Frequency Words*	● Tested Out	↓
Vocabulary	● Grade 4	↓
Comprehension: Literature	● Grade 4	↓
Comprehension: Informational Text	● Grade 3	↓

Show Comprehension: Overall (i) *Foundational Domains

National Norm Performance and Lexile® Framework for Reading Measure

3 National Norm

52nd Percentile (i)

Lexile® Reading Measure:

830L

[Understanding Lexile Reading Measures](#) PDF

Lexile Range:

730L–880L

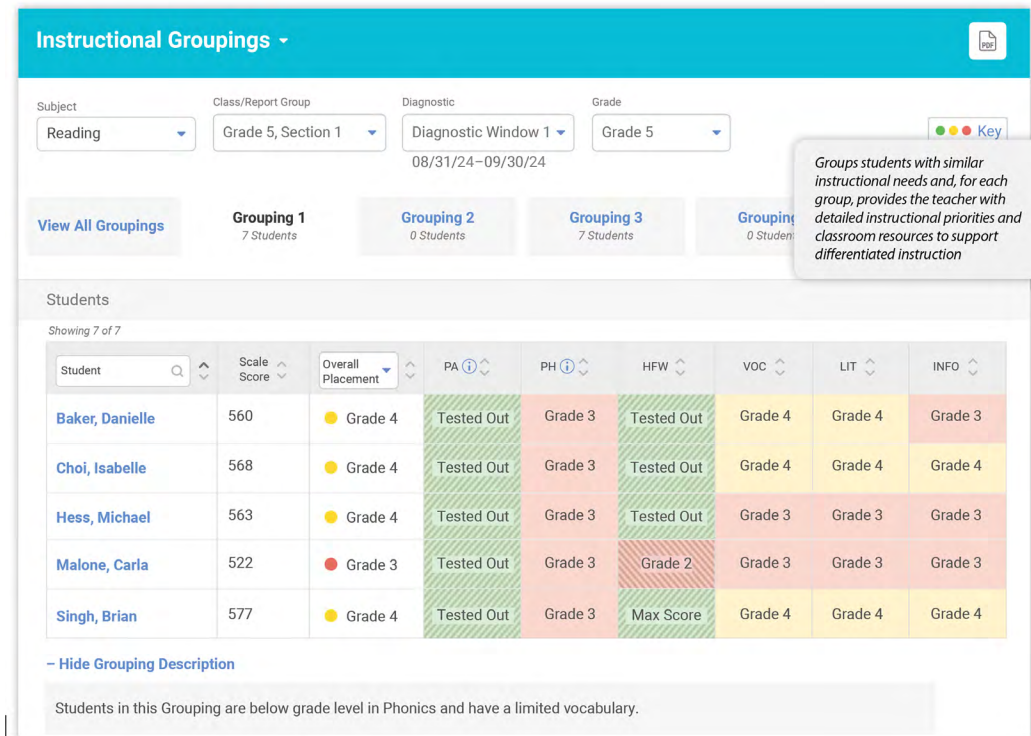
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[How to Use the Lexile Find a Book Tool](#) PDF

Actionable Reports

The value of score reports often reflects the alignment between the report, the intended audience, and anticipated use. *i-Ready Diagnostic* results directly drive on-demand reports that detail each student's proficiency and areas of need, highlighting immediate next steps for instruction and facilitating individualized learning. The reports provide educators with an action plan to make targeted, differentiated instruction a reality. The system also provides the tools to deliver that instruction in any learning environment, including online lessons and teacher-led instruction.

Reports for the Diagnostic include important information for educators. This information empowers them to make the best instructional decisions for students.



Instructional Groupings

Subject: Reading | Class/Report Group: Grade 5, Section 1 | Diagnostic: Diagnostic Window 1 | Grade: Grade 5
08/31/24–09/30/24

View All Groupings | **Grouping 1** (7 Students) | Grouping 2 (0 Students) | Grouping 3 (7 Students) | Grouping 4 (0 Students)

Groups students with similar instructional needs and, for each group, provides the teacher with detailed instructional priorities and classroom resources to support differentiated instruction

Students

Showing 7 of 7

Student	Scale Score	Overall Placement	PA	PH	HFW	VOC	LIT	INFO
Baker, Danielle	560	Grade 4	Tested Out	Grade 3	Tested Out	Grade 4	Grade 4	Grade 3
Choi, Isabelle	568	Grade 4	Tested Out	Grade 3	Tested Out	Grade 4	Grade 4	Grade 4
Hess, Michael	563	Grade 4	Tested Out	Grade 3	Tested Out	Grade 3	Grade 3	Grade 3
Malone, Carla	522	Grade 3	Tested Out	Grade 3	Grade 2	Grade 3	Grade 3	Grade 3
Singh, Brian	577	Grade 4	Tested Out	Grade 3	Max Score	Grade 4	Grade 4	Grade 4

- Hide Grouping Description

Students in this Grouping are below grade level in Phonics and have a limited vocabulary.

"A report should be designed to answer specific questions and provide actionable results, rather than something to be downloaded, glanced at, and filed away." (Hattie, 2009)

Conclusion

Above all else, *i-Ready Diagnostic* is an assessment in service of instruction. To this end, the *i-Ready Diagnostic* was designed to elevate student success and drive impactful learning.

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i-Ready to personalize learning and accelerate growth.**



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