



# Understanding the Difficulty and Duration of the *i-Ready Diagnostic*

Curriculum Associates Assessment Brief | December 2023

This document helps educators understand the level of difficulty of the *i-Ready Diagnostic* as well as the time it takes to complete the assessment. The document also outlines how the two topics are related.

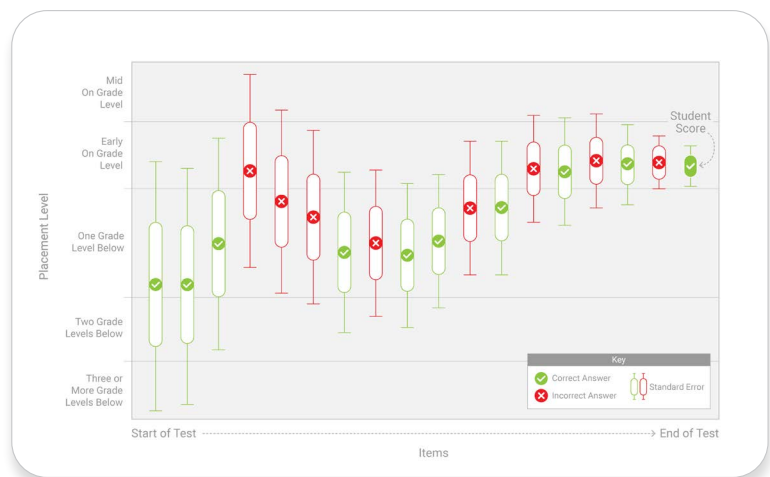


# Difficulty Level of the *i-Ready Diagnostic*

The *i-Ready Diagnostic* is designed such that students should answer roughly 50 percent of the questions correctly and 50 percent incorrectly. This helps precisely determine what a student knows and can do. Given this design, high-performing students who are accustomed to scoring well on tests will be particularly challenged. In order to understand specifically where students are performing, they must get some items wrong to better pinpoint their proficiency. When a student continues to answer questions correctly during the test, especially when the student is near the top range of the grade level, it is possible for students to be presented with content that is beyond what they have been taught in the classroom. These items may appear too hard to the student, but as an adaptive assessment, these items are necessary to give a precise score. A precise score assists educators in providing more targeted and specific instruction.

It is important to reiterate that students are not expected to get every question right. When they answer questions correctly, they will be presented with increasingly challenging questions in order to pinpoint which skill areas they have and have not mastered. If they get a more challenging question wrong, they are not penalized and are presented with a less challenging question until the assessment is able to match the item difficulty to the student's performance level.

*The following graphic illustrates in more detail how the adaptive algorithm works.*



As students respond to items, the algorithm learns more about their proficiency and can begin to home in on the level of difficulty more appropriate for the student. In order to provide scores that allow precise interpretations of a student's proficiency level, we must give them enough items to demonstrate what they know, and these items must represent the key concepts in the domain.

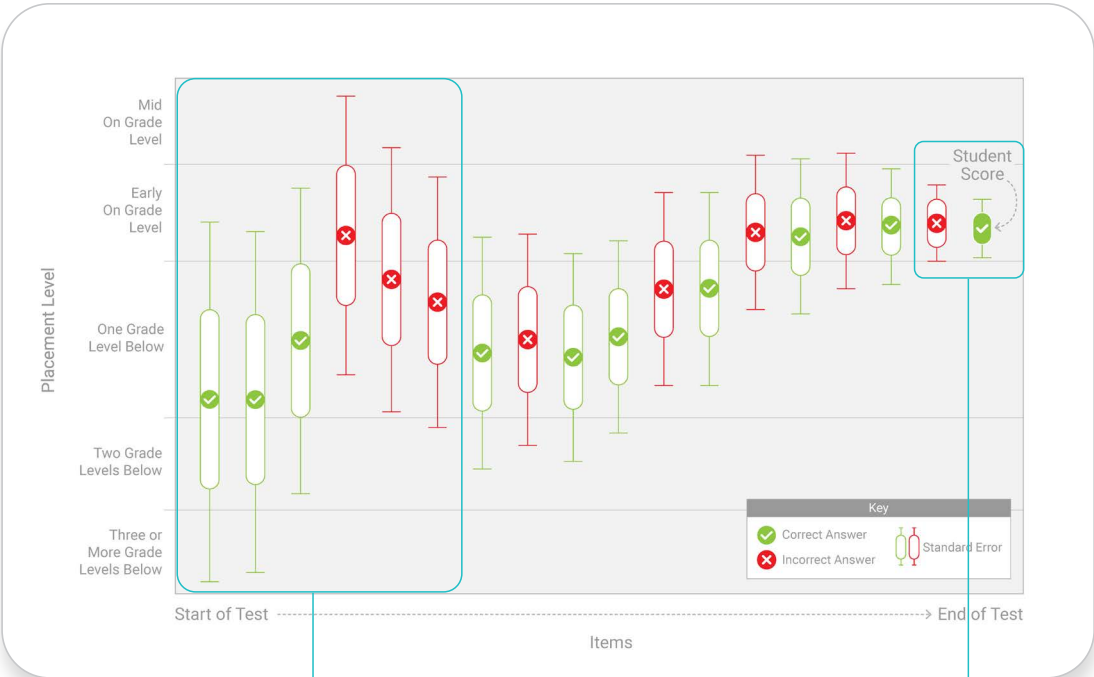
The number of items students see is also related to the standard error. The standard error provides an estimate of the accuracy of the test score. There is a careful interplay between the number of items needed to adequately sample the domain content and the number of items needed to reduce the standard error to an appropriate level.



For information, refer to [How the Diagnostic Works](#)

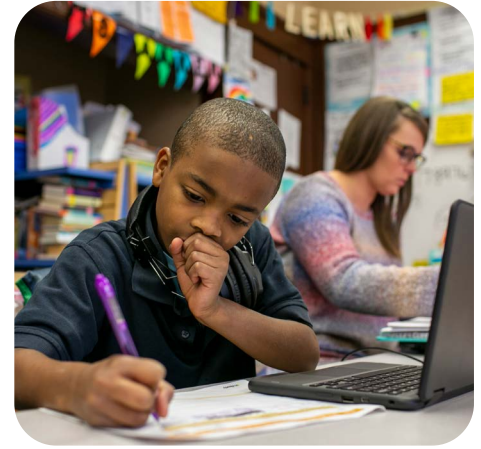


At the start of the assessment, we know less about what the student can do, so the standard error is larger. As the student proceeds through the assessment, they continue to answer questions they can do and those they can't do yet, and the algorithm continues to narrow in on student proficiency. This ultimately provides a score that allows for score interpretations that can be made confidently.



*The standard error narrows as students respond to more items.*

*The standard error is much smaller by the end of the assessment. Once students have answered enough items, we can confidently provide a score.*



## Duration of the *i-Ready Diagnostic*

The Diagnostic is an untimed assessment, which means students can spend as long as they need on each question. The time spent taking the assessment does not impact their score. In order to do their best work, some students may need to spend more time on the Diagnostic than some other assessments. As previously mentioned, it is important to provide students with items they will likely get incorrect as well as items they will be able to answer correctly in order to get a precise estimate of student proficiency. Difficult items can be challenging and require time to think through comprehensively, but these items are important to learning what students can do! In many ways, the assessment’s duration intersects with its difficulty, which directly impacts the precision of the score interpretations.

Additionally, it is important to give students enough opportunities to demonstrate their content knowledge. This means we must provide students with carefully selected items that have been expertly written to measure key concepts and domains. This cannot be accomplished with only a handful of items. The adaptive algorithm uses the pattern in student responses to understand which items to present to the student. We have established the optimal number of items by domain needed to report scores with precision and accuracy.

Finally, the Diagnostic can be used for many purposes, so while it may seem like the assessment is taking students longer than expected, in many ways it can eliminate the need for multiple assessments, thereby saving time for instruction.

### District Assessment

- ✓ Universal Screening
- ✓ Tri-Annual Benchmark Assessment

### Intervention

- ✓ MTSS/RTI/Intervention Screener
- ✓ Progress/Growth Monitoring

### Screening and Placement

- ✓ Dyslexia Screening
- ✓ Gifted/Talented Identification
- ✓ Passage Reading Fluency Assessments
- ✓ Early Reading Tests
- ✓ Assessment of Spanish Reading
- ✓ English Learner Reclassification Data
- ✓ Algebra Readiness

### Classroom Assessment

- ✓ Automatic Small Group Creation
- ✓ Instructional Planning Data
- ✓ Student/Teacher/School Goal-Setting Data
- ✓ Formative Assessment
- ✓ Benchmark Assessment
- ✓ Standards Performance
- ✓ Growth Measures
- ✓ Custom Data Analytics
- ✓ Lexile®/Quantile® Measures

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# Help Students Prepare

**Preparing students can be a key part to their readiness to take an adaptive assessment.**

**There are many ways to do this, including:**

- ✓ Active proctoring helps ensure students are proceeding through the test at a reasonable pace. Remind students not to rush!
- ✓ Tell students to stay motivated and to try their best on each test question.
- ✓ Let students know what to expect. Let them know there may be items that seem too hard or cover content they have yet to learn. It's OK! Do their best and move to the next question.



For information, refer to  
[\*\*\*i-Ready Diagnostic: Guidance on Assessment Duration\*\*\*](#)