i-Ready Diagnostic: What It Measures

This document provides an overview of the content assessed on the *i-Ready Diagnostic* and how it assesses students and provides information about the items presented to students.

What Is Assessed in Reading?

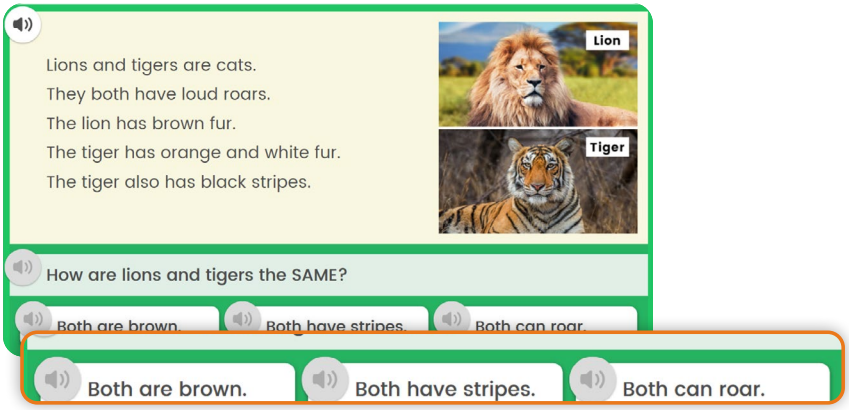
Reading skills are assessed in six key domains on the *i-Ready Diagnostic* for Reading. Those six domains are:

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

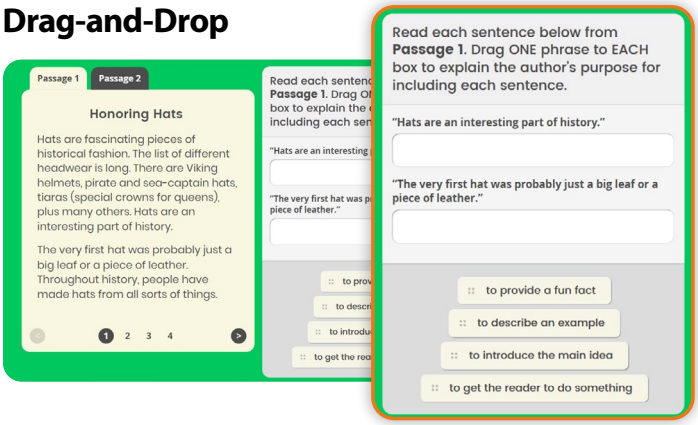
Students are assessed in the domains that are most relevant to informing instruction at their grade level. Additional information on which domains are covered at which grade levels is available in the *i-Ready Diagnostic* FAQ on reading test flows.

On the *i-Ready Diagnostic* for Reading, students are assessed with three types of items:

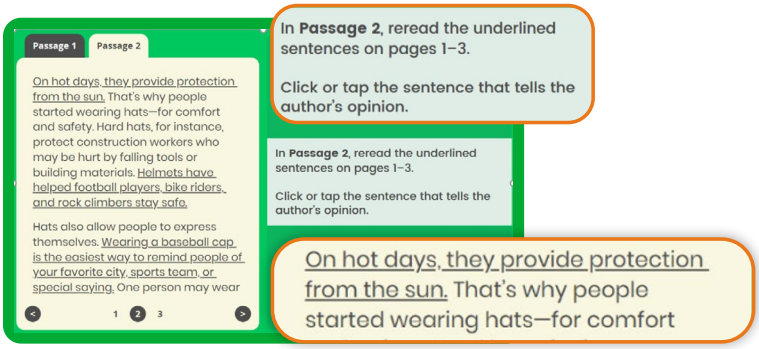
Multiple Choice



Drag-and-Drop



Highlight Text



For more specific information on skills assessed by grade level in Reading, click here.

Phonological Awareness

Phonological awareness is the understanding that a spoken word is made up of different parts, and each of these parts makes a sound. For example, the word *bat* includes the sounds */b/*, */a/*, and */t/*, and the word *batter* can be broken into two syllables that make the sounds */bat/* and */ter/*. Phonological awareness is an important building block for phonics. Readers need to be able to distinguish, or make out, the individual sounds in spoken words before they can fully master matching sounds to letters.

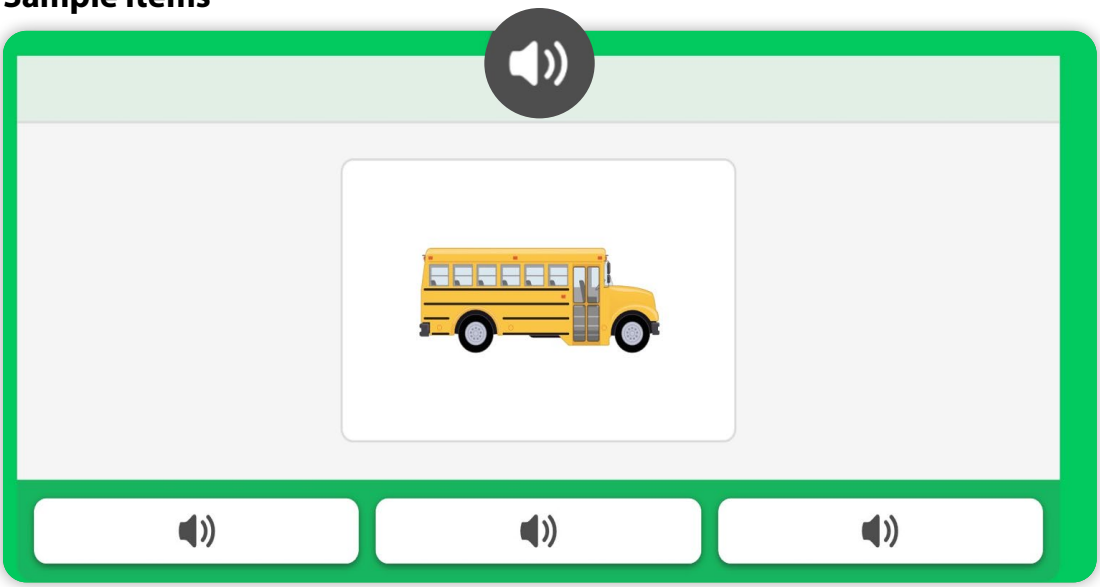
In the *i-Ready Diagnostic*, assessment items use both audio and visual cues to assess whether a student can distinguish and manipulate the sounds in spoken language. The stems, which comprise questions or directions, are read aloud to students, as are the individual answer choices. Students can use an audio icon to hear the items and answer choices repeated. Students are asked to segment and blend syllables, onset and rime, and individual phonemes. Other items assess whether a student can manipulate phonemes by deleting, adding, or substituting sounds in spoken words.

Assessed Skills

On the *i-Ready Diagnostic* for Reading, phonological awareness is assessed for Grades K–1. Some of the important skills assessed in the Phonological Awareness domain include:

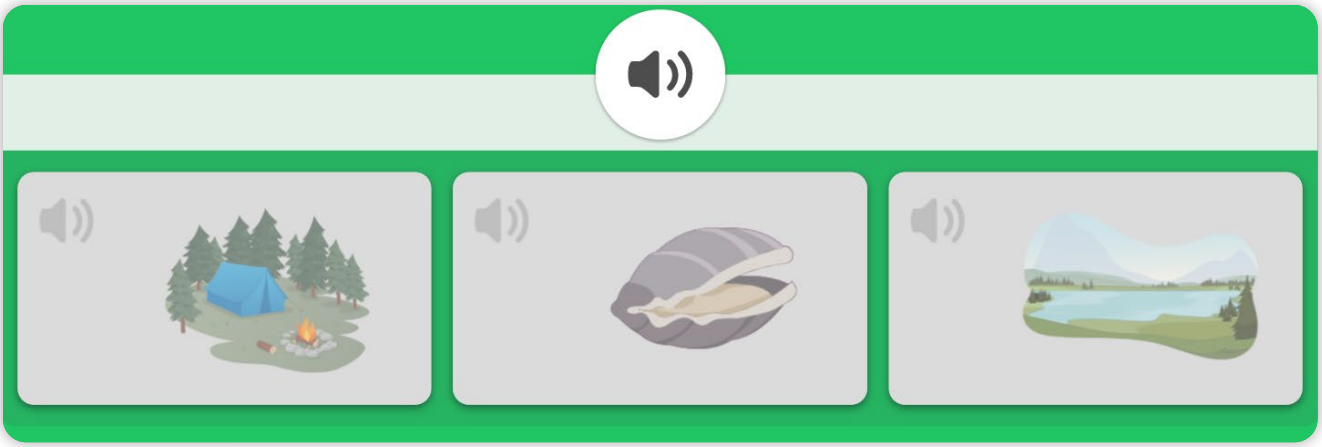
- Rhyme Recognition
- Syllable Blending and Segmenting
- Onset and Rime Blending and Segmenting
- Phoneme Identification and Isolation
- Phoneme Blending and Segmentation
- Phoneme Addition, Deletion, and Substitution

Sample Items



Grade K: In this example, audio is played and says, "Find the first sound in the word *bus*." Students must select the correct order of the sounds */b/*, */u/*, */s/*. This is an example of a Phonological Awareness item that assesses initial phoneme isolation.

Phonological Awareness (Cont'd.)



Grade 1: In this example, audio is played and says, "Say *lamb*. Now add */k/* to the beginning. What's the new word?" This item assesses a student's capability to add initial single-consonant sounds to words. The student creates a word of four or more phonemes with a blend. This is an example of a Phonological Awareness item that assesses manipulation through addition.

Phonics

Phonics instruction teaches students how to connect the sounds they hear in spoken words to the letters they see in written words. Students have to learn many different connections between sounds and spelling patterns. In fact, there are so many connections that learning phonics can feel like learning the rules to understand a hidden code. But this skill is mastered by taking one step at a time, learning one rule and then another, and so on. Once students can make these connections quickly and easily, they can really start to read for meaning.

i-Ready Diagnostic assesses a student's proficiency in recognizing sound-spelling correspondences. Test items use both audio and visual support. Some items that comprise questions or directions are read aloud, and students are asked to choose among written answer choices. Other items are written, and students are asked to choose among answer choices that are read aloud. As in Phonological Awareness, students can use an audio icon to hear the items and answer choices repeated. Many items are supported by art. Items focus on a range of high-utility skills, including letter recognition, one-to-one letter-sound correspondences, *CVC* words, consonant blends, consonant digraphs, final *e* conventions, *r*-controlled vowels, inflectional endings, vowel teams (i.e., digraphs and diphthongs), two-, three-, four-, and five-syllable words, and words with prefixes/suffixes.

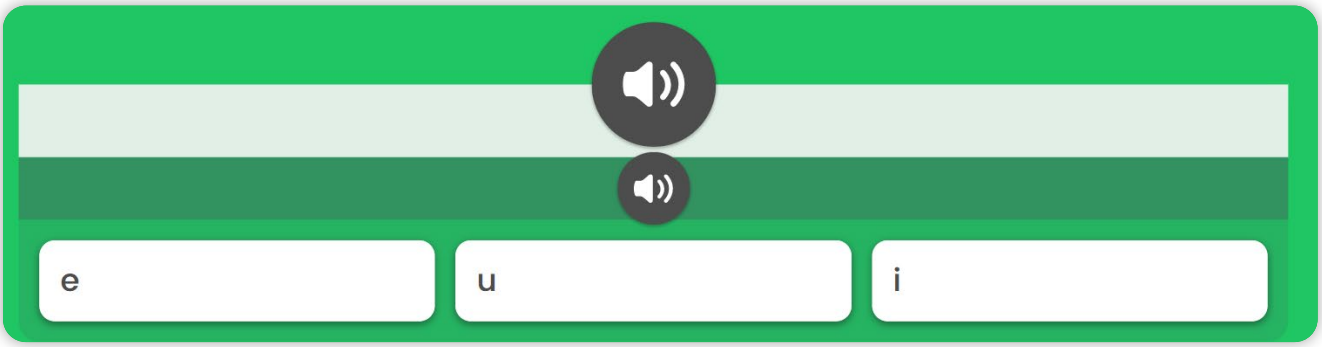
Assessed Skills

On the *i-Ready Diagnostic* for Reading, phonics is assessed for Grades K–2. Some of the important skills addressed in the Phonics domain include:

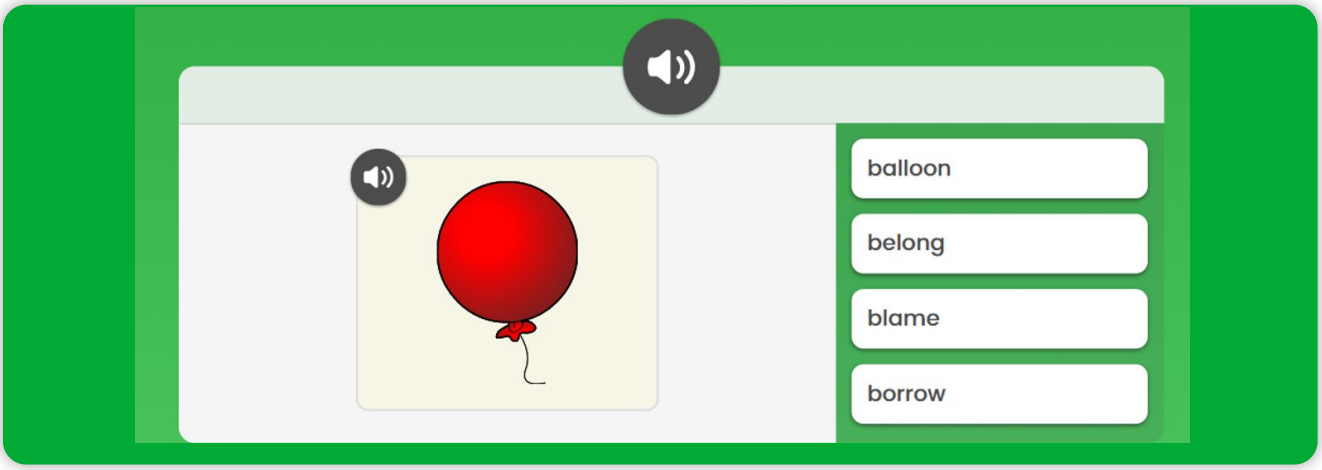
- Alphabetic Knowledge
  - Letter recognition
  - Letter-sound correspondence
- Sound Spellings
  - Short and long vowels
  - *r*-controlled vowels
  - Digraphs and diphthongs
- Decoding Multisyllable Words and Encoding
  - Multisyllable decoding strategies
  - Words with prefixes
  - Words with suffixes
- Decoding/Encoding/Sorting Multisyllable Words

Phonics (Cont'd.)

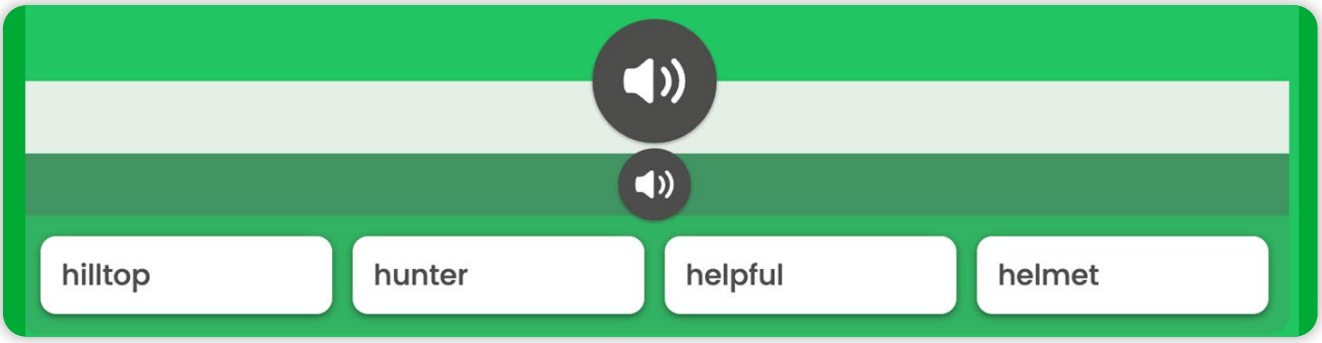
Sample Items



Grade K: In the above example, audio is played and says, "Which letter has the sound */i/*?" (i.e., short */i/* sound). This item measures proficiency in associating the long vowel sound */i/* with the appropriate grapheme. This is an example of a Phonics item that measures alphabetic knowledge.



Grade 2: In the above example, students listen to spoken directions and are asked to find the word *balloon*. This item measures proficiency with decoding grade-level sound spellings, including multisyllabic constructions and the sound */oo/*. This is an example of a Phonics item that measures the decoding of multisyllable words.



Grade 2: In the above example, students listen to spoken directions and are asked to choose the word *helmet*.

High-Frequency Words

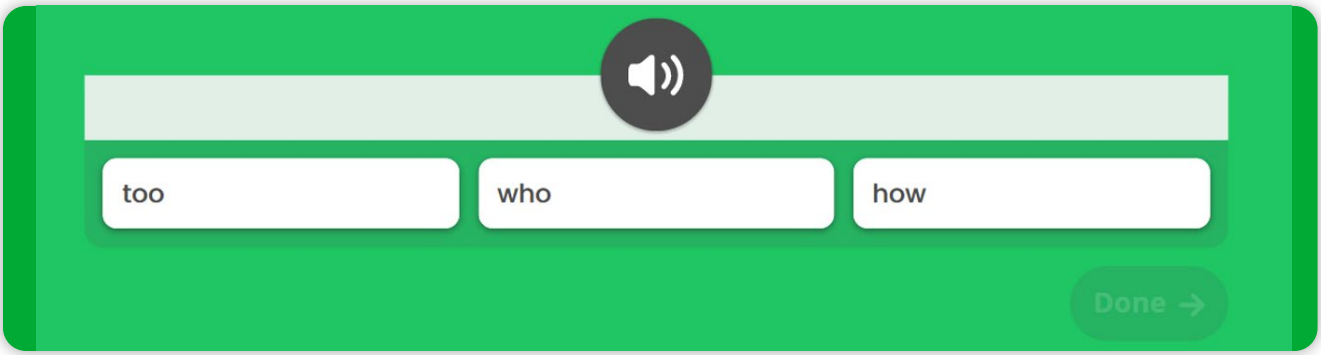
High-frequency words are the words that appear most often in what students read. Words such as *the*, *and*, and *it* are high-frequency words. Because these words appear so often, readers ought to learn to recognize them automatically. Also, these words are often spelled in ways that can be confusing. Words such as *could* and *there* do not follow the rules that connect sounds to letters in most words. Learning to recognize these words automatically helps students read more quickly and easily, which gives them a better opportunity to understand what they are reading.

Words assessed and taught in the *i-Ready Diagnostic* and Personalized Instruction are drawn from the Dolch Basic Word List (Dolch, 1941), the Fry Instant Word List (Fry, 1999), and the Educator's Word Frequency Guide (Zeno et al., 1995). Items in the *i-Ready Diagnostic* assess students' ability to recognize high-frequency words. Some item stems that comprise questions or directions are read aloud, and students are asked to choose among written answer choices. Other item stems are written, and students are asked to choose among answer choices that are read aloud. Students can use an audio icon to hear the items and answer choices repeated.

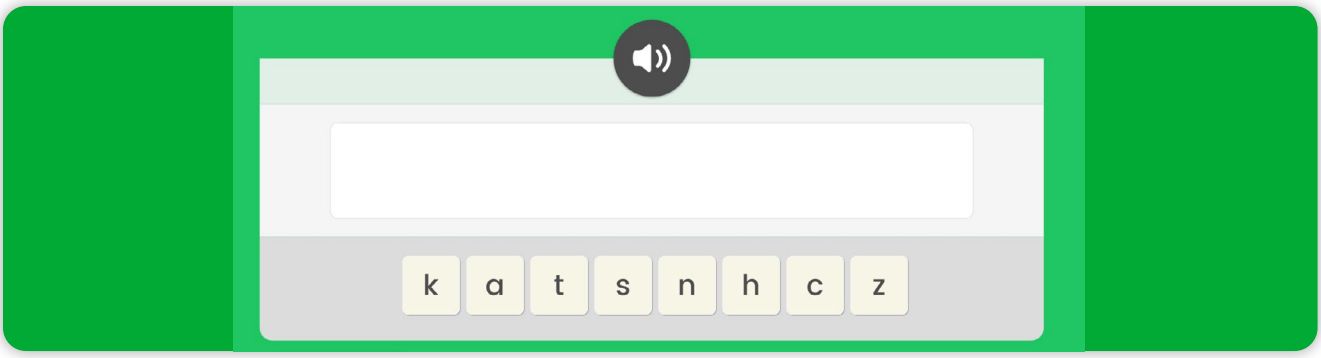
Assessed Skills

On the *i-Ready Diagnostic* for Reading, the domain of High-Frequency Words comprises words from the Dolch, Fry, and Zeno word lists.

Sample Items



Grade 1: In the above example, students hear the word, then choose the word that matches the spoken word. This item measures students' proficiency in recognizing a familiar word (e.g., *who*) among words with similar phonological elements.



Grade 2: In the above example, the audio prompt asks the students to "move the letters to correctly spell the word *thanks*." This item measures students' proficiency in spelling grade-appropriate high-frequency words.

Vocabulary

Vocabulary is the name for the words a student knows. The more words a student knows, the easier it is to understand what the student reads. Good readers know the meanings of many words. Students grow their vocabularies by hearing and reading new words, talking about words, and being taught specific words.

Test items in the *i-Ready Diagnostic* assess students' knowledge of both Tier 2 words (i.e., academic or literary) and Tier 3 words (i.e., domain-specific or content-area words). Panels of teachers and reading specialists selected the words to be assessed using research-based lists that included:

- *Words Worth Teaching* (Biemiller, 2010)
- *The Living Word Vocabulary* (Dale & O'Rourke, 1981)
- *The Educator's Word Frequency Guide* (Zeno et al., 1995)
- *An Academic Word List* (Coxhead, 2000)

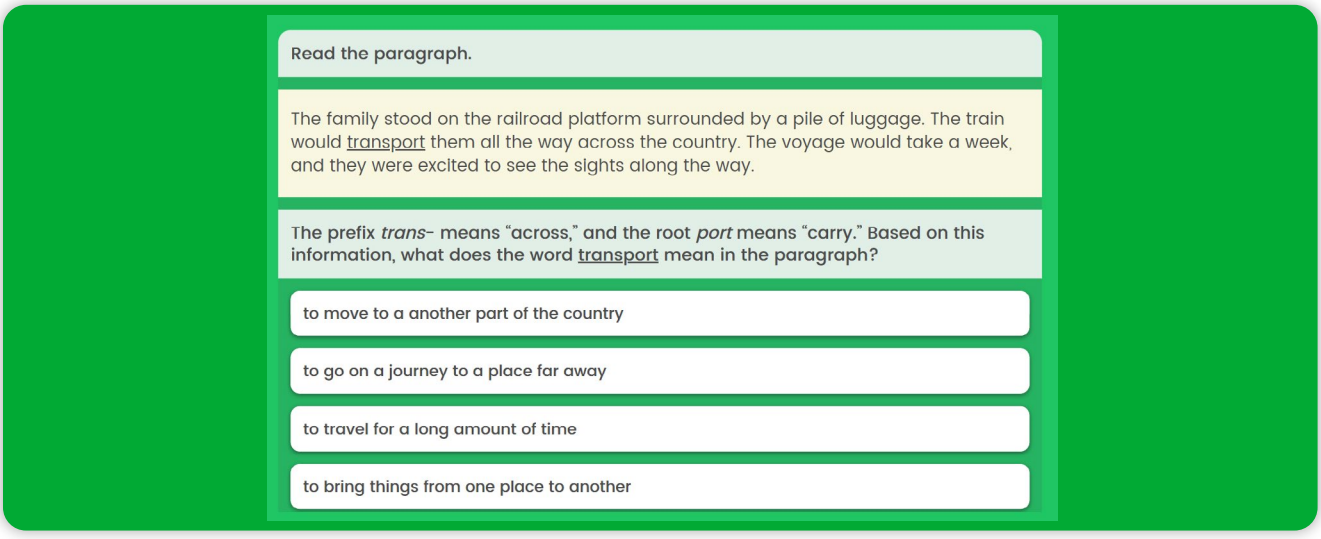
The panels made these selections to reflect the types of words students learn in various disciplines at different grade levels and in various stages of their lives. Test items assess knowledge of these words in context, and those aimed at early readers include visual support. Because oral vocabulary is a critical part of reading development, test items for Grades K–2 are supported by audio.

Assessed Skills

Some of the important skills addressed in the Vocabulary domain include:

- Understand General Academic and Domain-Specific Vocabulary
- Identify Word Relationships (Synonyms/Antonyms)
- Sort Images That Represent Words into Conceptual Categories
- Determine Word Meaning Using Base Words and Affixes
- Use a Glossary to Determine/Clarify Word Meaning
- Understand Word Families
- Determine Word Meaning Using Greek and Latin Roots and Affixes
- Understand Word Relationships
- Analyze Figurative Language

Sample Item



Grade 4: This item measures students' ability to infer meaning of words by using prefixes and root words.

Comprehension: Literature

The Comprehension: Literature domain assesses a student's ability to understand types of writing that are fictional. Fictional literary texts are composed of short stories, plays, and poems. A student who understands literature might identify the sequence of events in a story, discuss the meaning of a poem, or explain the lines a character speaks in a play. As a student develops as a reader, they will be able to understand increasingly complex stories, plays, and poems.

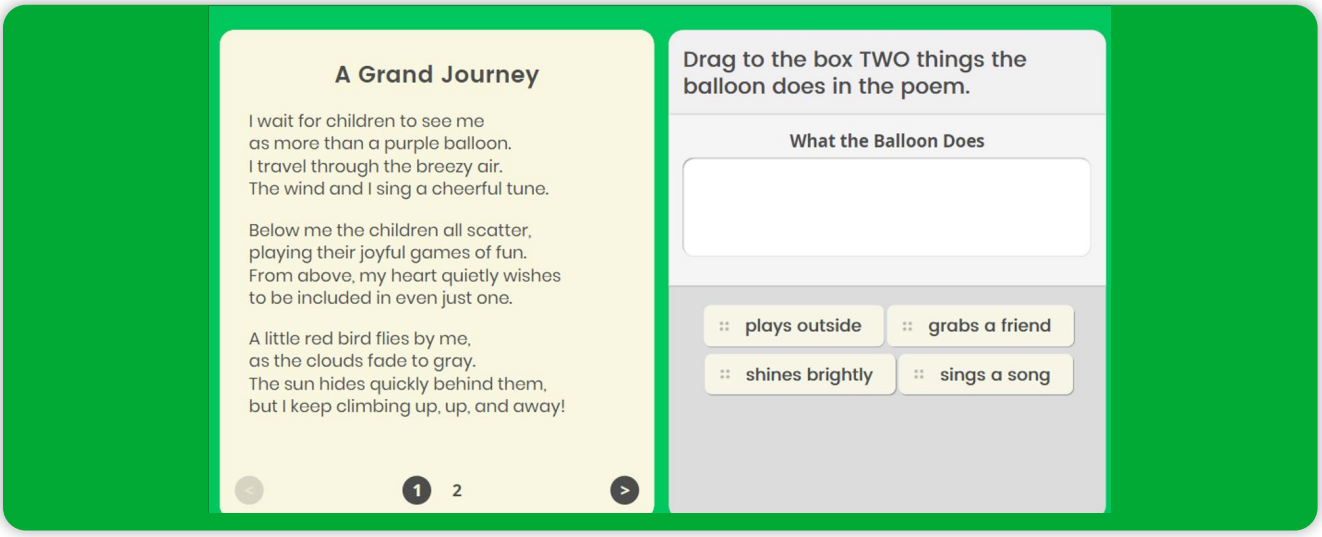
In the *i-Ready Diagnostic*, the Comprehension: Literature domain is assessed using passages written by authors experienced in the literature of the grade, and many of the texts are authentic and previously published. Each passage is associated with a set of items that assess various concepts, but they all require that a student has read and processed the literary passage presented to them in the Diagnostic.

Assessed Skills

Some of the important skills addressed in the Comprehension: Literature domain include:

- Ask Questions about Stories
- Make Inferences
- Cite Textual Evidence
- Determine Theme/Central Message of a Story/Poem
- Recount or Summarize Story Events
- Understand/Describe Characters, Settings, Events
- Interpret Figurative Language
- Connect Words and Pictures
- Analyze Structure and Elements of Stories/Plays/Poems
- Compare and Contrast Stories
- Interpret Allusions
- Analyze How Plot/Characters Are Developed
- Analyze Word Choice, Impact on Meaning, and Tone
- Analyze Point of View and How It Is Conveyed
- Compare and Contrast Literary Texts and Multimedia Presentations of the Texts

Sample Item



Grade 3: This item measures whether students can identify explicit key details in literary text.

Comprehension: Informational Text

The Comprehension: Informational Text domain assesses a student's proficiency with understanding types of writing that are usually true. Reading materials, such as articles, recipes, or instructions, are examples of informational text. The texts written in this domain are usually organized using one or more informational text structures. Additionally, they may contain charts, diagrams, and graphs that are important to understanding.

In the *i-Ready Diagnostic*, the Comprehension: Informational Text domain is assessed using passages written by authors experienced with the grade level and carefully selected to be informational while also engaging to students. A student who understands informational text might identify the main idea and supporting details, describe the way the writing is organized, or draw information from a photograph or diagram. Each passage is associated with a set of items that assess various concepts, but all require that a student has read and comprehended the informational passage presented to them in the Diagnostic.

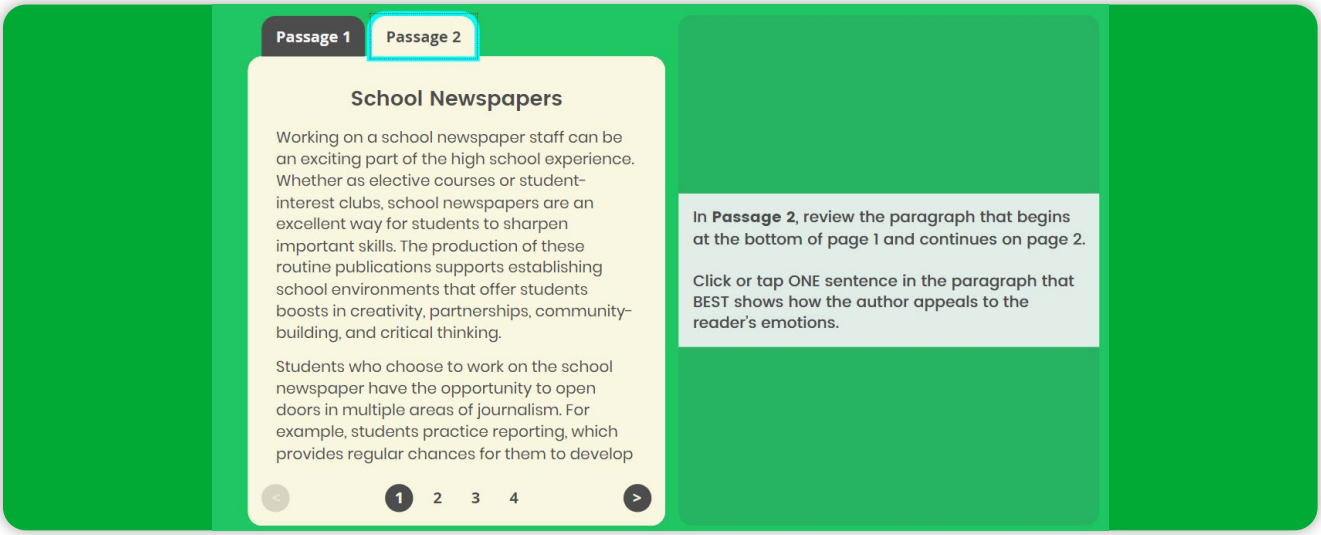
Assessed Skills

Some of the important skills addressed in Comprehension: Informational Text domain include:

- Ask Questions about Key Ideas
- Identify Main Idea/Key Details
- Cite Textual Evidence
- Make Inferences
- Retell or Summarize Text
- Demonstrate Understanding of Unfamiliar Words
- Describe or Analyze Relationships between Ideas and Events in Scientific, Historical, and Technical Texts
- Identify or Analyze Author's Point of View or Purpose
- Connect Text and Visuals
- Use or Interpret Text Features
- Compare Author's Point of View in Two Texts
- Analyze and Compare Text Structures within One Text or between Two Texts
- Find and Integrate Information from Multiple Sources
- Evaluate Arguments/Persuasive Techniques
- Analyze Interactions among Individuals, Events, and Ideas
- Analyze the Impact of Text Structure on Meaning
- Understand Unfamiliar Words/Figurative, Connotative, Technical Meanings
- Analyze Author's Point of View, Purpose, and Rhetorical Techniques
- Compare, Contrast, and Integrate Information from Various Print and Digital Sources
- Interpret Figurative Language/Allusions/Connotations
- Analyze Word Choice, Impact on Meaning, and Tone
- Analyze Point of View and How It Is Conveyed
- Compare and Contrast Literary Texts and Multimedia Presentations of the Texts

Comprehension: Informational Text (Cont'd.)

Sample Item



Grade 9: This item measures whether students are able to analyze how an author uses rhetorical techniques to support a point of view or purpose in informational text.

Reading Conclusion

In addition to these Reading domains, the *i-Ready Diagnostic* also includes an Overall Reading score, which is a composite score. This score combines student performance on the Comprehension: Literature and Comprehension: Informational Text domains. This score reflects a student's overall reading comprehension proficiency across both Comprehension domains included on the Diagnostic.

Content and Skills by Grade

Grades K–2	Grades 3–5	Grades 6–8	Grades 9–12 (Assessed Only)
Foundational Skills			
Phonological Awareness (Grades K–1) • Rhyme Recognition • Syllable Blending and Segmenting • Onset and Rime Blending and Segmenting • Phoneme Identification and Isolation • Phoneme Blending and Segmentation • Phoneme Addition, Deletion, and Substitution			
Phonics • Alphabetic Knowledge - Letter Recognition - Letter–Sound Correspondence - Letter Naming - Distinguishing between Frequently Confused Letters • Decoding and Encoding Sound-Spellings - Short and Long Vowels - Consonant Clusters and/or Consonant Blends and Digraphs - *r*-Controlled Vowels - Digraphs and Diphthongs - Common Syllable Types • Decoding and Encoding Multisyllable Words - Multisyllable Decoding Strategies - Inflectional Endings - Words with Prefixes - Words with Suffixes	**Phonics (Grade 3)** • Decoding/Encoding/Sorting Multisyllable Words - Multisyllable Decoding Strategies - Types of Syllables - Words with Prefixes - Words with Suffixes		
High-Frequency Words • Words from Zeno, Dolch, and Fry Lists - Recognition in Isolation - Identification among Other Words - Spelling			

Grades K–2	Grades 3–5	Grades 6–8	Grades 9–12 (Assessed Only)
Vocabulary			
• Understand General Academic and Domain-Specific Vocabulary • Identify Word Relationships (Synonyms/Antonyms) • Sort Images That Represent Words into Conceptual Categories	• Understand General Academic and Domain-Specific Vocabulary • Determine Word Meaning Using Base Words and Affixes • Use a Glossary to Determine/Clarify Word Meaning • Understand Word Families • Analyze Word Relationships	• Understand General Academic and Domain-Specific Vocabulary • Determine Word Meaning Using Greek and Latin Roots and Affixes • Understand Word Relationships • Use Print and Digital Reference Guides to Determine Word Meaning	• Understand General Academic and Domain-Specific Vocabulary • Determine Word Meaning Using Knowledge of Greek and Latin Roots and Affixes • Understand Word Relationships (e.g., Connotations) • Analyze Figurative Language

Reading Domain Tables

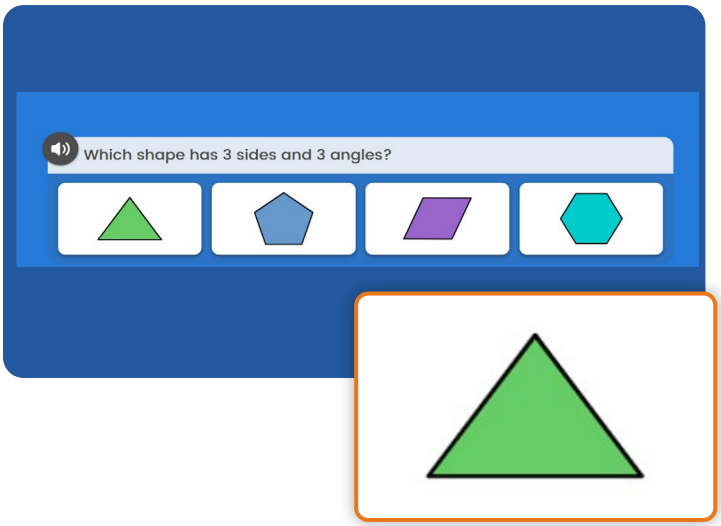
Grades K–2	Grades 3–5	Grades 6–8	Grades 9–12 (Assessed Only)
Comprehension: Informational Text			
• Ask/Answer Questions about Key Details • Identify the Main Topic or Main Idea • Identify Reasons That Support Specific Points • Recount or Retell Text • Determine Word Meanings • Connect Words and Pictures/Explain How Images Support Text • Use Text Features • Describe Connections between Ideas, Events, and Procedures • Identify Author's Purpose • Compare and Contrast Key Details within and between Two Texts	• Ask Questions about Key Ideas • Identify Main Idea/Key Details • Cite Textual Evidence • Make Inferences • Retell or Summarize Text • Demonstrate Understanding of Unfamiliar Words • Describe or Analyze Relationships between Ideas and Events in Scientific, Historical, and Technical Texts • Demonstrate Understanding of Unfamiliar Words • Identify or Analyze Author's Point of View or Purpose • Evaluate Arguments • Connect Text and Visuals • Use or Interpret Text Features • Compare Author's Point of View in Two Texts • Analyze and Compare Text Structures within One Text or between Two Texts • Find and Integrate Information from Multiple Sources	• Make Inferences • Cite Textual Evidence • Determine or Analyze Development of Central Ideas and Supporting Details • Summarize Text • Understand Unfamiliar Words/ Figurative, Connotative, Technical Meanings • Analyze Connections among Events, Ideas, and Individuals in Text • Analyze Text Structure • Determine Author's Point of View/Purpose • Evaluate Arguments/ Persuasive Techniques • Integrate Information from Different Print/Digital Sources • Compare Informational Texts (e.g., Autobiography vs. Biography, Historical Fiction vs. Nonfiction, Texts on the Same Topic)	• Make Inferences • Cite Textual Evidence • Analyze Development of Central Ideas and Supporting Details • Summarize Text • Analyze Interactions among Individuals, Events, and Ideas • Analyze the Impact of Text Structure on Meaning • Understand Unfamiliar Words/ Figurative, Connotative, Technical Meanings • Analyze Author's Point of View, Purpose, and Rhetorical Techniques • Evaluate Arguments/ Persuasive Techniques • Compare, Contrast, and Integrate Information from Various Print and Digital Sources
Comprehension: Literature			
• Ask/Answer Questions about Stories • Identify/Describe Characters, Settings, Events • Describe Parts of a Story • Recount Stories • Determine Word Meanings • Identify Sensory Words/ Phrases • Describe How Authors Use Words/Sounds in Special Ways (e.g., Alliteration) • Connect Words and Pictures • Determine Central Message • Identify Point of View • Compare and Contrast Story Elements within One Story or between Two Stories	• Ask Questions about Stories • Make Inferences • Cite Textual Evidence • Determine Theme/Central Message of a Story/Poem • Recount or Summarize Story Events • Understand/Describe Characters, Settings, Events • Interpret Figurative Language • Determine Point of View in a Story • Connect Words and Pictures • Analyze Structure and Elements of Stories/Plays/Poems • Compare and Contrast Stories (e.g., by Same Author, in Same Genre, Similar Topics/Themes) • Interpret Allusions	• Make Inferences • Cite Textual Evidence • Identify/Analyze Theme • Summarize Text • Analyze How Plot/Characters Are Developed • Analyze Structure/Elements of Poetry, Plays, Stories • Interpret Figurative Language/ Allusions/Connotations • Analyze Word Choice, Impact on Meaning and Tone • Identify or Analyze Narrative/ Author's Point of View • Compare/Contrast Literary Texts (e.g., Story to a Poem, Modern Work to Traditional Story, Print to Multimedia)	• Make Inferences • Cite Textual Evidence • Analyze Development of Multiple Themes • Summarize Text • Analyze How Story Elements Interact • Analyze Structure/Elements of Poetry, Plays, Stories • Interpret Figurative Language, Allusions, and Connotations • Analyze Word Choice, Impact on Meaning and Tone • Analyze Point of View and How It Is Conveyed • Compare and Contrast Literary Texts and Multimedia Presentations of the Texts

What Is Assessed in Mathematics?

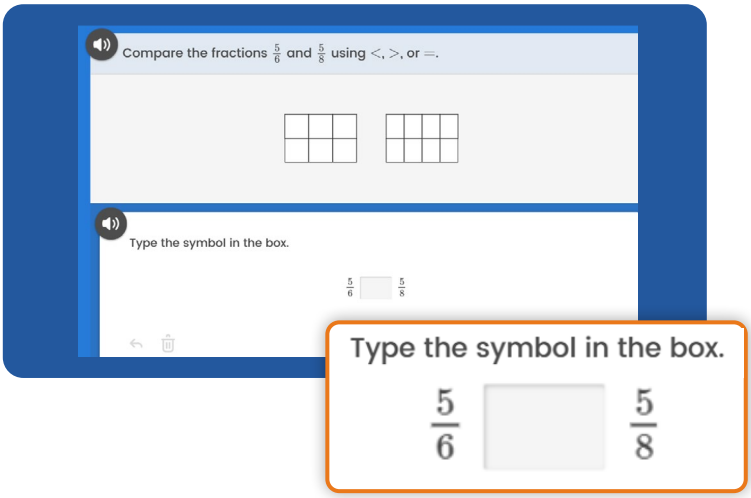
Most state content standards organize mathematical content within grades by domain—big ideas that connect topics across grades. A major goal of this grouping is to build understanding of mathematical concepts within each domain and how they progress across grades. *i-Ready Diagnostic* organizes mathematical content into four domains: Number and Operations, Algebra and Algebraic Thinking, Measurement and Data, and Geometry.

The intent of the *i-Ready Diagnostic* for Mathematics is to help identify the specific skills each student needs to develop, identify each student's areas of strength, and measure academic growth throughout 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 tools. The item types are:

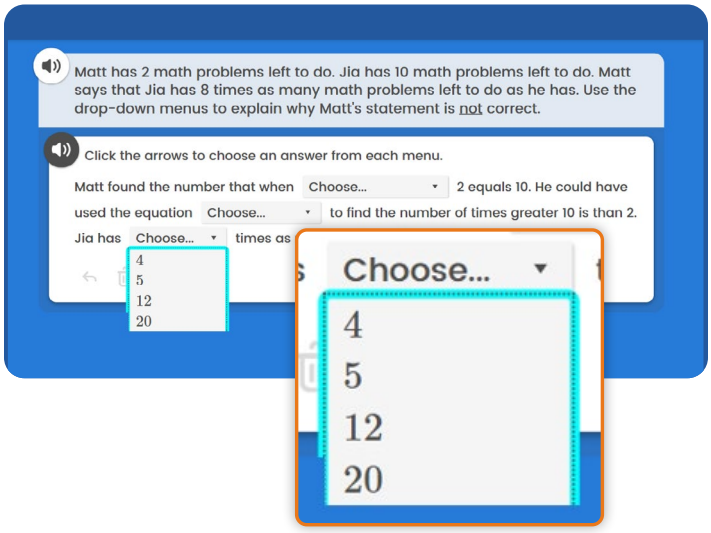
Multiple Choice



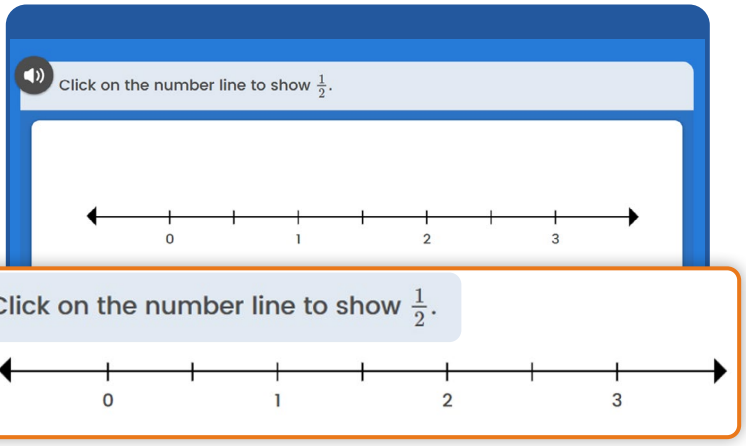
Short Answer



Dropdown

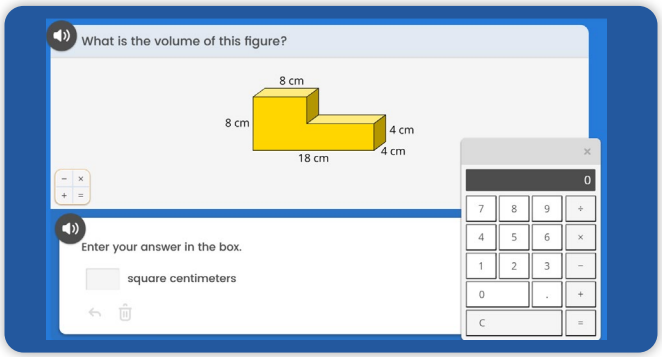


Number Line

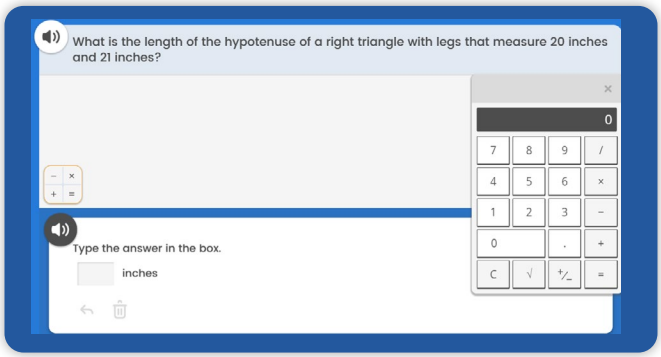


Mathematical Tools

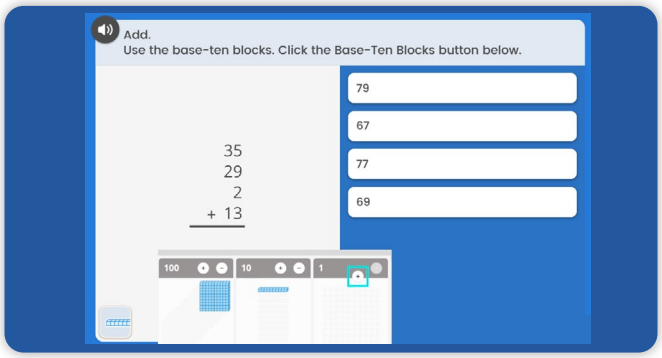
Some items require the use of certain virtual mathematical tools. When necessary, the tool will appear directly embedded in the item. The Diagnostic includes the following mathematical tools:



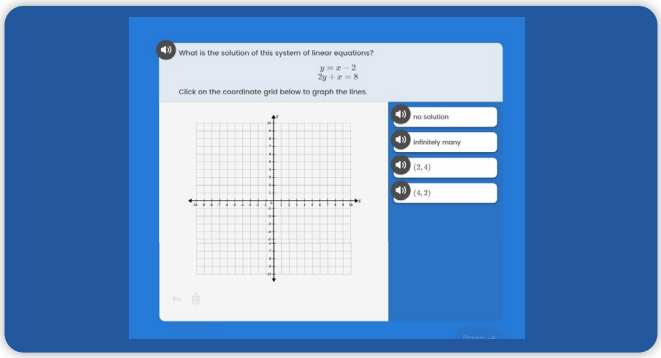
Four-Function Calculator



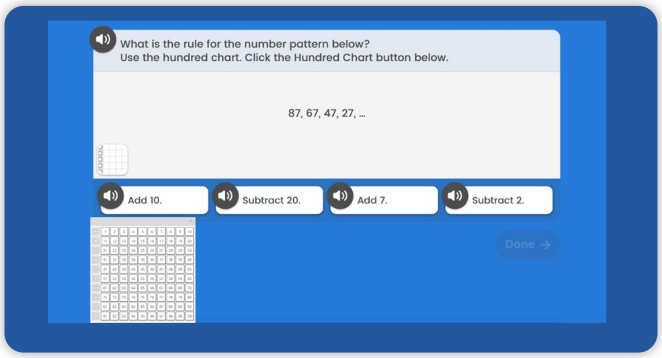
Five-Function Calculator



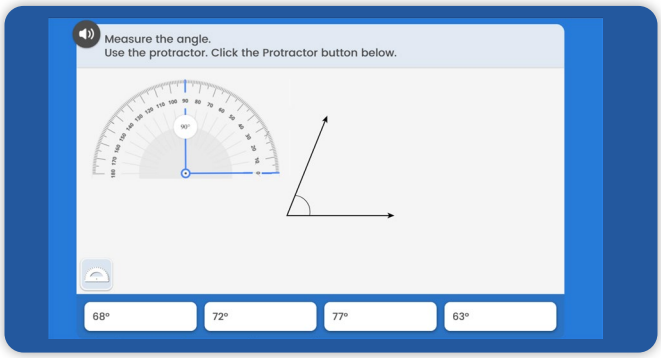
Base-Ten Blocks



Coordinate Grid

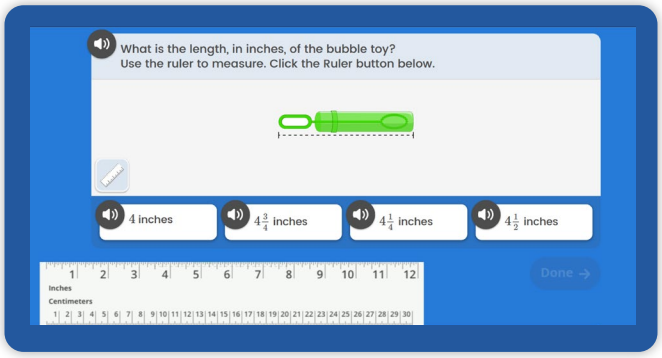


Hundred Chart

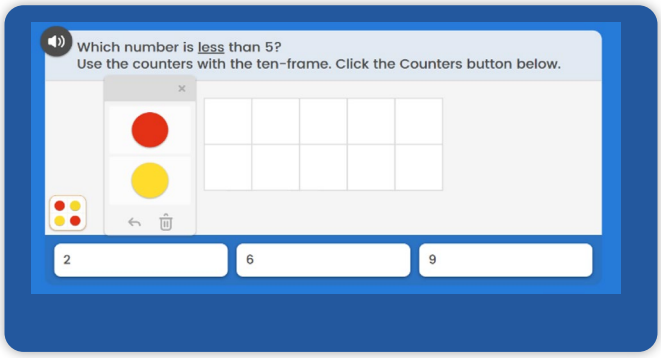


Protractor

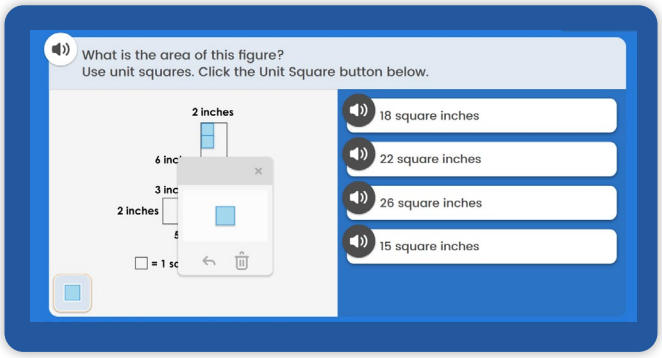
Mathematical Tools (Cont'd.)



Ruler



10-Frame with Counters



Unit Squares

For more specific information on skills assessed by grade level in Mathematics, click here.

Number and Operations

Number and Operations refers to the mathematics skills often thought of as arithmetic, from reading and writing numbers to adding, subtracting, multiplying, and dividing different types of numbers. This includes rational numbers, including whole numbers, decimals, fractions, integers, and irrational numbers. Number and Operations also includes number sense and quantitative reasoning.

The *i-Ready Diagnostic* for Mathematics assesses the Number and Operations domain by requiring students to demonstrate an understanding of representing numbers, relationships among numbers, relationships between operations and number systems, the number system, and performing computation with rational numbers accurately. This is done by presenting students with representations of numbers, operations, and mathematical tools. For example, students connect number words and numerals to the quantities they represent using various models.

Assessed Skills

Grades K–5

- Counting and Cardinality
- Number and Operations in Base Ten
  Whole numbers and decimals, place value, comparing, adding, subtracting, multiplying, and dividing
- Number and Operations—Fractions
  Modeling, comparing, adding, subtracting, multiplying, dividing

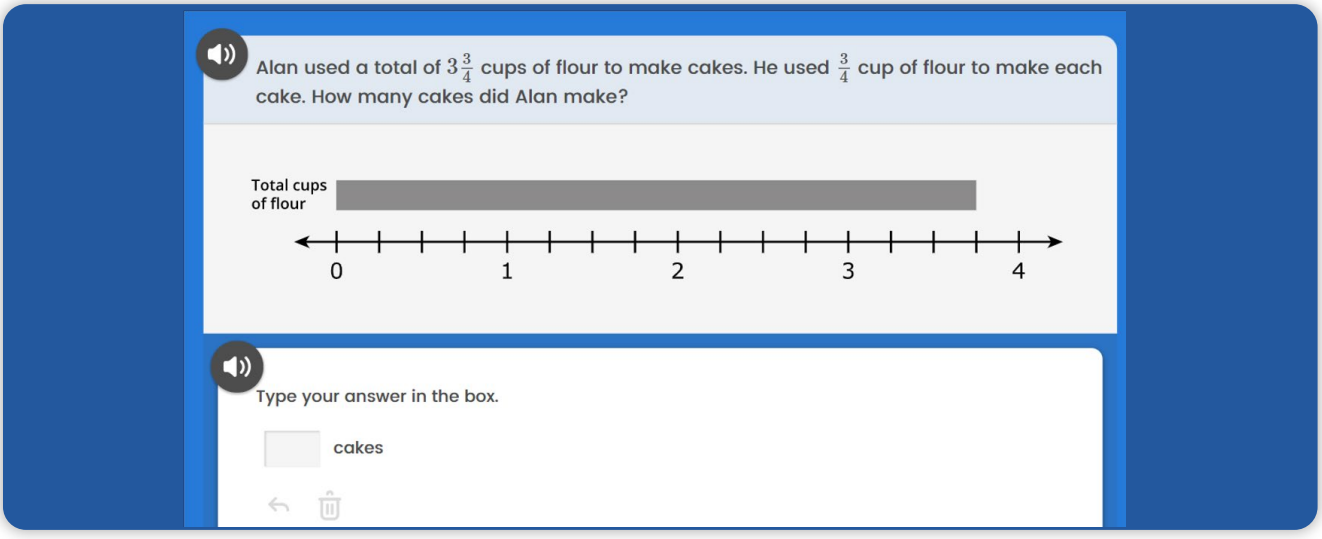
Grades 6–8

- The Number System
  Common factors, common multiples, positive and negative rational numbers, including integers, fractions, decimals, approximating numbers that are not rational, irrational numbers

Grades 9–12

- Number and Quantity
  The real number system, quantities, the complex number system, vector and matrix quantities, operations on vectors

Sample Item



Grade 6: This item measures students' proficiency with solving a word problem involving the division of a mixed number by a fraction with the help of a visual model.

Algebra and Algebraic Thinking

Algebra and Algebraic Thinking refers to mathematics skills related to seeing number patterns, understanding the meaning of addition, subtraction, multiplication, and division, and using symbols to write and solve equations, including those used to solve word problems. In the high school grades, this domain covers the algebra topics related to using functions, equations, and inequalities to model mathematical situations and solve problems by reasoning quantitatively and extending the understanding of operations beyond the real number system.

The *i-Ready Diagnostic* for Mathematics assesses the Algebra and Algebraic Thinking domain by requiring students to apply formulas, interpret word problems, and use images and modeling to come to a response to each item. Students demonstrate an understanding of quantitative relationships and analyze mathematical situations and structures using algebraic symbols, patterns, models, and words.

Assessed Skills

Grades K–5

- Operations and Algebraic Thinking
  Meaning of operations, number relationships, applying properties of operations, solving word problems

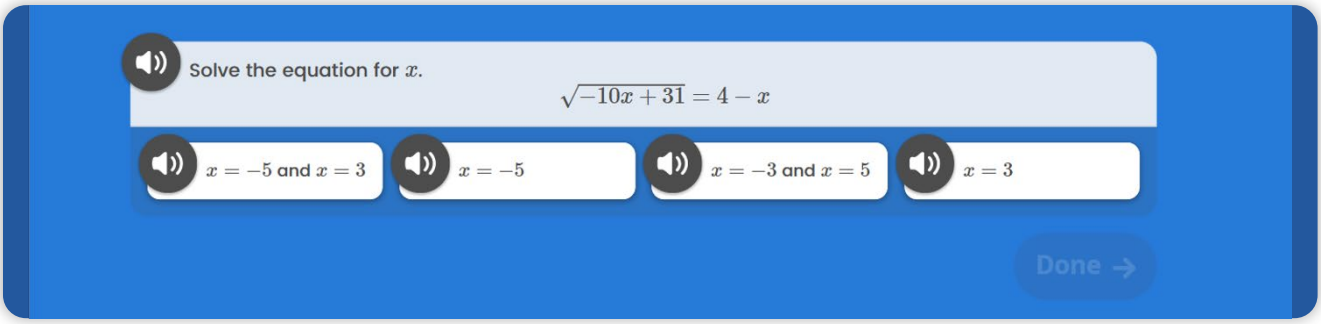
Grades 6–8

- Ratios and Proportional Relationships
  Percentages, rates, ratios
- Expressions and Equations
  Variables, equivalent expressions, exponents, radicals and integer exponents, solving real-world problems, slope, equations, inequalities, graphs of lines
- Functions
  Defining, evaluating, and comparing functions and modeling relationships with functions

Grades 9–12

- Algebra
  Expressions, arithmetic with polynomial and rational expressions, interpreting, writing and solving equations, reasoning with equations and inequalities
- Functions
  Interpreting, modeling, and building functions (i.e., linear, exponential, quadratic, polynomial, logarithmic, trigonometric, rational)

Sample Item



Grade 11: This item measures students' understanding of how to solve radical equations.

Measurement and Data

Measurement and Data comprises a wide range of mathematics skills related to collecting, organizing, and interpreting numerical information, from telling time or using a ruler to measuring the length of an object to using formulas to find volume or surface area.

The *i-Ready Diagnostic* assesses the Measurement and Data domain by requiring students to understand how to use and interpret tables and graphs, and in later grades, statistics and probability. Students are asked to demonstrate proficiency in applying concepts such as length, area, weight, and volume and are able to select the appropriate type of unit of measurement.

Assessed Skills

Grades K–5

- Measurement and Data
  Customary and metric units, time, money, length, capacity, weight and mass, geometric measurement, area, perimeter, volume, creating and interpreting graphs

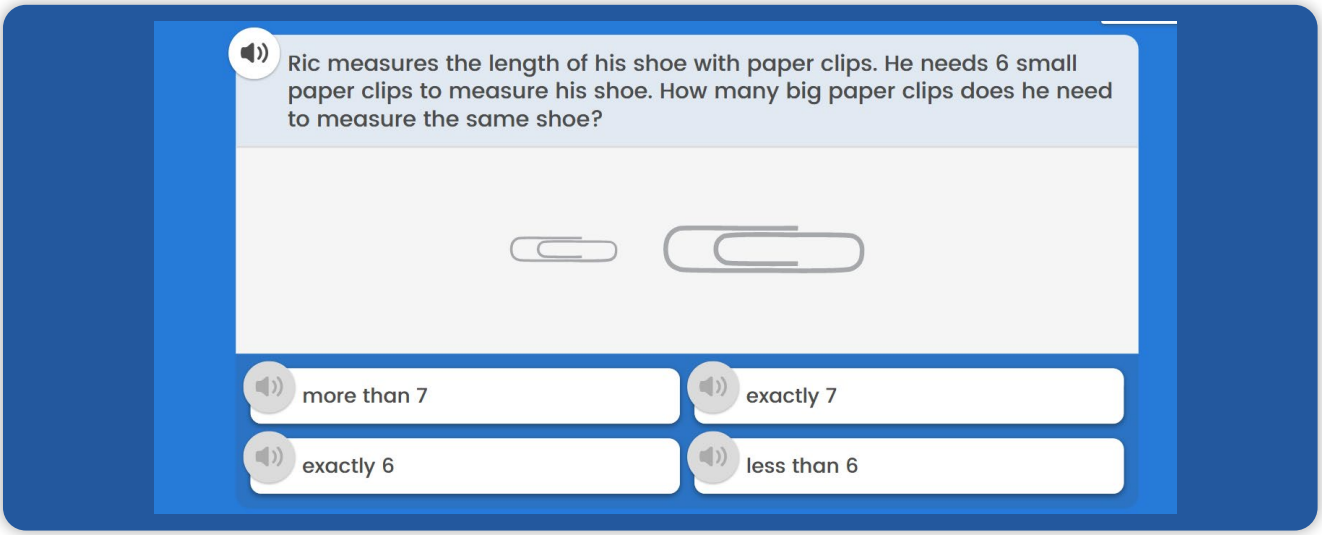
Grades 6–8

- Statistics and Probability
  Randomness, probability distributions, collecting and analyzing data, making inferences and conclusions based on random samples, and measures of center and variability

Grades 9–12

- Statistics and Probability
  Interpreting categorical and quantitative data, making inferences and justifying conclusions, conditional probability, rules of probability, expected values, making decisions using probability

Sample Item



Grade 2: This item measures students' skills in relating the size of a unit of measurement to the number of units needed to equal the length of an object.

Geometry

Geometry refers to a variety of skills related to analyzing two- and three-dimensional shapes. These include naming and classifying shapes using characteristics such as symmetry, number of sides, and angle measures, and in later grades, using congruence and similarity. In the high school grades, this domain covers geometry and measurement topics related to developing spatial geometric reasoning, connecting geometric properties and equations, writing proofs, and using statistics and probability concepts to analyze data.

The *i-Ready Diagnostic* assesses the Geometry domain by requiring students to make use of images, mathematical tools, and geometric relationships. Students use geometric properties and connections to solve word problems, evaluate constructs, and support mathematical conclusions.

Assessed Skills

Grades K–5

- Geometry
  Two-dimensional figures, three-dimensional shapes, lines, segments, points, rays, angles, symmetry, coordinate plane, graphing points, perimeter, area, volume

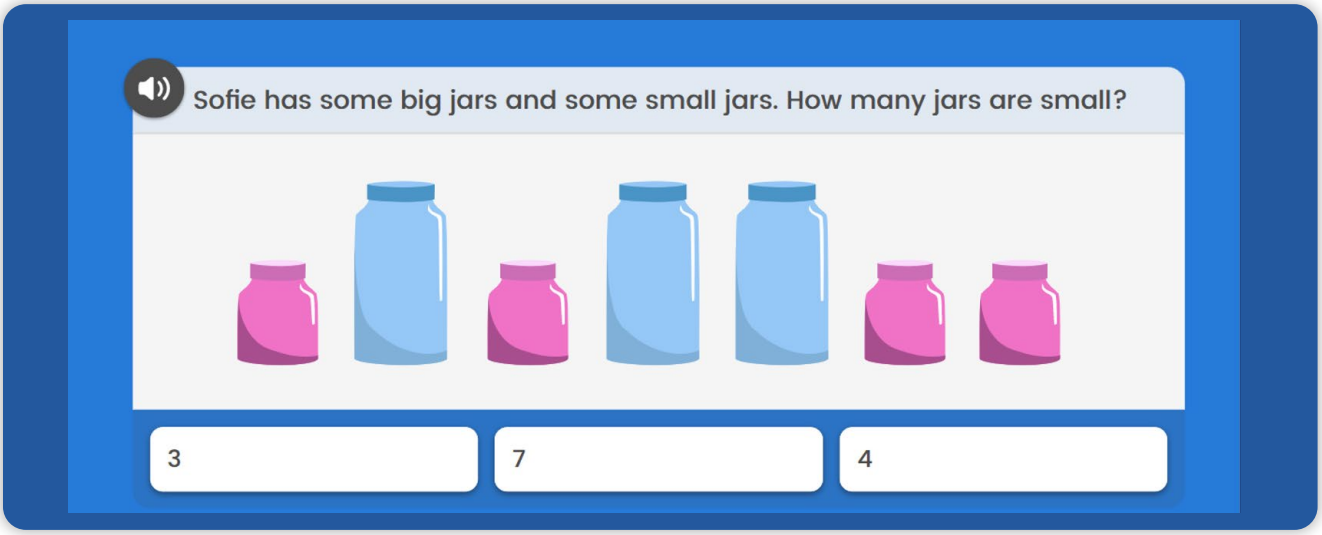
Grades 6–8

- Geometry
  Relationship between geometric figures, angle measures, area, surface area, congruence, similarity, coordinate geometry, Pythagorean Theorem

Grades 9–12

- Geometry
  Congruence, similarity, transformations, right triangles, right triangle trigonometry, circles, proofs

Sample Item



Grade K: This item measures the student's skill in classifying objects into given categories and counting the numbers of objects in the categories.

Mathematics Domain Tables

Grades K–5	Grades 6–8	Grades 9–12* (Assessed Only)
Number and Operations		
Counting and Cardinality **Number and Operations in Base Ten** Whole numbers and decimals, place value, comparing, adding, subtracting, multiplying, dividing **Number and Operations—Fractions** Modeling, comparing, adding, subtracting, multiplying, dividing	**The Number System** Common factors, common multiples, positive and negative rational numbers, including integers, fractions, decimals, approximating numbers that are not rational, irrational numbers	**Number and Quantity** The real number system, quantities, the complex number system, vector and matrix quantities, operations on vectors
Algebra and Algebraic Thinking		
Operations and Algebraic Thinking Meaning of operations, number sense, number relationships, properties, solving word problems	**Ratios and Proportional Relationships** Percent, rates, ratios **Expressions and Equations** Variables, equivalent expressions, exponents, radicals and integer exponents, solving real-world problems, slope, equations, inequalities, graphs of lines, systems of equations **Functions** Defining, evaluating, and comparing functions, modeling relationships with functions	**Algebra** Structure of expressions, arithmetic with polynomial and rational expressions, interpreting, writing and solving equations, reasoning with equations and inequalities **Functions** Interpreting, modeling, and building functions: linear, exponential, piecewise-defined, step, absolute value, quadratic, polynomial, logarithmic, trigonometric, rational
Measurement and Data		
Measurement and Data Customary and metric units, time, money, length, capacity, weight and mass, geometric measurement, area, perimeter, volume, creating and interpreting graphs	**Statistics and Probability** Randomness, probability distributions, statistical questions, collecting and analyzing data, making inferences and conclusions based on random samples and measures of center and variability	**Statistics and Probability** Interpreting categorical and quantitative data, making inferences and justifying conclusions, conditional probability, rules of probability, expected values, making decisions using probability
Geometry		
Geometry Two-dimensional figures, three-dimensional shapes, lines, segments, points, rays, angles, symmetry, coordinate plane, graphing points, perimeter, area, volume	**Geometry** Relationship between geometric figures, angle measures, area, surface area, congruence, similarity, coordinate geometry, Pythagorean Theorem	**Geometry** Congruence, similarity, transformations, right triangles, right triangle trigonometry, circles, proofs

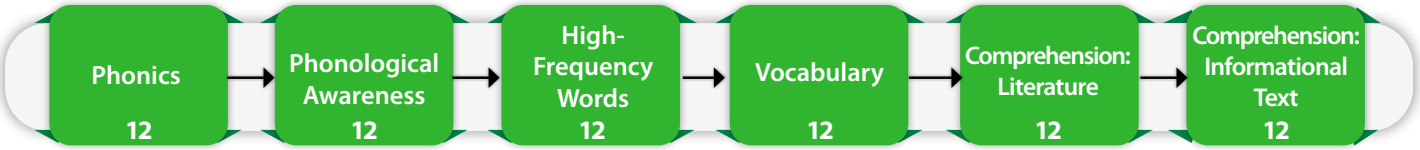
*In Diagnostic Results reports for Grades 9–12, student data will be reflected in two domains: Algebra and Algebraic Thinking (includes topics shown in Grades 9–12 Number and Operations) and Geometry (includes topics shown in Grades 9–12 Measurement and Data).

i-Ready Diagnostic Test Flows: Reading

For each subject, the domains and test flow (i.e., the order of domains) vary by grade level and student performance.

Grades K–1

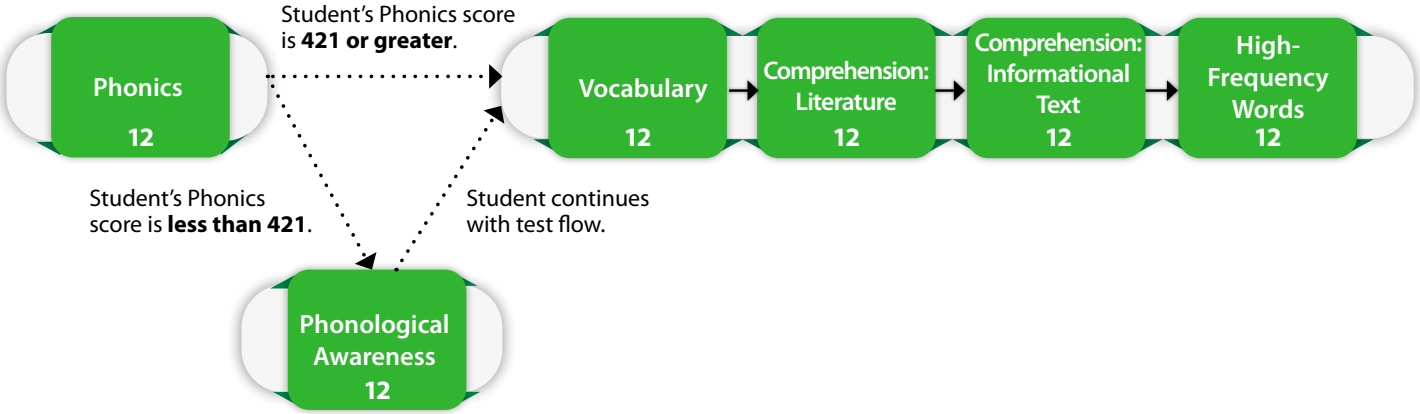
Students who are in chronological Grades K–1 will receive items in all six Reading domains. The test flow and number of items in each domain is as follows:



Students in Grades K–1 will see a total of 72 reading items across the six domains.

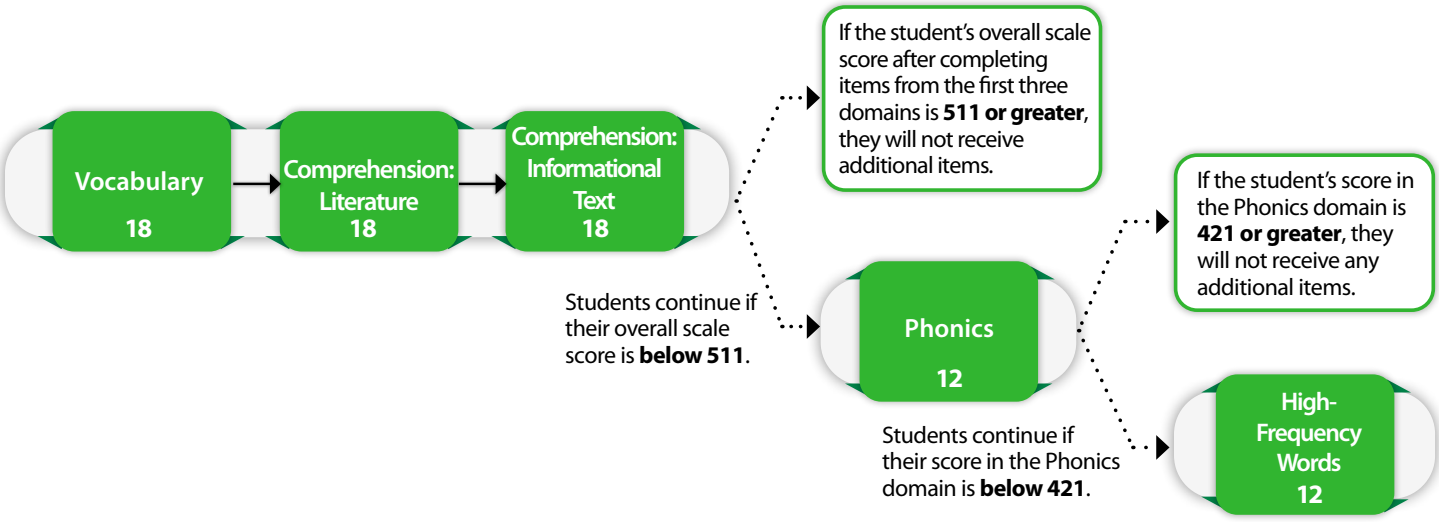
Grade 2

Students who are in chronological Grade 2 are first assessed in the Phonics domain. The student's overall scale score after completing Phonics items determines the rest of their test flow.



i-Ready Diagnostic Test Flows: Reading (Cont'd.)

Grades 3–8

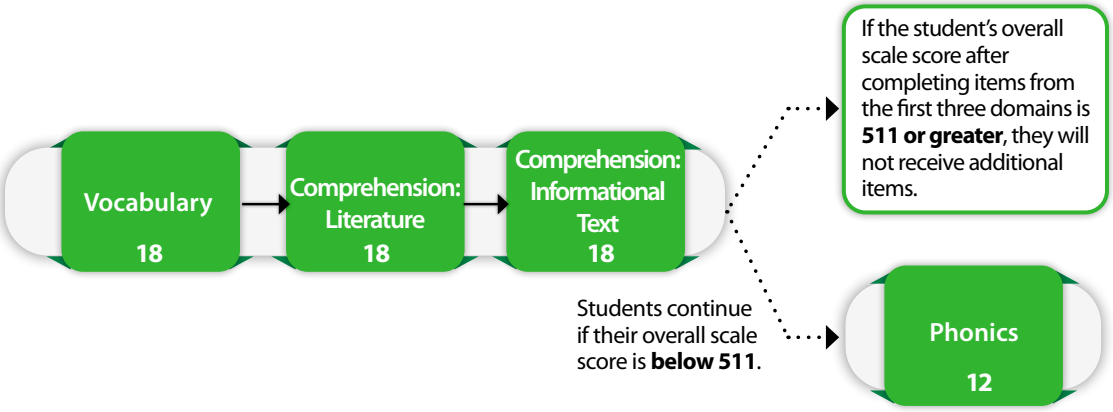


Students who are in chronological Grades 3–8 are first assessed in the Vocabulary, Comprehension: Literature, and Comprehension: Informational Text domains. The student's overall scale score after completing these domains determines if the test ends or continues. If the test continues, the student will receive Phonics, and the score on Phonics determines if the test ends or continues to High-Frequency Words.

Students whose test ends after the first three domains will see a total of 54 items, students whose test ends after the Phonics domain will see 66 items, and students who see all five domains will see 78 items.

Grades 9–12

Students who are in chronological Grades 9–12 are first assessed in the Vocabulary, Comprehension: Literature, and Comprehension: Informational Text domains. The student's overall scale score after completing these domains determines if the test ends or the student continues to Phonics.



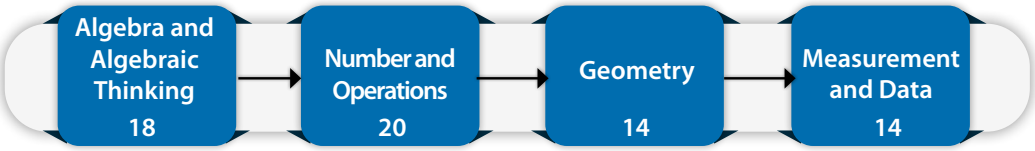
Students whose tests end after the first three domains will see 54 items. Students who see all four domains will see 66 items.

Mathematics

For each subject, the domains and test flow (i.e., the order of domains) vary by grade level and student performance.

Grades K–8

Students who are in chronological Grades K–8 will be assessed in all four Mathematics domains in the following order:

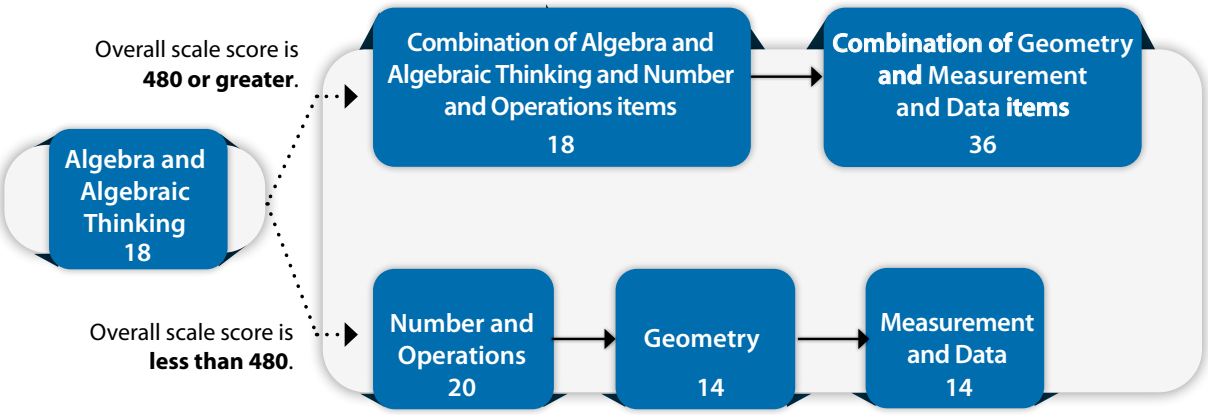


Students in Grades K–8 will see 66 total items across the four Mathematics domains.

Grades 9–12

Students who are in chronological Grades 9–12 are first assessed in the Algebra and Algebraic Thinking domain. The student's overall scale score after completing the first 18 items in this domain determines the rest of their test flow.

Students who score below 480 on the first set of items follow a test flow consisting of Number and Operations, then Geometry, then Measurement and Data. This branch of the test flow is designed to assess students who are generally performing well below proficiency on typical high school content. The goal is to provide instructional information to educators to help get students to grade-level proficiency.



Students who score at or above 480 on the first set of items follow a separate branch of the test flow that is for students who are ready for typical high school coursework.

In the first set of items, the students will see a combination of Algebra and Algebraic Thinking items and Number and Operations items. Students will see a maximum of 12 items in Algebra and Algebraic Thinking and a maximum of nine items in Number and Operations. In high school, the Number and Operations items are more similar to Number and Quantities items—a high school mathematics concept closely associated with algebraic thinking—and as a result, they contribute to a student's Algebra and Algebraic Thinking domain score. Students do not receive a Number and Operations domain placement.

For the second set of items, students will see a combination of Geometry items and Measurement and Data items. Students will see a maximum of 30 items in Geometry and a maximum of six items in Measurement and Data. For this branch, Measurement and Data items are generally represented through high school–level statistics items, and as a result, they contribute to a student's Geometry domain score. Students in this branch consequently do not receive a Measurement and Data domain placement.

Students who score below 480 on the first domain will see a total of 66 items. Students who score at or above 480 on the first domain will see a total of 72 items.

Field Test Items

Some students may be asked to take a small number of field test items, which contribute to the continual improvement and validity of the Diagnostic. These questions are seamlessly inserted into a student's test-taking experience, and a student would not be aware that they are taking a field test item. These items do not contribute to a student's score.