



What mathematics domains are covered by the *i-Ready Diagnostic*?

Overview

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 multiple domains including mathematics.

The Diagnostic covers these mathematics domains:

Number and Operations

Number and Operations in Grades K–8 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 whole numbers, decimals, fractions, integers, and irrational numbers.

Algebra and Algebraic Thinking

Algebra and Algebraic Thinking in Grades K–8 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.

Measurement and Data

Measurement and Data in Grades K–8 is a wide range of mathematics skills related to collecting, organizing, and interpreting numerical information, from telling time or using a ruler to measure the length of an object to using formulas to find volume or surface area. It also includes understanding tables and graphs, and in later grades, statistics and probability.

Geometry

Geometry in Grades K–8 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.

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What reading domains are covered by the *i-Ready Diagnostic*?

Overview

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 multiple domains including reading.

The Diagnostic covers these reading domains:

Phonological Awareness

Phonological Awareness is the understanding that a spoken word is made up of different parts and that 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 letter.

Phonics

Phonics instruction teaches children how to connect the sounds they hear in spoken words to the letters they see in written words. For example, a student who can connect sounds to letters knows to read "th" in *then* as a single sound /th/, rather than the sound /t/ and the sound /h/. 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.

High-Frequency Words

High-Frequency Words are the words that appear most often in what children read. Words such as *the*, *and*, and *it* are high frequency words. Because these words appear so often, readers must 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.

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.

Comprehension: Literature

Comprehension: Literature describes a student's ability to understand types of writing that are usually made up, or fictional. Stories are the literary texts that students read most often, but plays and poems are also examples of literary texts. 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, the student is able to understand stories, plays, and poems that are increasingly complicated.

Comprehension: Informational Text

Comprehension: Informational Text describes a student's ability to understand types of writing that are usually true. Books about science or history are examples of informational text, as are newspaper articles or magazine articles. This kind of writing is often structured differently than literary texts. Informational text often does not tell a story, and it is usually organized into sections with headings. Additionally, it might contain charts, diagrams, and graphs that are important to understanding. A student who understands informational text might identify the main idea and supporting details, describe the way the writing is organized, or draw information out of a photograph or diagram.