



# The Science of Reading

## Five Essential Elements of Effective Reading Instruction

**WHAT**

	Phonological Awareness	Phonics	Fluency	Vocabulary
	Phonological awareness is the ability to notice the sound structure of spoken words.	Phonics is a system for approaching reading that focuses on the relationship between letters and sounds.	Fluency is the ability to read a text quickly, accurately, and with proper expression.	Vocabulary is the knowledge of words and word meanings.
	Phonemic awareness is the ability to identify, isolate and manipulate language at the individual sound level. It is a part of phonological awareness.	The teaching has to move from letter/sound correspondences to graphemes, syllables and morphemes.	Fluency is determined by the size of your sight vocabulary.	Connecting meaning to spelling patterns of words can be critical to expanding a student's vocabulary.
	Basic phonological awareness skills include phoneme blending and segmentation and are generally mastered by most students by the end of the first grade.	Orthographic mapping is the ability to quickly and efficiently add words to your sight vocabulary.	If a student is good at orthographic mapping, reading practice is helpful to increase fluency.	Morphology is the study of segmenting words into prefixes, suffixes, roots, or bases and the origins of words.
	Advanced phonological awareness skills involve manipulating phonemes which include deleting, substituting, or reversing phonemes within words.	Sight vocabulary is all the words you instantly recognize.	If a student is not good at orthographic mapping, reading practice does not help to increase fluency.	Vocabulary knowledge is knowledge; the knowledge of a word not only implies a definition, but also implies how that word fits into the world.

**WHY**

Phonological awareness difficulties represent the most common source of word-level reading difficulties.	By the end of first grade, students taught by a code-based approach perform, on average, the equivalent of 7 to 8 standard score points higher on tests of reading comprehension than students taught with a meaning-based approach.	Students who are fluent readers are better able to devote their attention to comprehending the text.	Children's vocabulary skills are linked to their economic backgrounds. By 3 years of age, there is a 30 million word gap between children from the wealthiest and poorest families.
Phonological awareness is essential for skilled reading.	Guessing words from context is not as efficient as phonetic decoding. Skilled readers can identify unfamiliar words with a high degree of accuracy by sounding them out, even irregular words. By contrast, researchers have found that even proficient readers are not as skilled at correctly guessing words from context with an accuracy rate of only about 25%.	Fluency is the bridge between decoding words and understanding what has been read.	Vocabulary is the glue that holds stories, ideas, and content together making reading comprehension possible for children.
Phonemic awareness is needed for efficient sight-word learning.	When we see a word, the areas of the brain responsible for orthography (familiar spelling) and phonology (pronunciation) activate before the areas responsible for the semantic system (meaning).	A student needs to be able to read 130 correct words per minute on a sixth grade level to be successful in content reading.	There is a strong relationship between vocabulary and reading comprehension.
Early, explicit, and systematic instruction in phonics, along with direct instruction in phonological awareness, can prevent and also remediate reading difficulties.		As children become fluent readers, they are able to interact with text on a higher level.	Awareness of morphology is a strong indicator of and a positive influence upon reading comprehension.
The combination of explicit phonics and phonological training for all students in kindergarten and first grade provides far greater results in word-level reading skills than any other teaching practice that has been studied.			

Phonological awareness, phonics, fluency, and vocabulary all lead to

# COMPREHENSION.

Reading aloud to children builds the foundation of literacy learning. Listening comprehension comes before reading comprehension.

**HOW**

To meet the goal of helping our students make the maximum possible academic gains in the 5 essential elements of effective reading instruction, students need instruction that is both systematic and explicit as well as direct, engaging, and success oriented. Systematic means that the teacher has a specific scope and sequence for introducing each skill. Explicit means that the teacher provides clear and precise instruction.