The Science of Reading

RISE ARKANSAS — *Reading Initiative for Student Excellence*

WHAT

Phonological Awareness

1. Phonological awareness is the ability to notice the sound structure of spoken words.

2. Phonemic awareness is the ability to identify, isolate and manipulate language at the individual sound level. It is a part of phonological awareness.

3. Basic phonological awareness skills include phoneme blending and segmentation and are generally mastered by most students by the end of the first grade.

4. Advanced phonological awareness skills involve manipulating phonemes which include deleting, substituting, or reversing phonemes within words.

Phonics

10. Phonics is a system for approaching reading that focuses on the relationship between letters and sounds.

11. The teaching has to move from letter/sound correspondences to graphemes, syllables and morphemes.

12. Orthographic mapping is the ability to quickly and efficiently add words to your sight vocabulary.

13. Sight vocabulary is all the words you instantly recognize.

Fluency

17. Fluency is the ability to read a text quickly, accurately, and with proper expression.

18. Fluency is determined by the size of your sight vocabulary.

19. If a student is good at orthographic mapping, reading practice is helpful to increase fluency.

20. If a student is not good at orthographic mapping, reading practice does not help to increase fluency.

Vocabulary

25. Vocabulary is the knowledge of words and word meanings.

26. Connecting meaning to spelling patterns of words can be critical to expanding a student's vocabulary.

27. Morphology is the study of segmenting words into prefixes, suffixes, roots, or bases and the origins of words.

28. 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

5. Phonological awareness difficulties represent the most common source of word-level reading difficulties.

6. Phonological awareness is essential for skilled reading.

7. Phonemic awareness is needed for efficient sight-word learning.

8. Early, explicit, and systematic instruction in phonics, along with direct instruction in phonological awareness, can prevent and also remediate reading difficulties.

9. 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.

14. 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.

15. 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%.

16. 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).

21. Students who are fluent readers are better able to devote their attention to comprehending the text.

22. Fluency is the bridge between decoding words and understanding what has been read.

23. A student needs to be able to read 130 correct words per minute on a sixth grade level to be successful in content reading.

24. As children become fluent readers, they are able to interact with text on a higher level.

29. 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.

30. Vocabulary is the glue that holds stories, ideas, and content together making reading comprehension possible for children.

31. There is a strong relationship between vocabulary and reading comprehension.

32. Awareness of morphology is a strong indicator of and a positive influence upon reading comprehension.

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33. **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

34. For maximum academic gains, students need systematic, explicit, engaging and success oriented instruction. Systematic means a teacher has a **specific scope and sequence** for introducing each skill. Explicit means that the teacher provides **clear and precise instruction**. Engaging instruction that is success oriented involves increased **active participation** in the instructional activities while minimizing errors and providing **immediate corrective feedback** when errors occur.

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