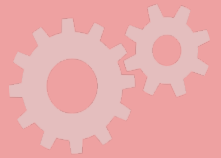

THE READING BRAIN – UNDERSTANDING THE SCIENCE OF READING

PARTICIPANT HANDOUT



ASDN Webinar Series - 1

Pre-Test: The Reading Brain

1. Decoding x _____ = Reading comprehension
 - a. reading vocabulary
 - b. listening comprehension
 - c. language comprehension
 - d. none of the above

2. What is the most common reason children struggle with word-level reading?
 - a. lack of letter name knowledge
 - b. deficit in the phonological core processor
 - c. deficit in learning sight words
 - d. lack of grade level vocabulary

3. When we read, we process written language:
 - a. word by word
 - b. letter by letter

4. Hollis Scarborough's Reading Rope is a metaphor for:
 - a. fluency
 - b. skilled reading
 - c. word recognition
 - d. none of the above

5. Comprehension of written language involves processing language at the following levels:
 - a. gaining access to word meaning
 - b. making sense of sentence structures
 - c. integrating meaning within and between sentences
 - d. all of the above

6. There is still a disconnect between the science of reading and educational practice.
 - a. true
 - b. false

7. The Simple View of Reading tells us that reading is the product of:
 - a. reading comprehension and language comprehension
 - b. reading comprehension and word recognition
 - c. language comprehension and background knowledge
 - d. word recognition and language comprehension

Quick Write

What comes to mind when you think about the phrase "*Science of Reading*"?

Reading Models:

Identify anything that you might already know about *The Simple View of Reading* and the *Scarborough Rope Model*.

After engaging with the content presented, what might you add to what you already knew about *The Simple View of Reading* and the *Scarborough Rope Model*.

Teaching Reading Is Rocket Science – Louisa C. Moats

Directions: Use this document to record your responses to the following prompts.

What are the implications for students in the elementary and secondary setting who are poor readers but do not benefit from instruction delivered by educators with deep knowledge of the structure of language?

Identify a few important aspects of the chart on page 18-19 which illustrates the knowledge teachers should have and how that knowledge may be applied in teaching reading.

Reflection:

Identify ideas confirmed for you that support the need to provide instruction based on the Science of Reading.

Considering the content of this session and conversations with colleagues across Alaska; how might this information impact your instructional practice?

Video Viewing Guide – The Reading Brain

Directions: After watching the video segments, use this document to record responses to the questions below.

- Stanislas Dehaene - https://youtu.be/wlYZBi_07vk
- Stanislas Dehaene - <https://youtu.be/GzvMyzici6U>
 - Watch: 3:02 -9:22
 - Watch: 12:24-15:45



In your own words, summarize what happens in the brain when it reads?

What implications should this information have for how reading should be taught?

What information presented by Stanislas Dehaene was particularly interesting to you?

References

- Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest*, 19(1), 5-51.
- Dehaene, S. (2010). *Reading in the brain: The new science of how we read*. Penguin Group USA.
- Gough, P. B., & Hillinger, M. L. (1980). Learning to read: An unnatural act. *Bulletin of the Orton Society*, 30(1), 179-196.
- Hoover, W. A., & Gough, P. B. (1990). The simple view of reading. *Reading and writing*, 2(2), 127-160.
- Houdé, O., Rossi, S., Lubin, A., & Joliot, M. (2010). Mapping numerical processing, reading, and executive functions in the developing brain: an fMRI meta-analysis of 52 studies including 842 children. *Developmental science*, 13(6), 876-885.
- Kilpatrick, D. A. (2015). *Essentials of assessing, preventing, and overcoming reading difficulties*. John Wiley & Sons.
- Lyon, G. R., & Chhabra, V. (2004). The Science of Reading Research. *Educational Leadership*, 61(6), 13.
- Moats, L. C. *Teaching Reading Is Rocket Science*, 2020.
- National Reading Panel (US), National Institute of Child Health, Human Development (US), National Reading Excellence Initiative, National Institute for Literacy (US), United States. Public Health Service, & United States Department of Health. (2000). *Report of the National Reading Panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups*. National Institute of Child Health and Human Development, National Institutes of Health.
- Sandak, R., Mencl, W. E., Frost, S. J., & Pugh, K. R. (2004). The neurobiological basis of skilled and impaired reading: Recent findings and new directions. *Scientific Studies of reading*, 8(3), 273-292.
- Scarborough, H. S., Neuman, S., & Dickinson, D. (2001). *Handbook for research in early literacy*.
- Seidenberg, M. (2017). *Language at the Speed of Sight: How we Read, Why so Many Can't, and what can be done about it*. Basic Books.
- Shaywitz, S. E. (2003). *Overcoming dyslexia: A new and complete science-based program for reading problems at any level*. Knopf.
- Snowling, M. J., & Hulme, C. E. (2005). *The science of reading: A handbook*. Blackwell Publishing.
- Stewart, L. SCIENCE READING.
- Wolf, M. (2018). *Reader, come home: The reading brain in a digital world*. New York, NY: Harper.
- Wolfe, P., Wolfe, P., & Nevills, P. (2004). *Building the reading brain, PreK-3*. Corwin Press.