



The Science of Reading/Literacy

Social Services and Education Professionals Symposium

University of New England

August 18, 2026

Sarah Perle, M.Ed.



Breakout Session



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The Science of
Reading

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The Science of
Writing

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Social Emotional
Implications

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Structured Literacy



Turn and Talk

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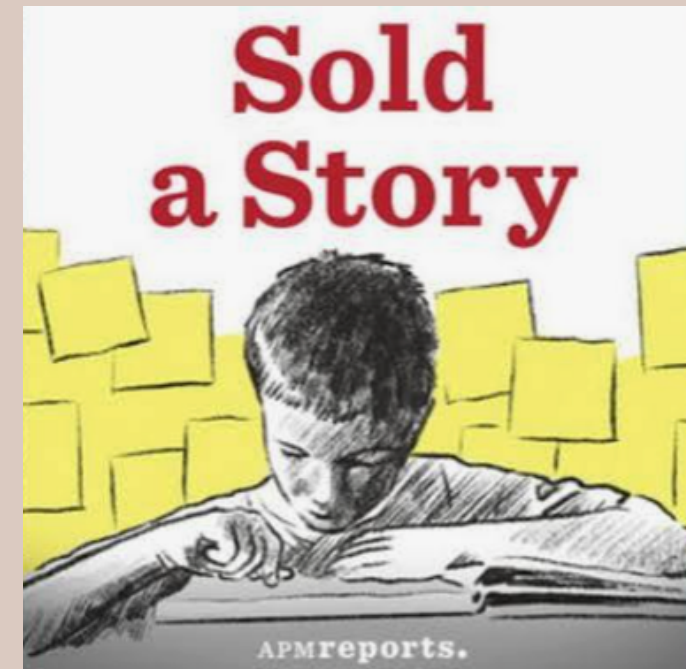
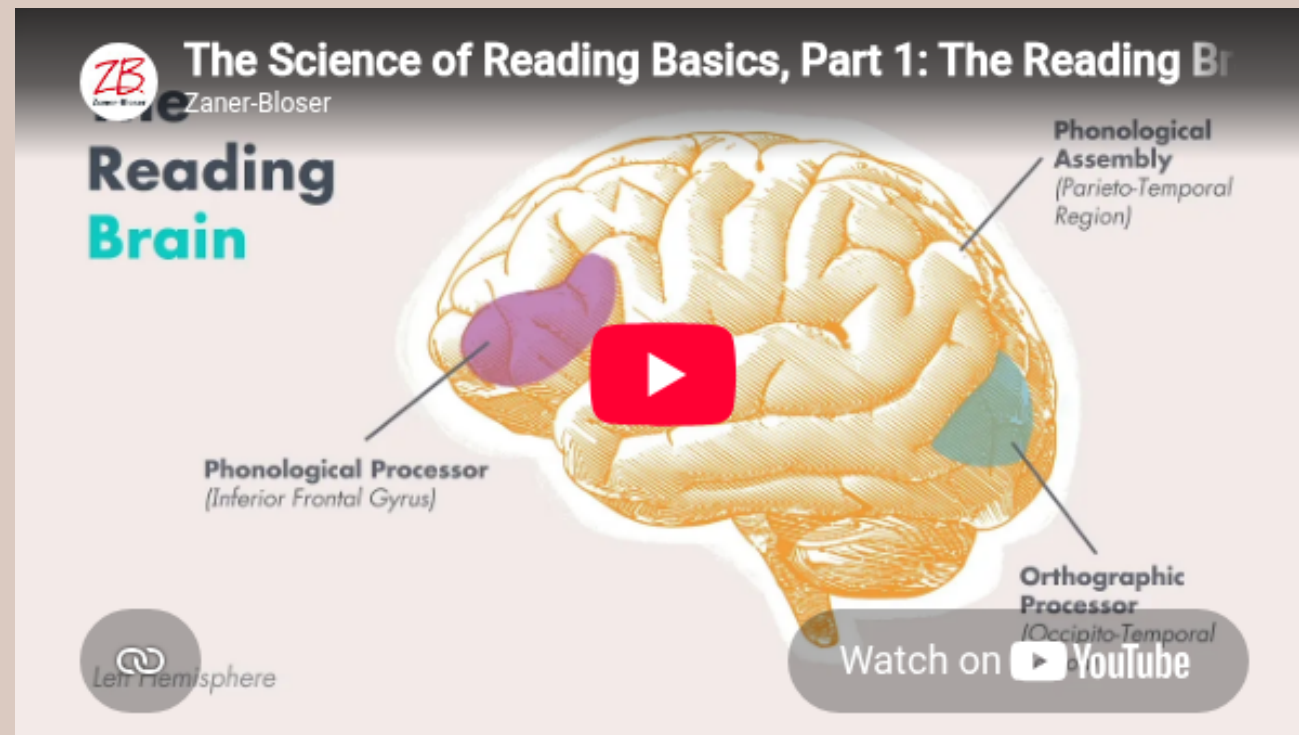
Introduce yourself

2

Discuss:

- What do you know about the science of reading/literacy?
- What brought you to this session?
- What are you hoping to learn?

The Science of Reading



“While learning to speak is innate—an infant regularly exposed to language will learn to speak it—reading is not. No matter how many books you surround a child with, they will not master reading without instruction. Reading repurposes multiple parts of the brain, including visual processing and language comprehension. Researchers have studied this using MRI scans, and have shown that the same areas of the brain activate no matter what language people read in.”

<https://www.lexialearning.com/blog/what-is-the-science-of-reading-how-the-human-brain-learns-to-read>



The Science of Reading

The Reading League states, “The science of reading is a vast, interdisciplinary body of scientifically-based research about reading and issues related to reading and writing. This research has been conducted over the last five decades across the world, and it is derived from thousands of studies conducted in multiple languages. The science of reading has culminated in a preponderance of evidence to inform how proficient reading and writing develop; why some have difficulty; and how we can most effectively assess and teach and, therefore, improve student outcomes through prevention of and intervention for reading difficulties.”



What is the science of reading?

What is the Science of Reading

The Science of Reading: Defining Guide provides a firm definition of what the science of reading is, what it is not, and how all stakeholders can understand its potential to transform reading instruction.

 The Reading League /

What the Science of Reading is **NOT**

- ❌ an ideology or philosophy
- ❌ a fad, trend, new idea, or pendulum swing
- ❌ a political agenda
- ❌ a one-size-fits-all approach
- ❌ a program of instruction
- ❌ a single, specific component of instruction, such as phonics



The Science of Reading

The National Reading Panel (2000)

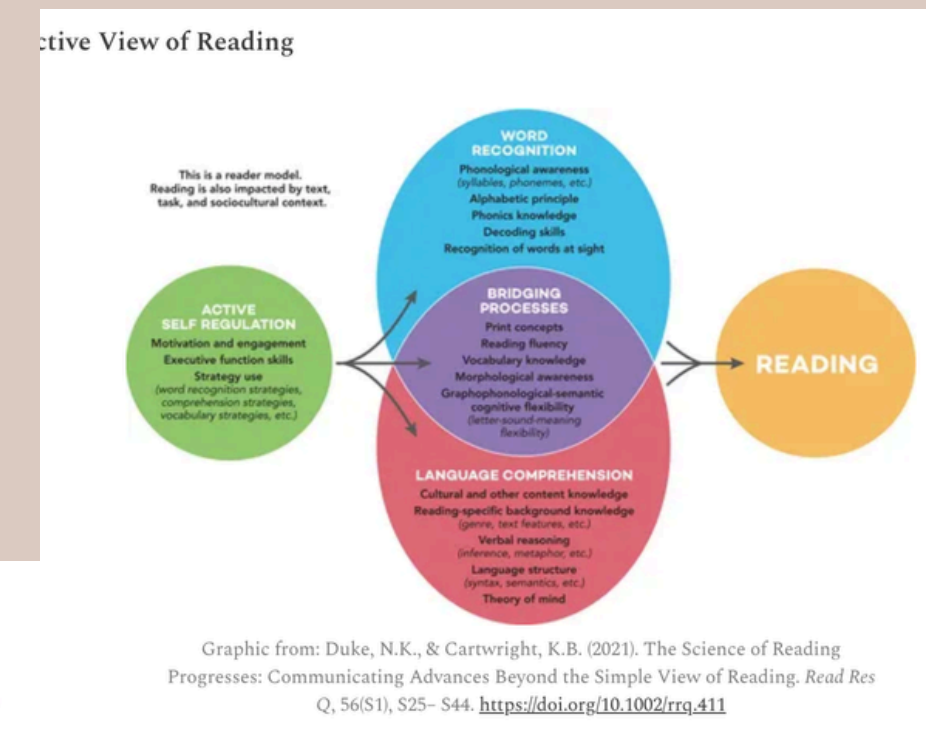
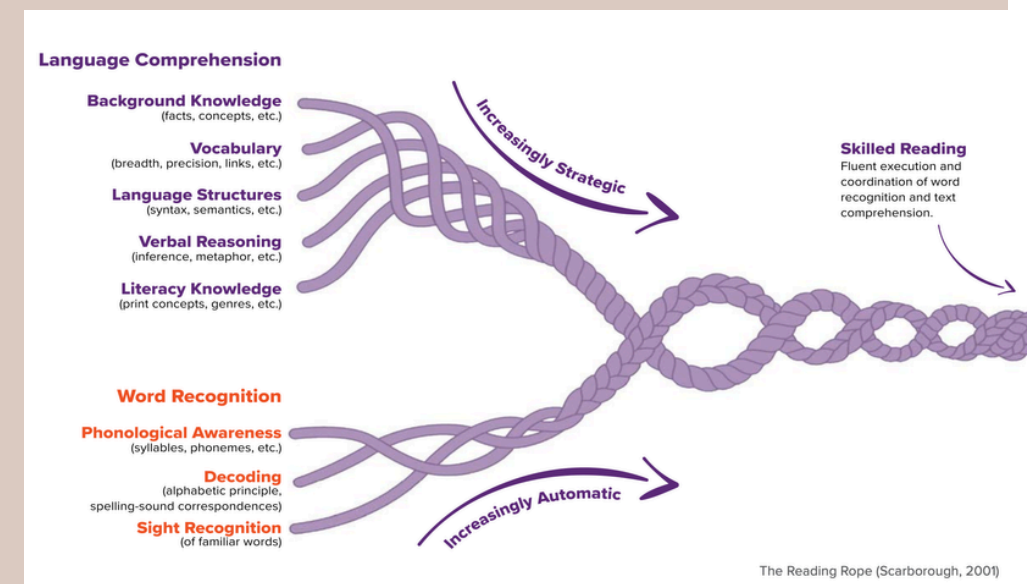
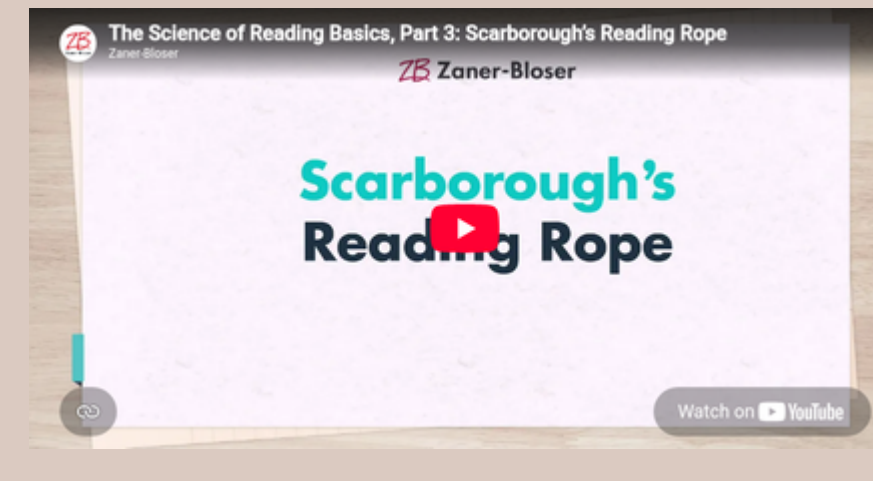
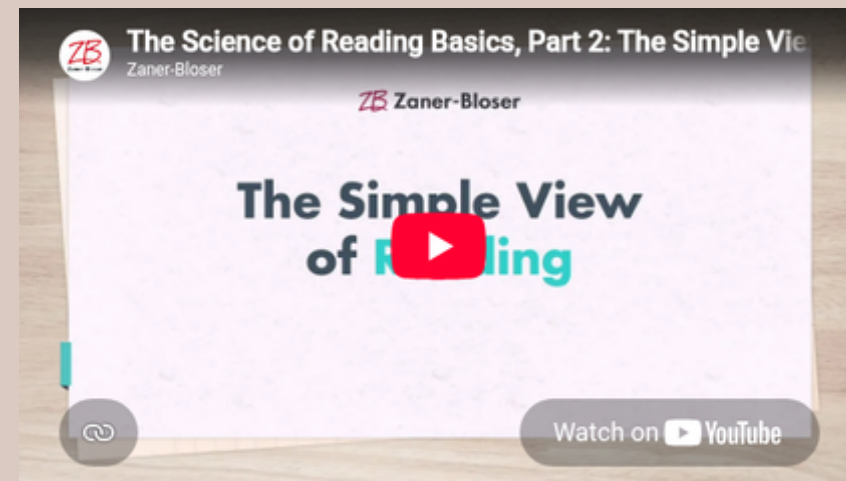
The Simple View of Reading (1990)

Scarborough's Reading Rope (2001)

The Active View of Reading (2021)



<https://files.eric.ed.gov/fulltext/ED489535.pdf>





Turn and Talk

Discuss:

- What is new learning for you so far?
- What are you wondering?



The Science of Writing

The Simple View of Writing

Foundational
Writing Skills
(Transcription)



Text
Generation
(Composition)



Skilled Written
Expression

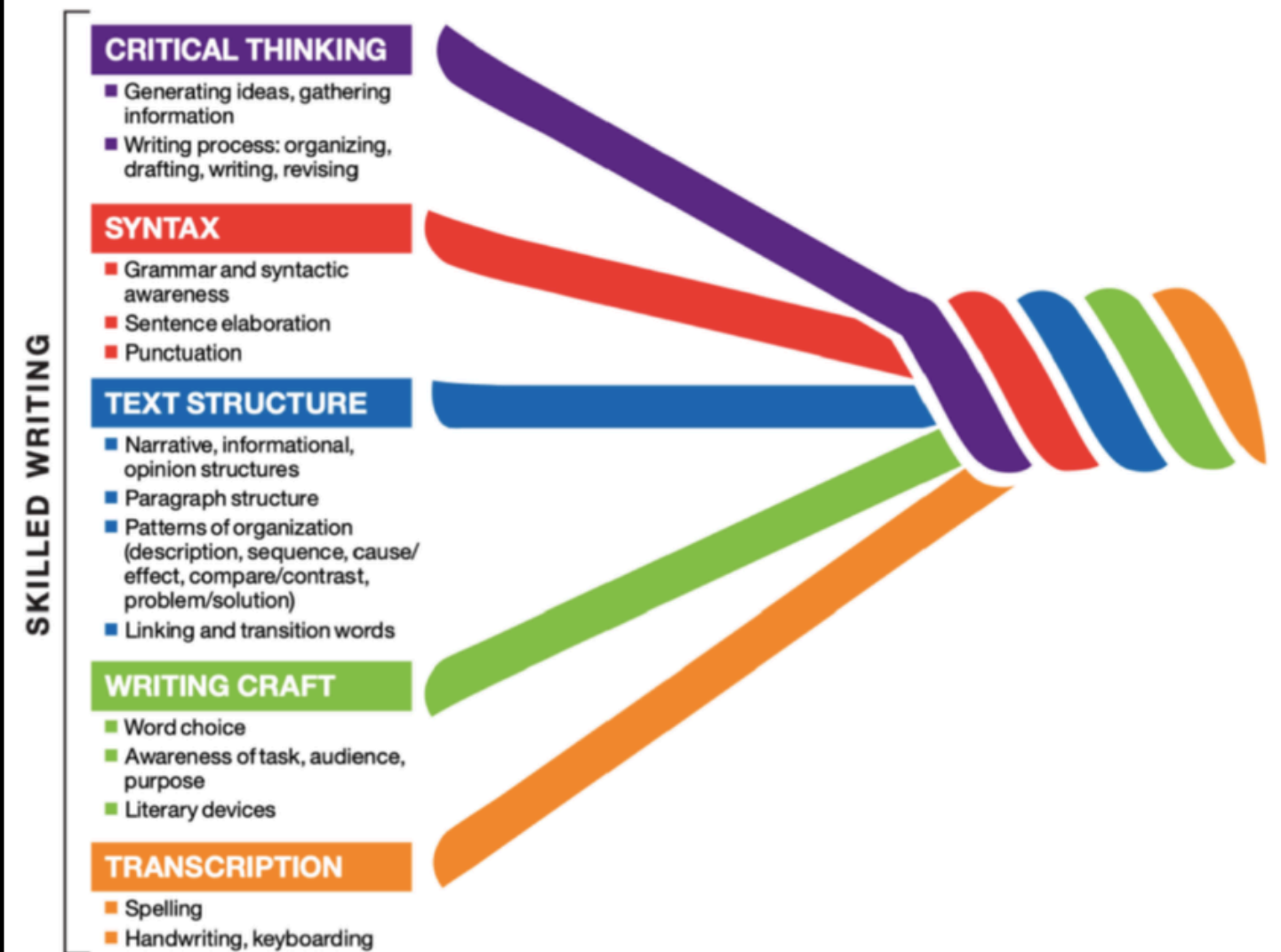
- Letter formation
- Handwriting/
Keyboarding
Fluency
- Spelling
- Punctuation
- Spacing

- Knowledge
- Vocabulary
- Sentence
construction
- Grammar & usage
- Literary genres
- Idea organization
- Audience

(Adapted from Moats & Tolman, 2019)

The Writing Rope

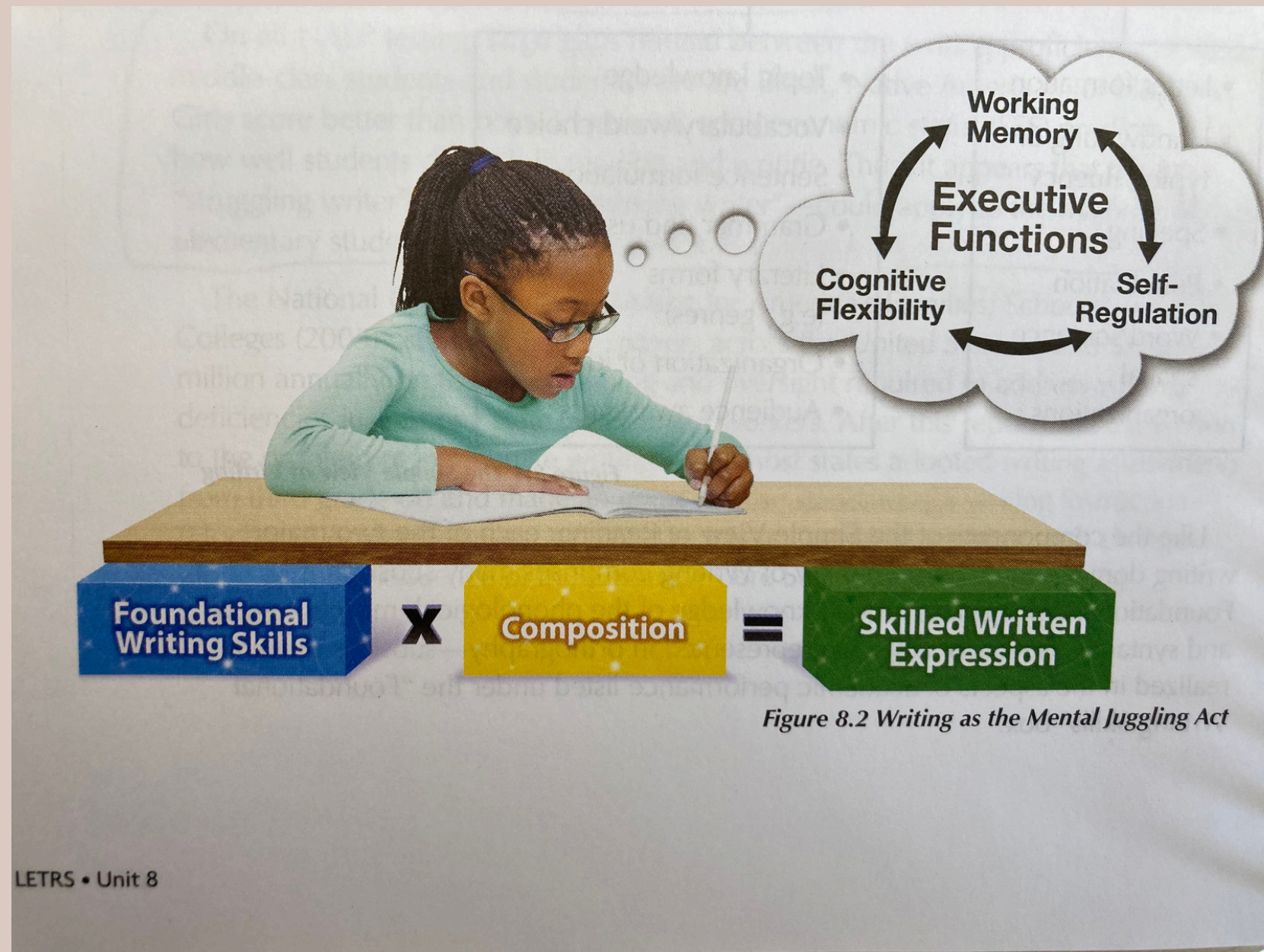
The Strands That Are Woven Into Skilled Writing
(Sedita, 2019)



From: The Writing Rope: The strands that are woven into skilled writing. (c) 2019 by Joan Sedita. All rights reserved.
(Graphic in The Writing Rope: A Framework for Explicit Writing Instruction in All Subjects, by Joan Sedita. (2023); Paul H. Brookes Publishing Co., Inc.)

The Science of Writing

Writing is the quintessential “mental juggling act” and thus it takes the longest time to learn.



Engaging *working memory* to hold information in mind while decisions about spelling, word choice, sentence structure, and organization are being made.



Enabling *cognitive flexibility* for planning and goal-setting, monitoring progress toward the goal, and shifting attention among the many aspects of the task.

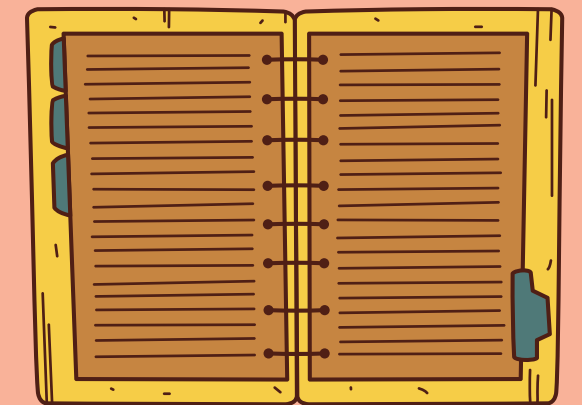
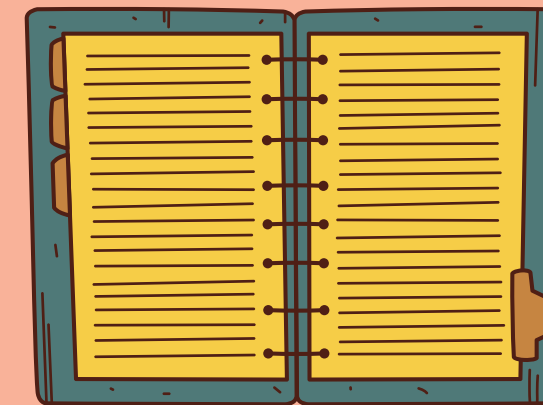
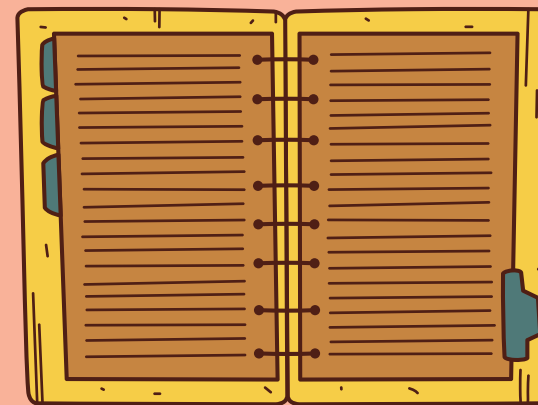
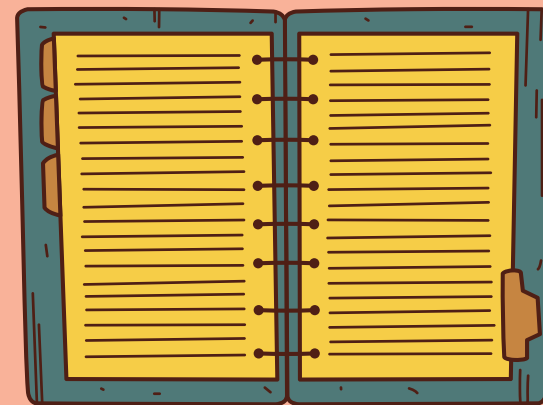
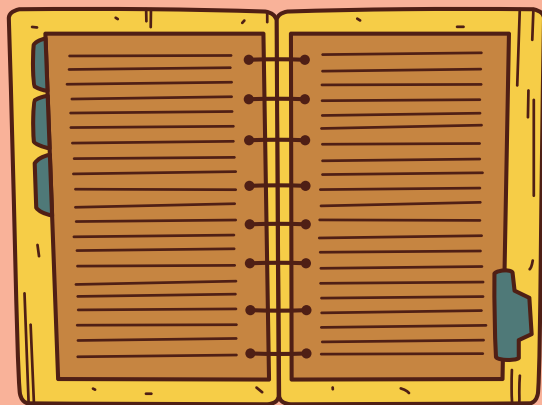


Activating *self-regulation* or the ability to persist in the face of distractions and frustration.

(LETRS, p. 234)

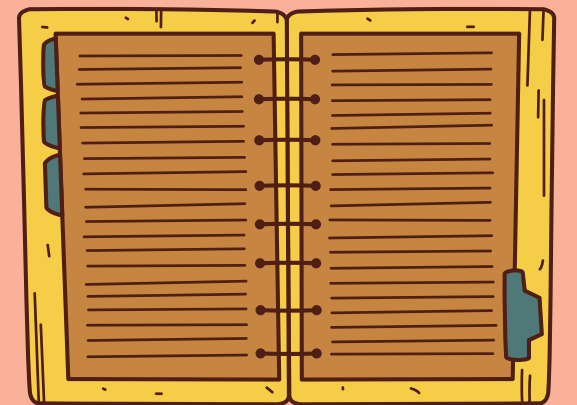
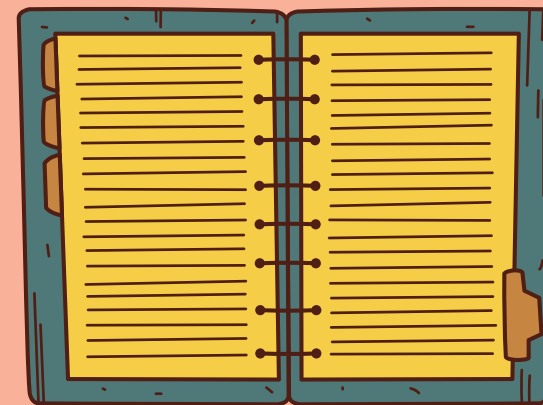
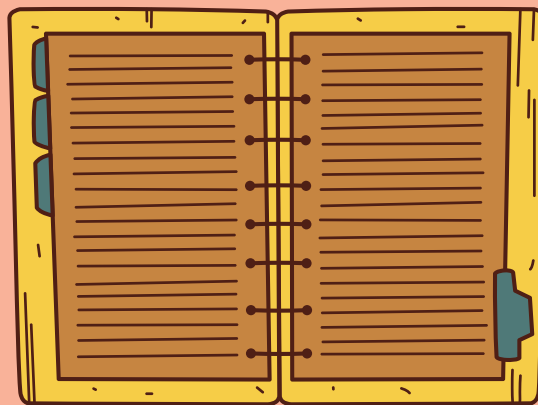
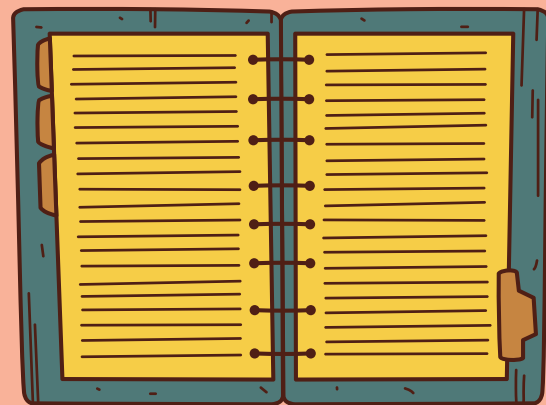
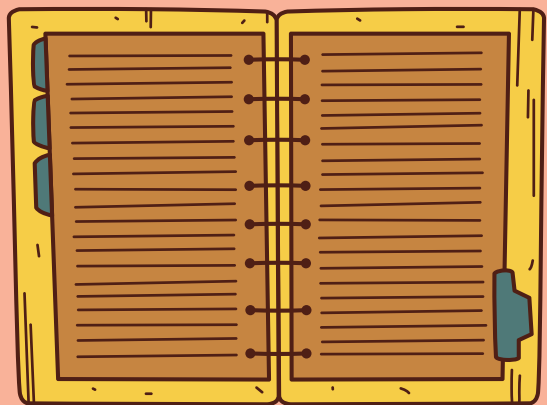
Your Turn

- With your dominant hand: What is your favorite movie or television show and why?
 - 30 seconds plan, 60 seconds to write



Your Turn

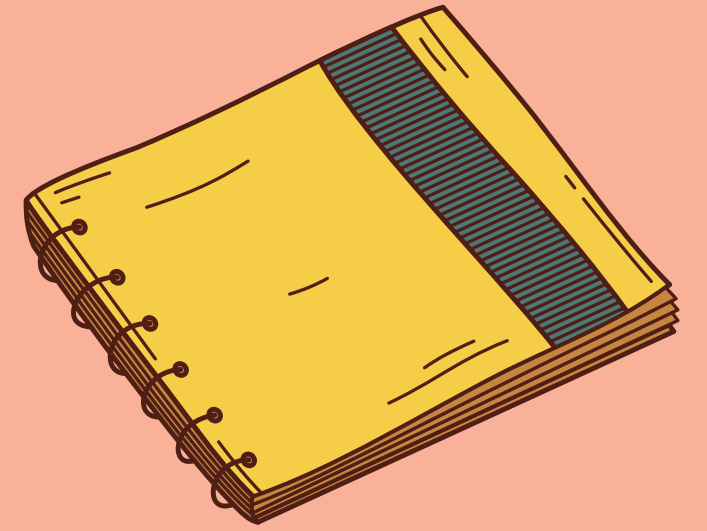
- With your nondominant hands: What is your favorite month or season and why?
 - 30 seconds plan, 60 seconds to write



Writing Fluency

- In the second activity, your cognitive load was quite increased - forming letters, choosing shorter words, etc.
- Handwriting fluency is something that we usually take for granted as adults.
- The longer we let it go, the harder it will be to remediate - just like with everything else!

**“The research is clear: If foundations are established early, composition quality and length improves from grade to grade.”
(LETRS, p. 326)**

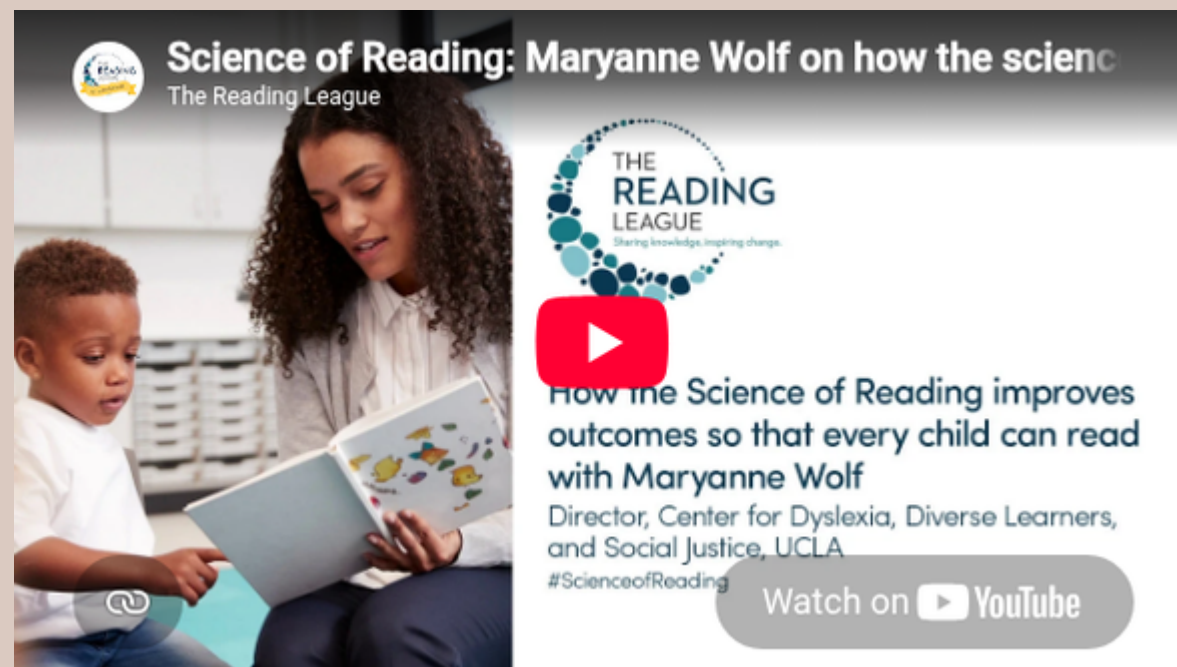


Social Emotional Implications

“When you know better, you do better.” ~ Maya Angelou

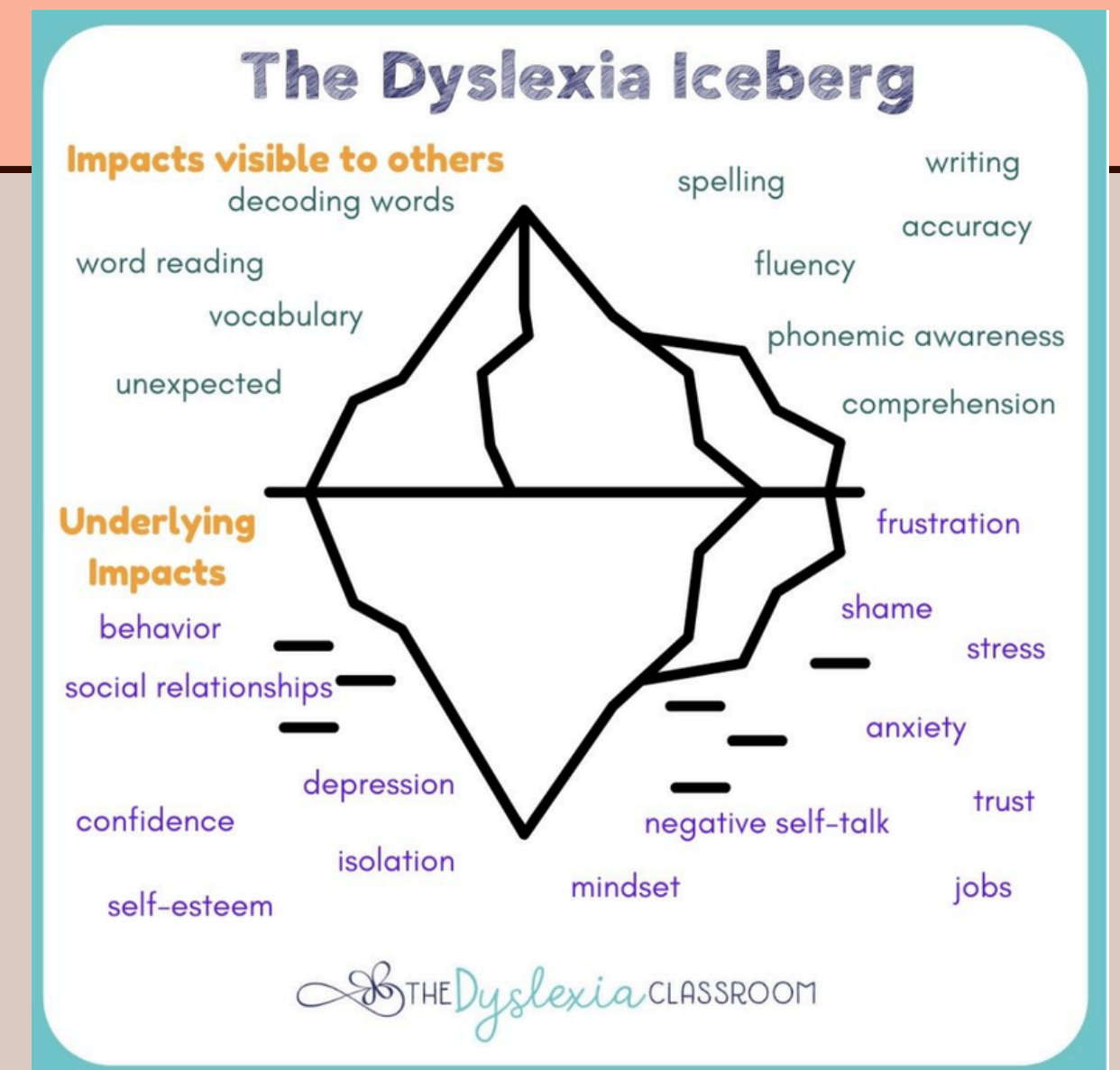
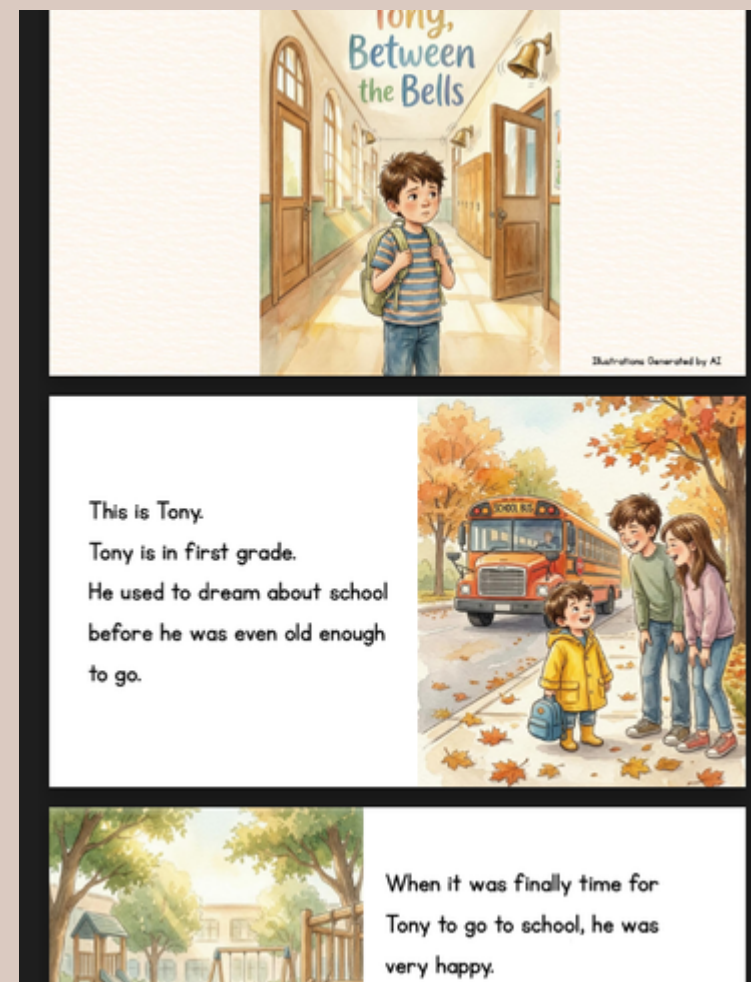


Maryanne Wolf



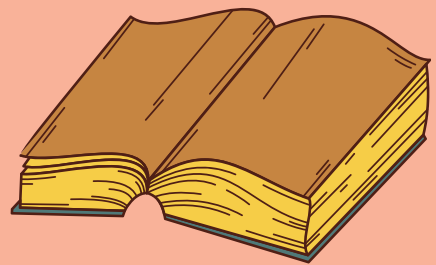
"Literacy changes our brains, and that changes the lives and trajectory of an individual, which changes a society, which changes the future of our species."

Tony's Story



The Path Forward

Scientifically-based teaching practices.



Balanced Literacy

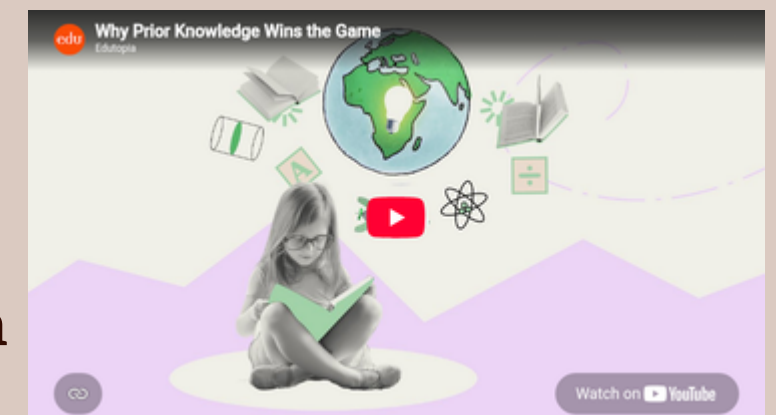


Structured Literacy

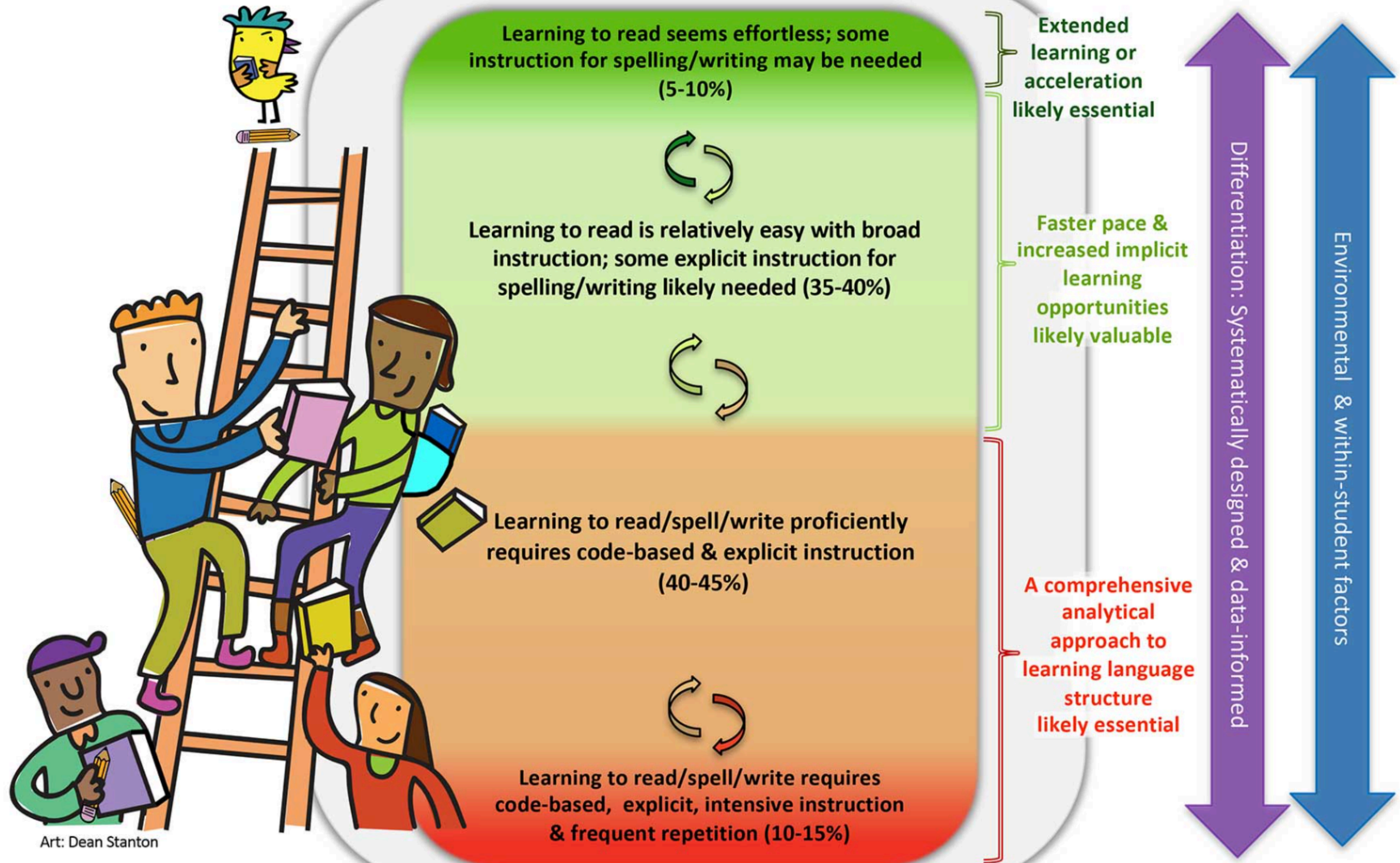
- In 2019, A national survey found that about 72% of American educators report using balanced literacy to teach reading.
- Involves a combination of whole-group instruction, small-group instruction, and independent learning with a focus on authentic texts.
- Lucy Calkins, [a] proponent of balanced literacy, uses a workshop model for her method. Skills are demonstrated, then students practice, with minimal direct instruction.

FMI: Lexia

- Structured Literacy approaches are explicit, systematic, cumulative, diagnostic, and responsive.
- Explicit means the concepts are directly taught and practiced. Systematic means the skills are taught in a “stairstep” fashion: Each skill builds on the last, and they are taught in a logical order that starts with the simple information and becomes progressively more complex. Cumulative means all the information builds upon earlier knowledge. Diagnostic and responsive means students' unique strengths and weaknesses are identified using differentiated instruction.
- Knowledge-building curriculum



The Ladder of Reading & Writing

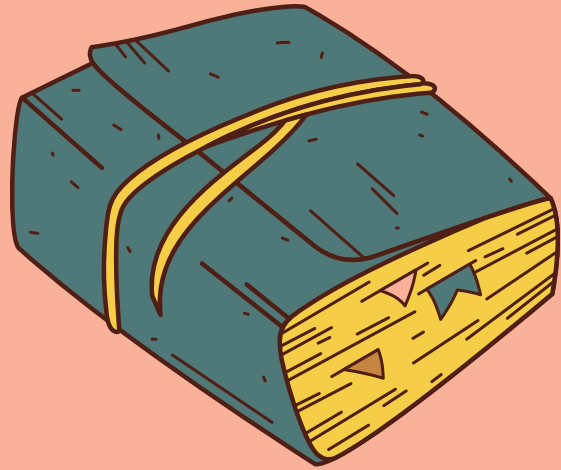


Art: Dean Stanton

Terms/references at
www.nancyyoung.ca

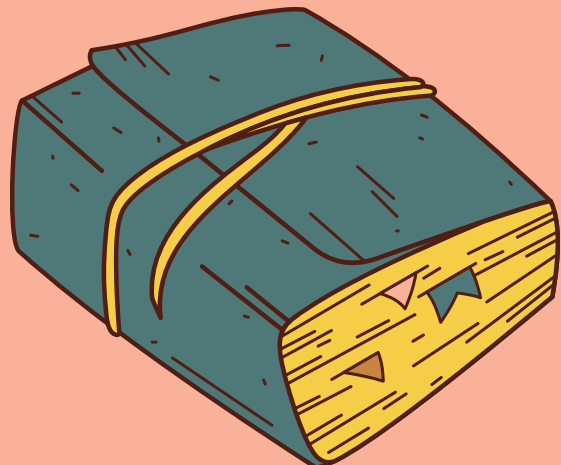
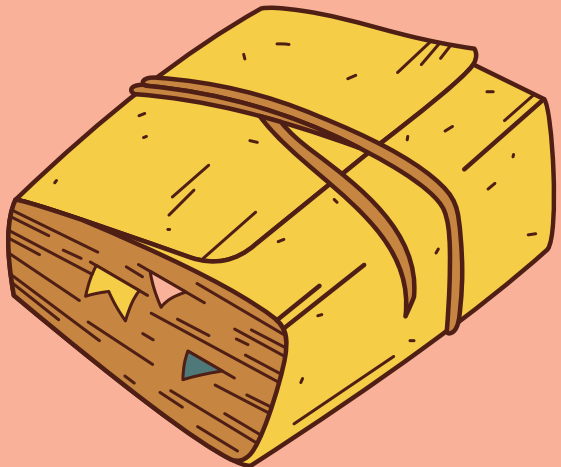
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Nancy Young



Resources

- <https://www.thereadingleague.org/resources/>
- <https://readinguniverse.org/>
- <https://heggerty.org/11-science-of-reading-resources-every-educator-should-know-about/>
- <https://heggerty.org/science-of-reading-resources/>
- <https://irrc.education.uiowa.edu/blog/2023/04/listen-five-stellar-science-reading-podcasts-worth-trying>
- <https://knowledgematters.org/>
- Join the Maine chapter of The Reading League!
<https://me.thereadingleague.org/>





Thank you!

Questions or Comments