

engageok

ON THE ROAD

# Introduction to the Science of Reading

July 2022

# Melissa Ahlgrim

## Director of Reading Sufficiency



[melissa.ahlgrim@sde.ok.gov](mailto:melissa.ahlgrim@sde.ok.gov)



405.522.1591



@melissaahlgrim



#ELAOK / #ELAOK Elementary  
#OKEarlyEd / #OKSpEd

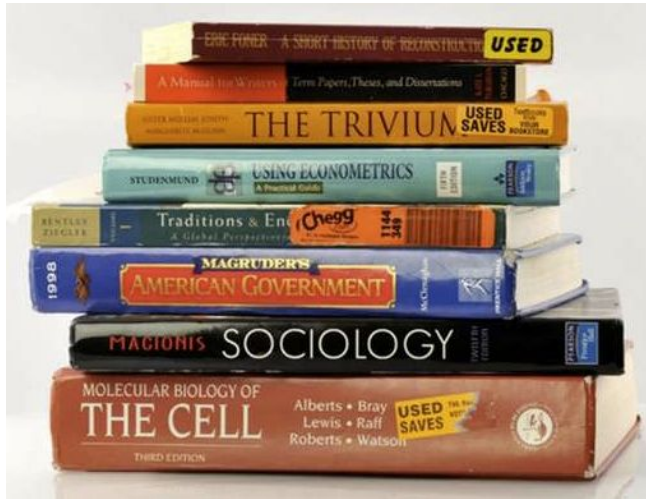
# Discussion

What comes to mind when you hear the term “science of reading?”

# Session Goals

- Define the science of reading
- Describe two key theoretical frameworks
- Understand which instructional practices are helpful
- Identify resources for extended learning

# Why is early literacy important?



# What is the Science of Reading?

# The Science of Reading is NOT...

- adding more phonics.
- only for students in the early grades.
- giving more tests to students.
- a curriculum or program to teach to fidelity.
- a one-size-fits-all approach.

# What is the Science of Reading?

- **Multi-disciplinary** research on reading and writing conducted over **five decades across the world** and in **multiple languages**, culminating in best practices identified by scientific research.
- A theoretical underpinning for instructional methods that science has **proven are effective** for learning to read.
- Instructional understanding and strategies that capitalize on how the **brain processes language** so that student growth and achievement can be maximized through **prevention of and intervention for** reading difficulties.

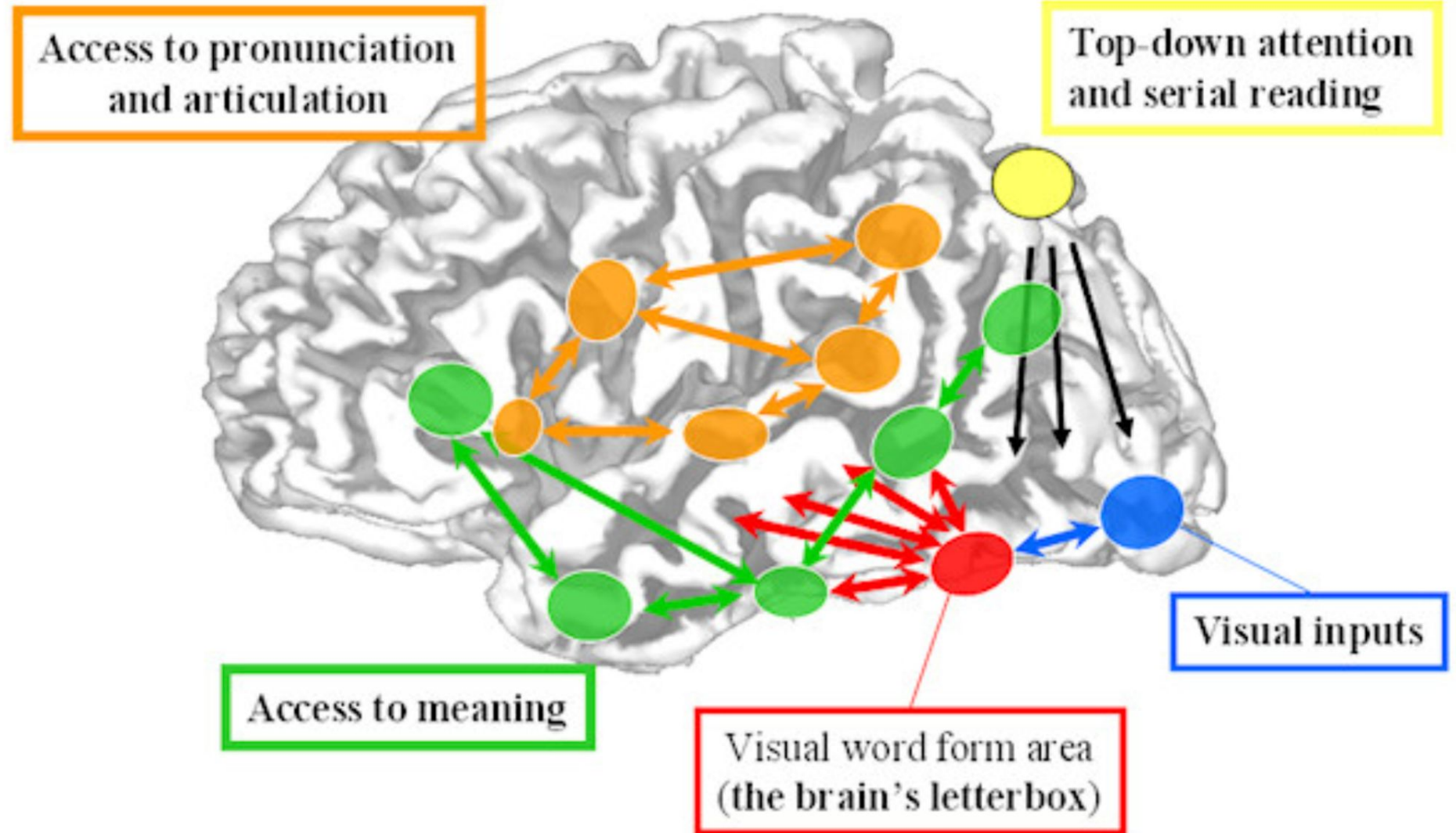


# Key Theoretical Frameworks

# What happens in the brain when reading?



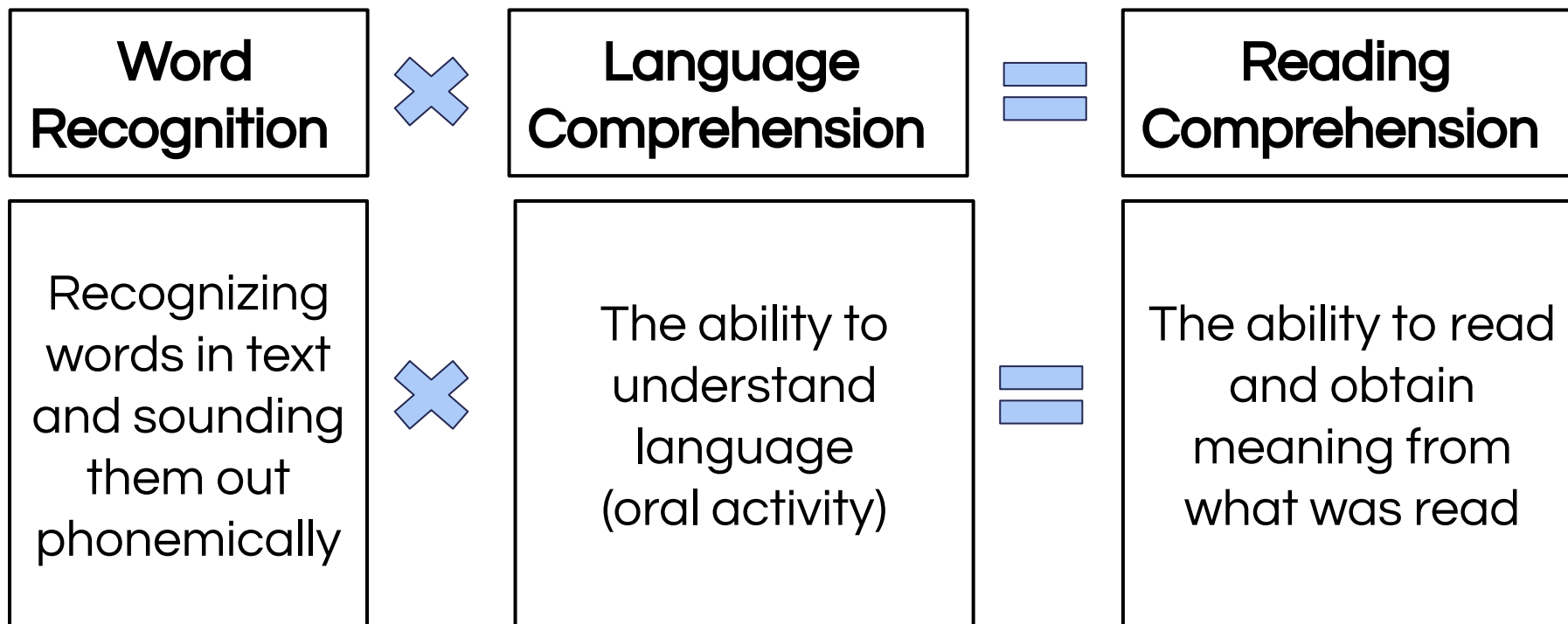
Video: How the Brain Learns to Read with Prof. Stanislas Dehaene



# Simple View of Reading

(Gough & Tunmer, 1986; Hoover & Gough, 1990; Tunmer & Hoover, 2019)

Simple View of Reading at Reading Rockets



# The Many Strands that are Woven into Skilled Reading (Scarborough 2001)

Reading  
Comprehension

=

Language  
Comprehension

X

Word  
Recognition

## LANGUAGE COMPREHENSION

BACKGROUND KNOWLEDGE  
(facts, concepts etc)

VOCABULARY  
(breadth, precision, links etc)

LANGUAGE STRUCTURES  
(syntax, semantics etc)

VERBAL REASONING  
(reference, metaphor etc)

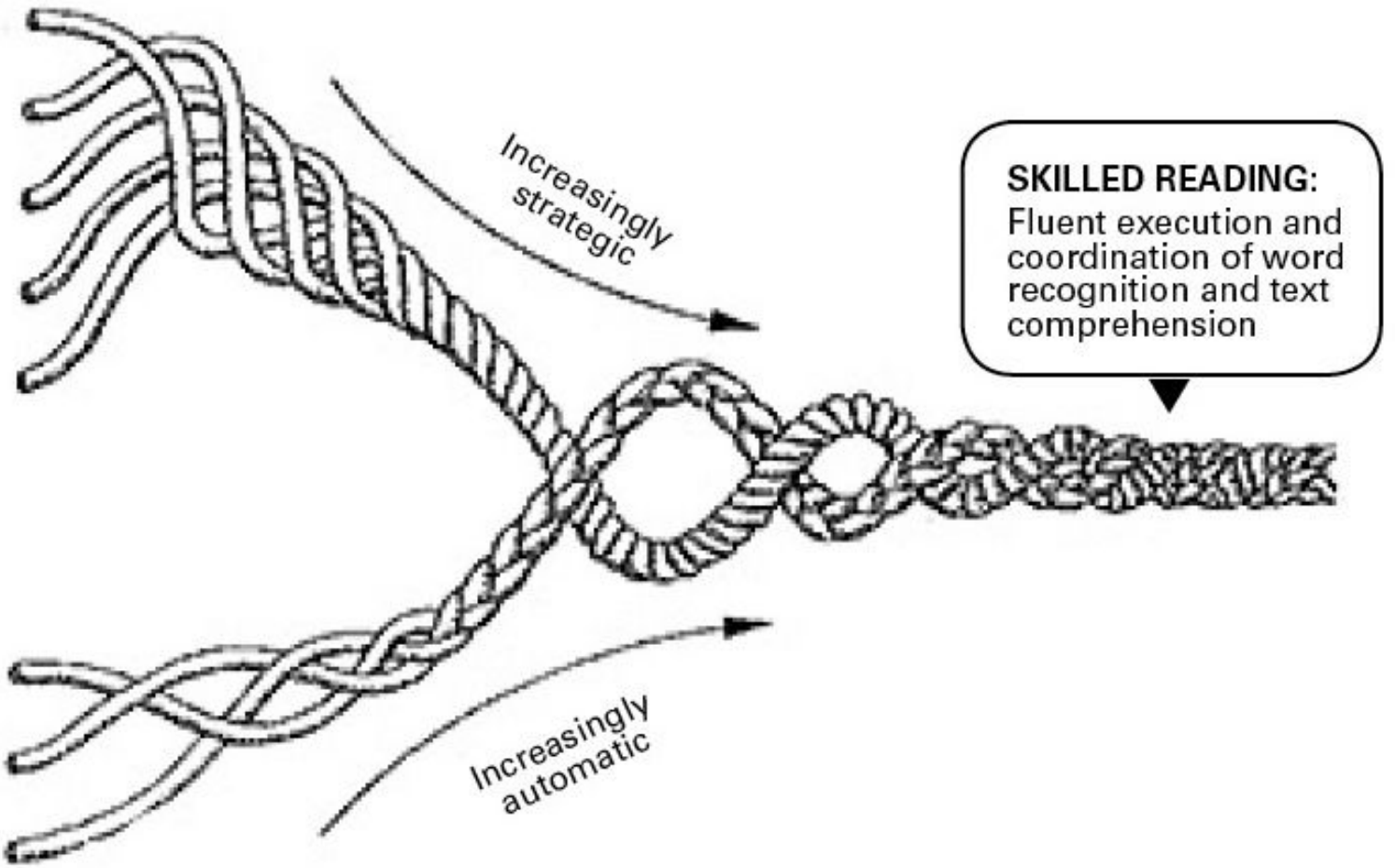
LITERACY KNOWLEDGE  
(print concepts, genres etc)

## WORD RECOGNITION

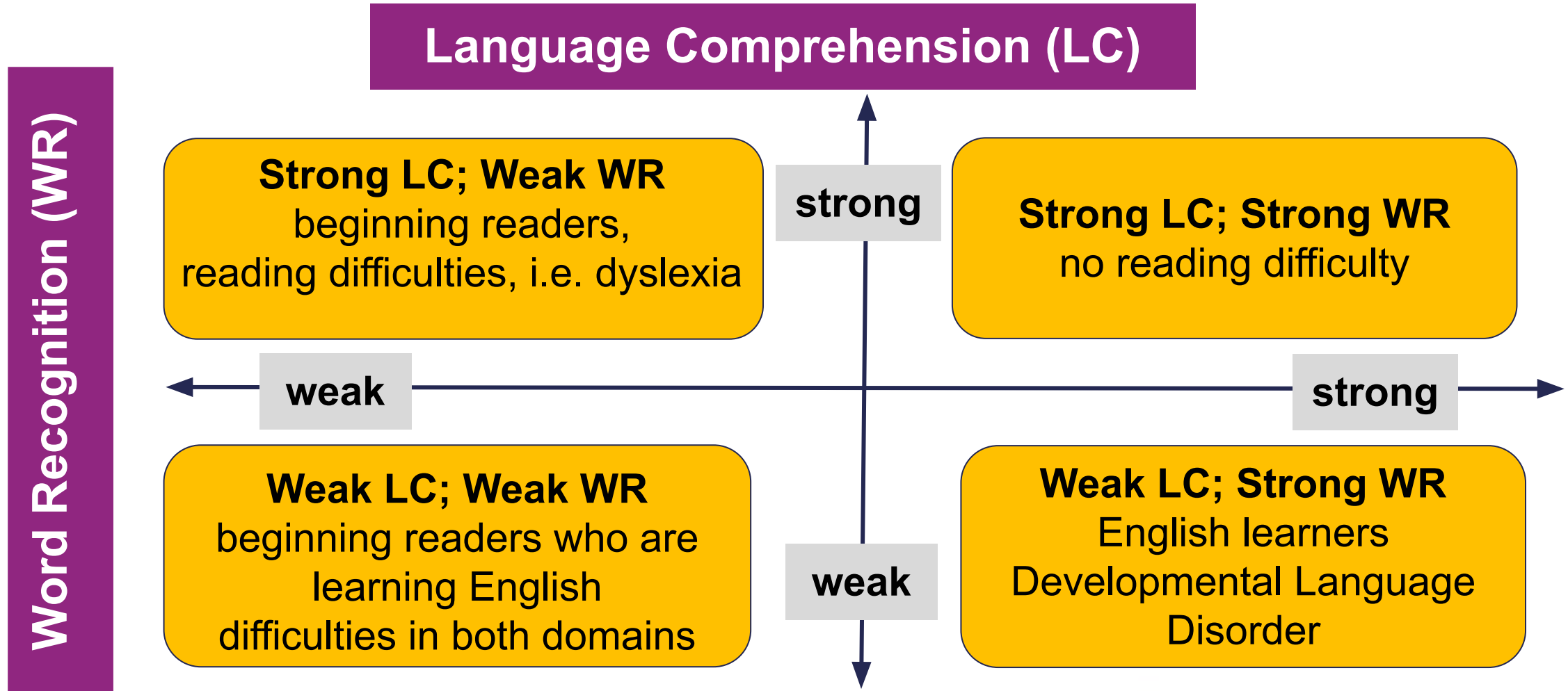
PHONOLOGICAL AWARENESS  
(syllables, phonemes etc)

DECODING (alphabetic principle  
spelling-sound correspondence)

SIGHT RECOGNITION  
(of familiar words)



# Using the Simple View of Reading to Understand Reading Difficulties



# Effective Instructional Practices

# Instructional Practices: Word Recognition

## Supported by evidence:

- **Phonemic awareness and letter instruction:** Instruction in the identification of phonemes in spoken words and how they link to letters.

## NOT supported by evidence:

- Emphasis on **larger units** of speech rather than individual phonemes.

# Instructional Practices: Word Recognition

## Supported by evidence:

- **Explicit and systematic** instruction in how to **decode** and **encode** words, including **word part analysis** (e.g., syllables, morphemes).

## NOT supported by evidence:

- **Implicit and incidental** instruction in word reading, visual **memorization** of whole words, **guessing from context**, and **picture cues**.



# Instructional Practices: Word Recognition

## Supported by evidence:

- **Connected text reading** to build reading accuracy automaticity, fluency, and comprehension.

## NOT supported by evidence:

- **Emphasis on speed** or words per minute over accuracy when reading texts.

# Instructional Practices: Language Comprehension

## Supported by evidence:

- **Read-alouds** from a variety of **complex** texts to build knowledge and vocabulary.

## NOT supported by evidence:

- Read-alouds from **leveled texts** that students will be reading so that text is **not sufficiently complex**.

# Instructional Practices: Language Comprehension

## Supported by evidence:

- **Robust conversations** to develop students' academic language (e.g., narrative and inferential language).

## NOT supported by evidence:

- A **lack of explicit instruction** of morphology, **memorization** of isolated words and definitions **out of context**, and a **lack of strategic and intentional** instruction.

# Instructional Practices: Language Comprehension

## Supported by evidence:

- **Explicit** instruction in **grammatical structures** and **academic vocabulary** within the **context** of other reading activities.

## NOT supported by evidence:

- **Implicit** instruction of grammatical structures.

# Linguistic Differences

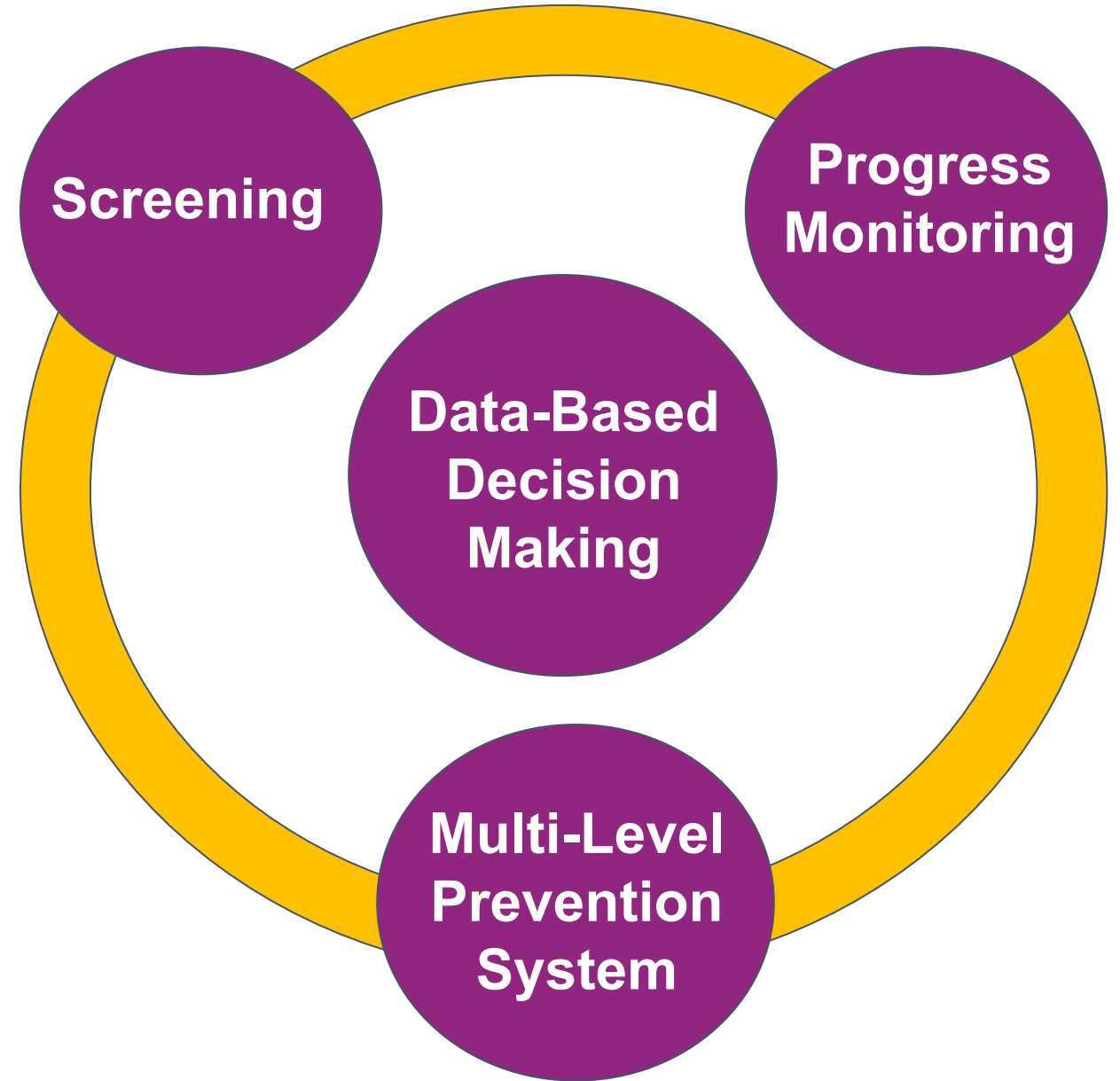
“English learners benefit from reading instruction that includes phonemic awareness, phonics, fluency, vocabulary, and text comprehension. Adjustments are necessary, however. One of the major adjustments includes a focus on **oral language proficiency**, which is often overlooked during instruction.”

Elsa Cárdenas-Hagan  
Literacy Foundations for English Learners (2020), p. 38

# Connecting to the MTSS Framework

# Multi-Tiered Systems of Support (MTSS)

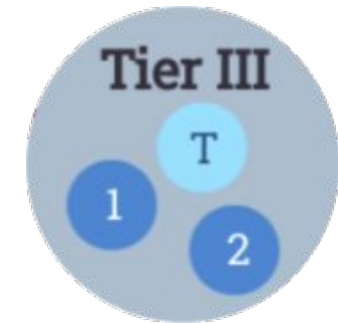
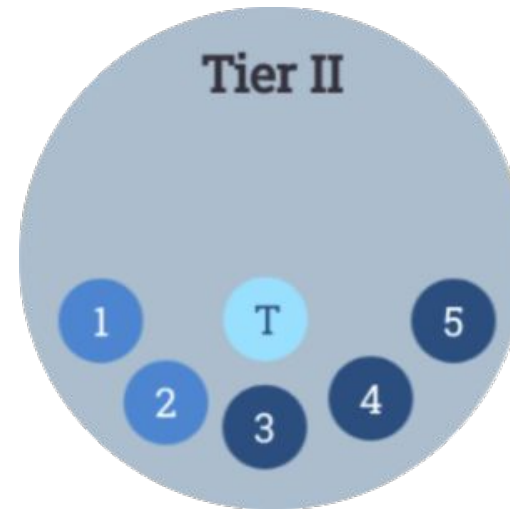
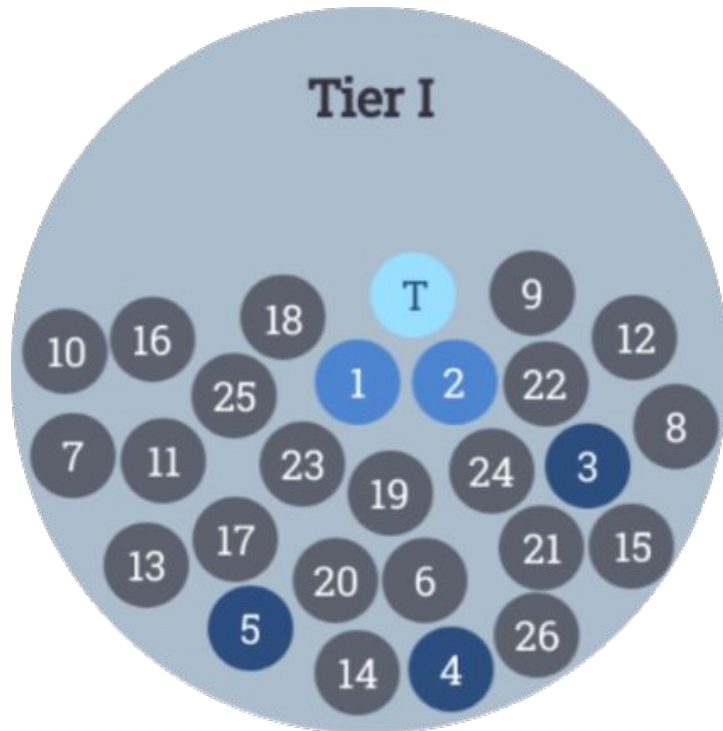
MTSS is a school-wide framework to improve student outcomes through prevention and intervention.





# Increasing Intensity Across Tiers of Instruction

Explicit, systematic instruction with an increase in intensity



Link to full infographic from  
Lead for Literacy





# Resources for Specific Needs

## Dyslexia



Oklahoma Dyslexia Handbook

## English Learners



Website: MTSS for ELs

# Oklahoma Alignment to the Science of Reading

# Reading Sufficiency Act

- Structured around an MTSS framework
- Focus on prevention
  - Early identification of learning needs
  - Strong, research-based Tier 1, or core instruction
- Address the importance of well-informed, highly-qualified teachers through ongoing professional development

# Oklahoma Academic Standards

- Oklahoma Academic Standards for English Language Arts revised in 2021
- Strengthened in areas to better address the science of reading
- Frameworks to support the standards are currently being revised

# High Quality Instructional Materials

- New process to review instructional materials
  - First review conducted in 2021-2022
  - Elementary English Language Arts
- Rubric aligned with the science of reading research
- Intent is to guide districts to quality instructional materials

# Dyslexia

- Creation of the Oklahoma Dyslexia Handbook through a legislative taskforce
- Ongoing professional development for dyslexia awareness
- Screening for characteristics of dyslexia

# Science of Reading Academies

- Training in the science of reading for up to 10,000 educators, focusing on those who work with students in kindergarten through grade 3
- Using Language Essentials for Teachers of Reading and Spelling (LETRS), 3rd edition
- Hybrid model which contains both asynchronous, online work and facilitated sessions with a national trainer
- Offered at no cost to participants or districts through ESSER funds

# Resources for Extended Learning



# IES Practice Guides to Support MTSS and Early Reading Instruction

- [Foundational Skills to Support Reading for Understanding in Kindergarten Through Third Grade](#)
- [Assisting Students Struggling with Reading: Response to Intervention \(RtI\) and Multi-Tier Intervention in the Primary Grades](#)
- [Effective Literacy and English Language Instruction for English Learners in the Elementary Grades](#)
- [A Roadmap to Implementing Evidence-Based Literacy Practices](#)



Lead for Literacy

# Oklahoma Science of Reading Academies

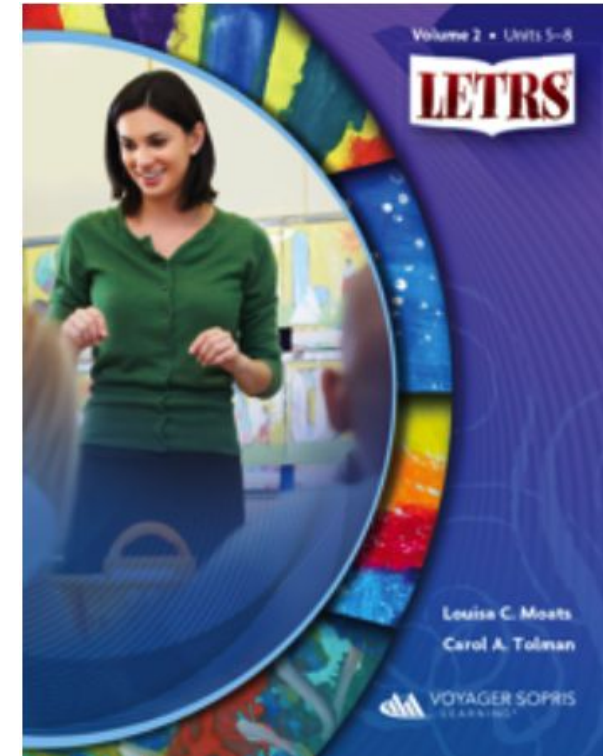
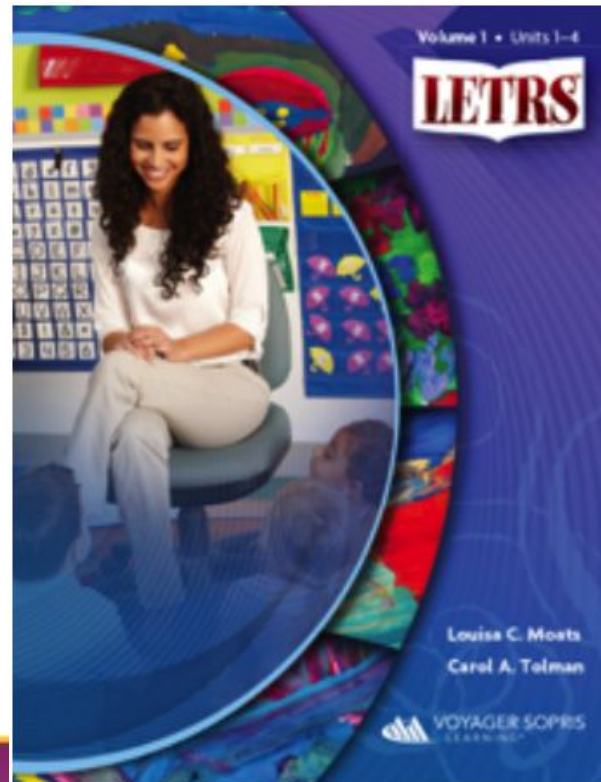
[www.sde.ok.gov/scienceofreading](http://www.sde.ok.gov/scienceofreading)

## Cohort 3: Aug 2022 - May 2024

- Registration: Jul 11 - Aug 19

## Cohort 4: Jan 2023 - Dec 2024

- Registration: Sept 1 - Dec 9





# Extended Learning

## Article

Teaching Reading IS Rocket Science

Louisa Moats, 2020

## Podcast

Reading documentaries by  
Emily Hanford

2017-2020

## Book

Structured Literacy Interventions

Louise Spear-Swerling, 2022

## Website

Reading Rockets

[www.readingrockets.org](http://www.readingrockets.org)

# Questions?

# Melissa Ahlgrim

## Director of Reading Sufficiency



[melissa.ahlgrim@sde.ok.gov](mailto:melissa.ahlgrim@sde.ok.gov)



405.522.1591



@melissaahlgrim



#ELAOK / #ELAOK Elementary  
#OKEarlyEd / #OKSpEd