School Psychology and the The Science of Reading

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Reading Science Academy

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Objectives

This session will provide school psychologists:

- Background information on the science of reading
- Strategies for sharing research with other educators
- A framework for implementing the science of reading so more students become skilled readers
- Guidance for implementing structured literacy practices that are consistent with Ohio's dyslexia legislation and other state and federal laws

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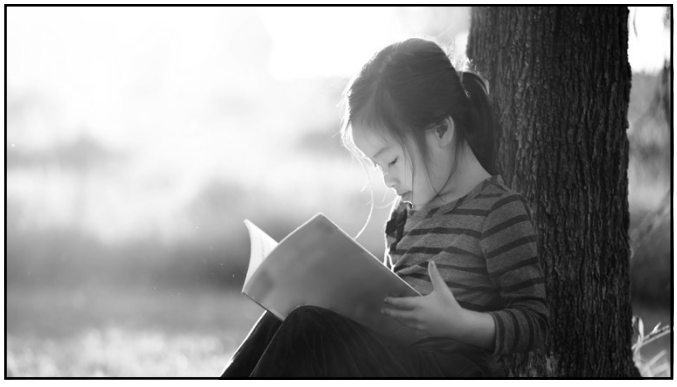

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Percent at Minimum Expectation in Kindergarten		
	Beginning of Year	**End of Year**
District A	39%	81%
District B	38%	90%
Typical District	54%	62%

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"The most critical elements of an effective program for the prevention of reading disability at the elementary school level are:

a) the right kind and quality of instruction delivered with the
b) right level of intensity and duration to
c) the right children at the
d) right time."

Torgesen, 1998

https://www.aft.org/sites/default/files/periodicals/torgesen.pdf

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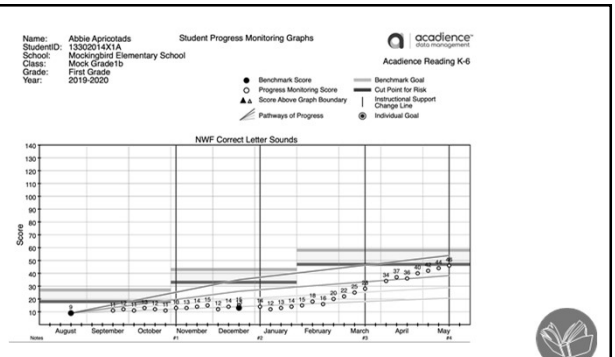

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School Psychologist's Role and Function

- Participating as team members at all levels of the system
- Consulting with teachers on curriculum and instruction
- Classroom observations
- Selecting, conducting and interpreting reading assessments
- Data-based decision making - selecting, matching students to, implementing, and evaluating reading interventions
- Supporting parents, families and communities
- Special education eligibility determination
- Seeing schools as systems that can be organized to maximize student outcomes

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The Big Ideas of Changing Early Literacy Outcomes

1. Find out what kids need
2. Provide what they need in regular classroom reading instruction
3. Increase support as data indicate the need

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Definition

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.

Whatisthescienceofreading.org. (2021, February 3). Retrieved February 5, 2021, from https://www.whatisthescienceofreading.org/

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MTSS: A Framework to Improve Reading Outcomes Through Prevention and Intervention

Multi-Tiered Systems of Support (MTSS) is a school-wide framework for implementing effective instruction. MTSS involves efficiently targeting instruction to student needs based on universal screening and diagnostic assessments.

School and district teams use assessments in a data-based, decision-making process to build a system of increasingly intensive instructional supports that are customized to fit the needs of the students. Simultaneously, schools must also assess their human and instructional resources to ensure that those needs are met.

MTSS does not involve prescriptive practices to be rigidly implemented by tiers or levels of assignment. Nor is it adding to current, ineffective practices for the sake of innovation. It is a comprehensive system whereby ineffective practices are strategically abandoned and proven practices are prioritized.

Whatisthescienceofreading.org. (2021, February 3). Retrieved February 5, 2021, from https://www.whatisthescienceofreading.org/

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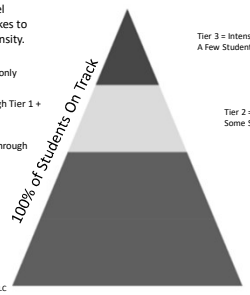
MTSS

All students reach grade-level reading goals, but what it takes to get them there varies in intensity.

- 80% reach goals through Tier 1 only
- Another 15% reach goals through Tier 1 + Tier 2
- The remaining 5% reach goals through Tier 1+ Tier2 and/or Tier 3



Tier 3 = Intensive Intervention
A Few Students

Tier 2 = Targeted Intervention
Some Students

Tier 1 = Universal Instruction
All Students

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Ohio's Plan to Raise Literacy

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https://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/Literacy/Ohios-Plan-to-Raise-Literacy-Achievement.pdf.aspx

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OH Dyslexia Laws

https://education.ohio.gov/Topics/Learning-in-Ohio/Literacy/Dyslexia

- Screen all students in K-3
- Report risk to parents
- Monitor progress of at-risk students for up to six weeks
- If no progress is made, notify parents, and administer a diagnostic assessment
- Report results to parents
- If dyslexic tendencies, provide the parents with information about reading development, risk factors for dyslexia and descriptions for evidence-based interventions
- If markers for dyslexia, provide written explanation of district's multi-sensory structured literacy program
- PD and Certification

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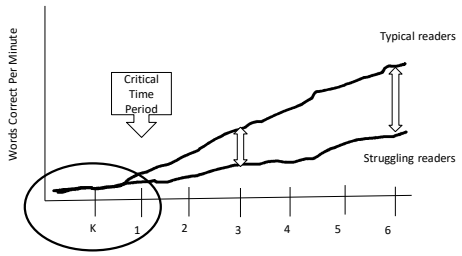
Prevention



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Prevention

Children who start low tend to stay low

Trouble with early word reading skills leads to

- less time spent reading
- slow vocabulary growth
- missed opportunities to practice comprehension
- negative attitudes toward reading

The best solution to the problem of reading failure is to allocate resources for early identification and prevention.

Torgesen, 1998

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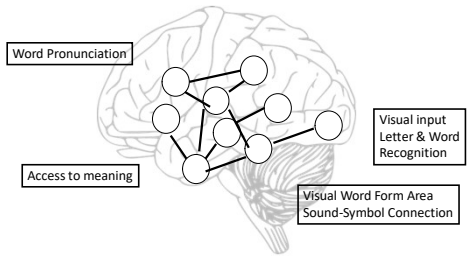
How Reading Works in the Brain



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How Reading Works in the Brain

Word Pronunciation Letter Recognition Connection of Phonemes To Letters Word Recognition	X	Word Meanings Background Knowledge Listening Comprehension	=	Understanding the Meaning of the Text

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How Reading Works in the Brain

The Simple View of Reading

Word Recognition		Language Comprehension		Reading Comprehension
1	X	0	=	0
0	X	1	=	0
1	X	1	=	1

18 Gough & Tunmer, 1986

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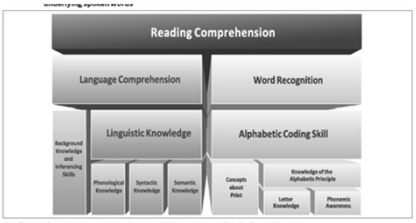

Note. The color figure can be viewed in the online version of this article at http://ila.onlinelibrary.wiley.com.
Source: Hoover and Tunmer (2020a)

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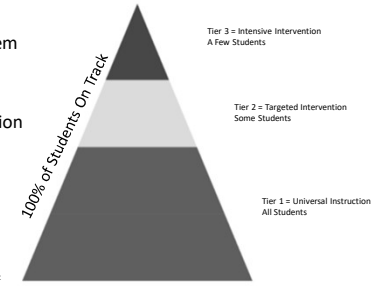
MTSS

Essential Components
1. Schoolwide Assessment System
2. Collaborative Problem Solving
3. Tiered Instruction



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Assessment System

Screening Which students and systems are at risk?	Diagnostic Exactly what should we teach next?
Progress Monitoring Is it working?	Outcome Evaluation Did it work?

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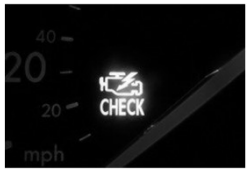
1. Universal Screening

Which students and systems are at risk?

- Given to all students
- Brief
- Standardized
- Predictive
  - Cut points that predict an important reading outcome in the future
- Provide student-level and system-level information



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Example of Universal Screening

■ Above Benchmark / Likely to Need Core Support ■ At Benchmark / Likely to Need Core Support ☐ Below Benchmark / Likely to Need Strategic Support ■ Well Below Benchmark / Likely to Need Intensive Support

		ORF						MAZE		READING COMPOSITE SCORE		
NAME	STUDENT ID	Words Correct	Local Percentile	Accuracy	Retell	Local Percentile	Retell Quality	Adjusted Score	Local Percentile	Score	Local Percentile	Score Level
West, Doris	401800140	45 ■	4	90% ■	25 ☐	23	2 ☐	4 ■	3	151 ■	4	Well Below Benchmark
Montgomery, Janice	401800128	59 ■	6	89% ■	25 ☐	23	2 ☐	8 ☐	16	173 ■	6	Well Below Benchmark
Stevens, Todd	401800138	67 ■	14	92% ☐	19 ☐	11	1 ☐	4 ■	3	177 ■	9	Well Below Benchmark
Fleming, Patrick	401800139	61 ■	11	95% ☐	23 ☐	14	3 ☐	6 ■	10	211 ■	14	Well Below Benchmark
Brown, Victor	401800137	71 ☐	19	92% ☐	26 ■	29	2 ☐	13 ☐	39	231 ■	19	Well Below Benchmark
Barker, Raymond	401800132	83 ☐	25	98% ☐	14 ■	6	1 ☐	10 ☐	28	255 ☐	21	Below Benchmark
Curtis, Jonathan	401800134	87 ☐	29	97% ☐	15 ■	9	1 ☐	13 ☐	39	265 ☐	24	Below Benchmark
Brock, Frank	401800130	102 ☐	48	94% ☐	26 ■	29	2 ☐	15 ☐	50	286 ☐	28	At Benchmark
Hernandez, Mark	401800133	95 ☐	39	98% ☐	28 ■	34	3 ☐	10 ☐	28	295 ☐	30	At Benchmark
Fuller, Susan	401800125	78 ☐	21	98% ☐	29 ☐	36	2 ☐	18 ■	68	312 ☐	34	At Benchmark

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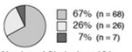
Example of Universal Screening

Number of Students = 94
Average = 28.7
Standard Deviation = 23.4
Score Range = 0 to 93



Number of Students = 101
Average = 148.8
Standard Deviation = 47.8
Score Range = 18 to 240

Number of Students = 98
Average = 167.2
Standard Deviation = 42.6
Score Range = 79 to 310

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2. Diagnostic Assessment

Exactly what should we teach next?

- Given to students when you aren't sure what to teach next
- More in-depth than screening
- May or may not be standardized, timed, but not teacher created
- Closely linked to instruction (the score is less important than how the student got to the score)

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Example of Diagnostic Assessment

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3. Progress Monitoring

Is it working?

- Brief
- Standardized
- Alternate forms of the same task
- Sensitive to change over small units of time

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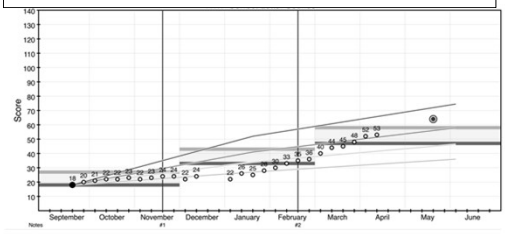
Example of Progress Monitoring



#1: Changed focus of instruction
#2: Changed group size

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4. Outcome Evaluation

Did it work?

- Achievement testing
- Grade level objectives
- Linked to standards

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Collaborative Problem Solving

Progress Monitoring

1.Problem Definition
What is the Problem?

Diagnostic

Screening

2. Problem Analysis
Why is the Problem Happening?

3. Plan Development
What Should We Do About It?

4. Plan Evaluation
Is It Working?

Fuels Teaming at all levels

- District
- Building
- Grade
- Student

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Step	Question	Task	Data Source
1. Problem Definition	What is the Problem?	State as the difference between expected and actual performance	Universal Screening
2. Problem Analysis	How and why is the problem happening?	Generate hypotheses about: • Schedule • Curriculum & Instruction • Flexible Service Delivery • Grouping	Screening Diagnostic Adult Implementation Variables
3. Plan Development	What should we do about it?	Use resources to resolve barriers	
4. Plan Evaluation	Did you implement the plan? Did students improve?	Develop an action plan	Progress Monitoring

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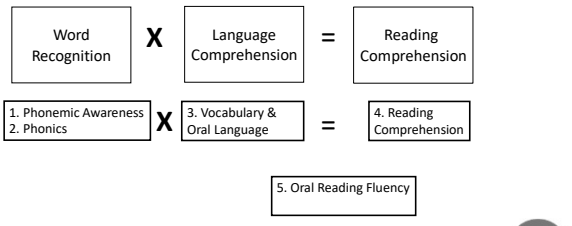
What to Teach



Gough & Tunmer, 1988

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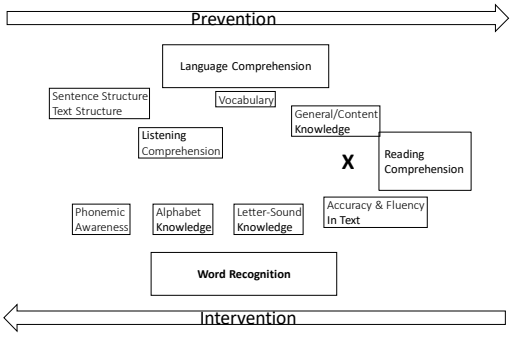

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The Essential Components of Early Literacy

Skill	Definition
Phonemic Awareness	Noticing, thinking about and working with phonemes
Vocabulary & Oral Language	Understanding the meaning of words we speak, hear, read, and write
Phonics	Knowing relationships between sounds (phonemes) and letters (graphemes)
Oral Reading Fluency	Reading connected text accurately, fluently, and for meaning
Reading Comprehension	Gaining meaning from text

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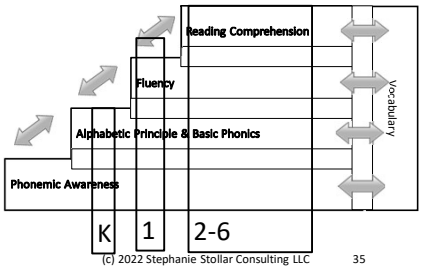
What to Teach: The Five Essential Components of Early Literacy



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What is Phonemic Awareness?

The ability to manipulate sounds in spoken language at the level of the smallest unit – the phoneme

Elusive

Creating "parking spaces"

Independent of meaning and print

Reciprocal

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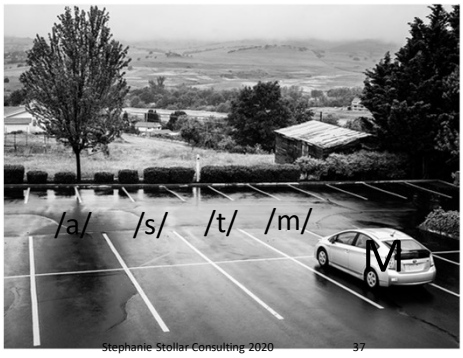

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Why is Phonemic Awareness Important?

Written English is the representation of spoken phonemes

Students who have phonemic awareness are more likely to learn phonics easily

PA predicts reading comprehension; The path to reading comprehension starts with phonemic awareness

To read you must transfer the print to speech; To spell you must transfer speech to print

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Misunderstandings About Phonemic Awareness

- Same thing as phonics
- Acquired by osmosis; It doesn't need to be taught
- Not all students need this skill
- This is only for pre-K and K
- All of the skills are equally important and must be taught
- You have to start with larger linguistic units before you work on phonemes
- Instruction should be done without print

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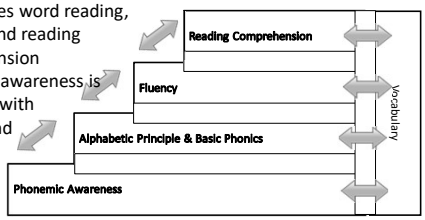
How Does Phonemic Awareness Connect?

PA improves word reading, spelling, and reading comprehension
Phonemic awareness is reciprocal with phonics and spelling



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Research on Teaching Phonemic Awareness

- Focus on blending and segmenting phonemes
- Make sounds in spoken words concrete with movement, objects and letters
- 10-15 minutes per day
- Prioritize 1-2 skills per lesson
- Small groups
- Link to letters

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Phonemic Awareness Resources

Mary Dahlgren on Sound Walls
https://www.youtube.com/watch?v=Wws8Ghj0IJ0&t=584s
https://www.tools4reading.com/
Free TN PA Curriculum
https://openedx.tneducation.net/courses/course-v1:TDOE+fs101+2020YL/about?mc_cid=cd5ab51d2c&mc_eid=ce1578ed6c&mc_cid=0e04cb86a4&mc_eid=502f6811d6
Sound Partners
https://www.voyagersopris.com/literacy/sound-partners/overview
Road to the Code
https://products.brookespublishing.com/Road-to-the-Code-P322.aspx
95 Percent Group PA Lessons
https://www.95percentgroup.com/products/pa-lessons

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What Is Phonics?

Knowledge of the relationships between sounds and letters in reading and spelling.

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Research on Phonics

- Benefits all students K-6
- Positively impacts all other skill areas
- Systematic synthetic phonics instruction is more effective than embedded analytic phonics
- Goal should be applying knowledge in reading text and spelling
- Explicit and systematic programs get the best results

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Why Is Phonics Important?

Provides the basis for reading comprehension

26 letters represent 44 speech sounds

Decoding – linking sounds to letters, blending them together and reading the word

Encoding – linking print to letters that represent sounds to write words

Over 80% of words are phonetically regular

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Misunderstandings About Phonics

- Boring; Drill and kill
- Overemphasis or thinking phonics is the whole program
- Only necessary for struggling readers
- Takes time away from focusing on meaning
- Sight Words – High Frequency Words – Regular/Irregular Words
- Leveled Text – Decodable Text
- Nonwords

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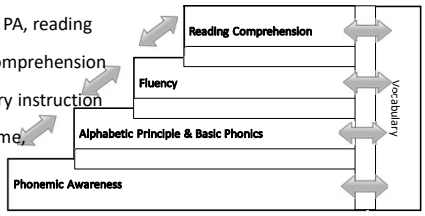
How Does Phonics Connect?

- Students who have phonics skills do better on PA, reading fluency, & comprehension
- Vocabulary instruction
- Letter name, sound, form



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Research on Teaching Phonics

- Benefits all students K-6, even top readers
- Positively impacts all other skill areas – this is HOW to get to reading comprehension, not taking time away from it
  - Students who have phonics skills do better on phonemic awareness, reading fluency, & reading comprehension
- Systematic synthetic phonics instruction is more effective than embedded analytic phonics
- Goal should be applying knowledge in reading text and spelling
- Scripted programs get the best results

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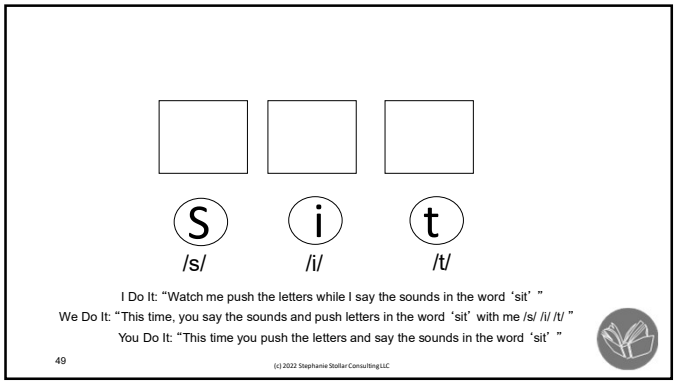
S
i
t
/s/
/i/
/t/
I Do It: "Watch me push the letters while I say the sounds in the word 'sit'"
We Do It: "This time, you say the sounds and push letters in the word 'sit' with me /s/ /i/ /t/"
You Do It: "This time you push the letters and say the sounds in the word 'sit'"
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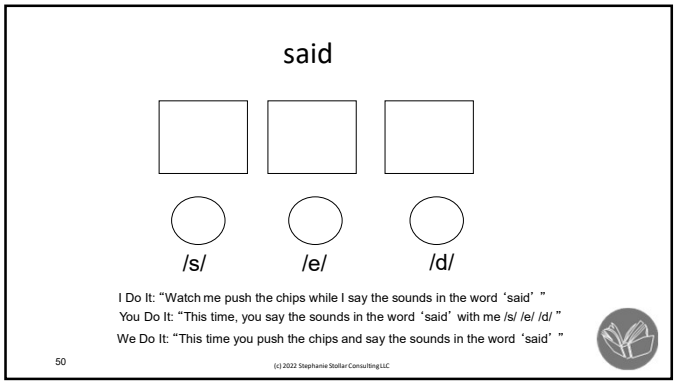
said
/s/
/e/
/d/
I Do It: "Watch me push the chips while I say the sounds in the word 'said'"
You Do It: "This time, you say the sounds in the word 'said' with me /s/ /e/ /d/"
We Do It: "This time you push the chips and say the sounds in the word 'said'"
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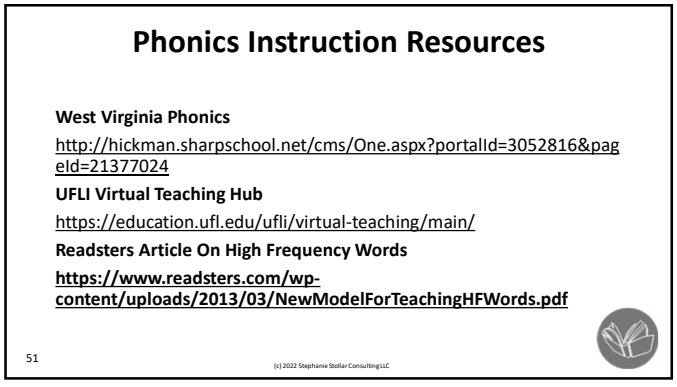
Phonics Instruction Resources
West Virginia Phonics
http://hickman.sharpschool.net/cms/One.aspx?portalId=3052816&pageId=21377024
UFLI Virtual Teaching Hub
https://education.ufl.edu/ufli/virtual-teaching/main/
Readsters Article On High Frequency Words
https://www.readsters.com/wp-content/uploads/2013/03/NewModelForTeachingHFWords.pdf
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What Is Reading Fluency?

Accurate, fluent, reading for meaning

Reading aloud effortlessly and with expression

Reading as you would speak

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Why Is Fluency Important?

Fluency is a bridge between decoding and reading comprehension

Accurate and effortless reading of connected text is a necessary but not sufficient pre-requisite to reading comprehension

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Misunderstandings About Fluency

It's all about speed reading

Sustained silent reading and independent reading will improve fluency

Fluency can't or shouldn't be taught

Accurate reading is sufficient

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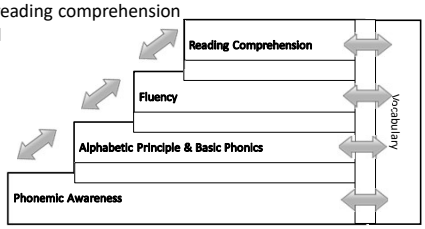
How Does Fluency Connect?

Fluency and reading comprehension are reciprocal



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Research on Teaching Reading Fluency

Repeated Reading Best Practices (NRP; Chard et al; Therrien 2004; Morgan & Sideridis 2006; Stevens, Walker & Vaughn 2017)

- Use instructional level text
- Cue for speed and comprehension
- Model
- Multi component – listening preview, progress monitoring
- Increase number of re-readings
- Set a goal
- Performance feedback

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Repeated Reading Resources

The Six Minute Solution An approach to repeated reading that involves partners.

https://www.voyagersopris.com/literacy/six-minute-solution/overview

Read Naturally A variety of print and digital solutions for repeated reading that can be delivered in person or remotely. https://www.readnaturally.com/research/read-naturally-strategy

Quick Reads Procedures and materials for improving reading fluency and comprehension.

http://textproject.org/teachers/students/commercially-available-products-powered-by-text/quickreads-family-of-products/

Iowa Reading Research Center Research on Text Sets

https://iowareadingresearch.org/sites/iowareadingresearch.org/files/irrc_fluency_study_report.pdf

30 sets of varied practice text sets https://iowareadingresearch.org/elearning#VPR%20Module

Webinar Dr. Jan Hasbrouck defines oral reading fluency and what research says about how to assess and teach it. https://www.youtube.com/watch?v=vHSmwiNZe9s

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What Are Vocabulary and Oral Language?

Levels of Understanding	Description of Levels
Vocabulary Breadth	how many words a learner recognizes or knows ("size of an individual's mental lexicon")
Vocabulary Depth	measure of how well an individual knows a word
Fluency	rate at which the individual accesses the meaning of a word

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Why Are Vocabulary and Oral Language Important?

Perfetti's Lexical Quality Hypothesis

- Orthographic mapping required for automatic recall
- Word representations that include well specified orthographic, phonological, semantic and syntactic information
- If representation is high quality it will be retrieved instantly and accurately

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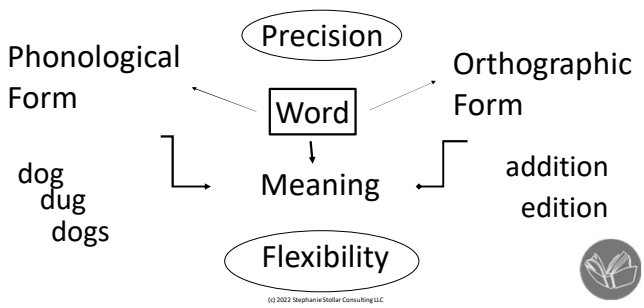
Perfetti's Lexical Quality Hypothesis



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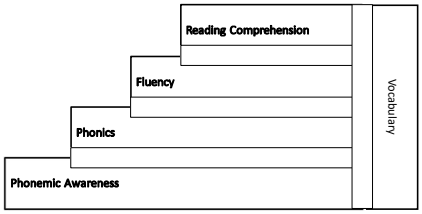
How does vocabulary connect?



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Research on Teaching Vocabulary

1. Teaching word meanings
2. Fostering word consciousness
   1. Morphology
   2. Oral discussion
3. Wide reading

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1. Directly Teaching New Words

Criteria for selecting words to teach before reading aloud or independently

- Importance and utility
- Instructional potential
- Conceptual understanding

- Tier 1
  - Common words; May need to be taught to ELs
- Tier 2
  - "Words that travel well"; Essential for understanding the text; Best to teach directly
- Tier 3

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1. Explicit Vocabulary Instructional Routine

1. Pronounce the word, phonology
2. Write it, read it orthography
3. Explore syllables, orthography, morphology orthography, meaning
4. Provide a student-friendly definition meaning

   A _____ is a _____ that _____.

4. Say more about the word, examples & non-examples meaning and context (in the text and others)
5. Ask yes or no questions

   Would it be brave to tell the truth when you did something wrong? Yes or no?

6. Elicit word use by the students phonology, meaning and context

   It would be brave to _____ I was brave when I _____

7. Encourage students to use the word across subjects, in spoken language, in writing

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2. Fostering Word Consciousness

Directly Teaching Morphology

- Words with affixes outnumber single morpheme words by 4 to 1
- Teach *un, re, dis, in/im/ir; able/ible, ly, ness; es, ed, ing* – students can analyze at least 250 new words a year
- Order easier to harder
  - Inflectional endings
  - Prefixes
  - Derivational suffixes
  - Greek and Latin roots

Cognates

- Up to 40% of all words in English have a related word in Spanish.

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3. Wide Reading

Most new words are learned through reading

- Who is choosing to spend time reading?
- Be cautious about Sustained Silent Reading
- Mastery reading level considerations
- Use of audio books
- Increasing a student's reading comprehension skills increases their vocabulary

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Vocabulary Instruction Resources

Reading Rockets – Choosing Words to Teach (3 Tiers)
https://www.readingrockets.org/article/choosing-words-teach
Susan Ebbers' Blog
https://vocablog-plc.blogspot.com/p/vocabulary-brief.html
Vocabulary Through Morphemes
http://store.voyagersopris.com/vocabulary-through-morphemes/
Bringing Words to Life
https://www.guilford.com/books/Bringing-Words-to-Life/Beck-McKeown-Kucan/9781462508167

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What is Reading Comprehension?

The ultimate goal of reading is comprehension: for the reader to **reconstruct the mental world of the writer.** As skilled readers, this usually feels pretty **effortless** and comprehension flows naturally as we read along. This sense of ease is misleading, however, as it **belies the complexity of what we do as we read**, even when a text is simple and straightforward. A whole range of **cognitive and linguistic operations** are at play, from identifying individual words through to making inferences about situations that are not fully described in the text.

Nation, 2019, p.47

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What Is Reading Comprehension?

Reading comprehension is not a single entity that can be explained by a unified cognitive model.

Instead, it is the **orchestrated product of a set of linguistic and cognitive processes…** Castles et al 2018

As we read, we construct a mental representation of the situation being described by the text, linking information from the text with relevant background knowledge. The product of comprehension is not a verbatim record of what has been read, instead, meaning emerges from the formation of a situation model (e.g., Kintsch, 1998; Zwaan &

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What Is Reading Comprehension?

- Comprehension Products are indicators of what the reader knows and understands after reading
- Comprehension Processes are the cognitive and language activities that allow the reader to arrive at the products
  - Semantics
  - Morphology
  - Reading Fluency
  - Syntax
  - Story Structure

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Common Misunderstandings About Reading Comprehension

- Strategy instruction
- Text selection
- It is the means to the end

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Research on Teaching Reading Comprehension

- Reading comprehension is multidimensional, not a single skill
- Background knowledge
- The relationship between knowledge and reading comprehension is reciprocal
- Teaching comprehension requires multiple levels of instruction and practice
- Assessing comprehension is difficult

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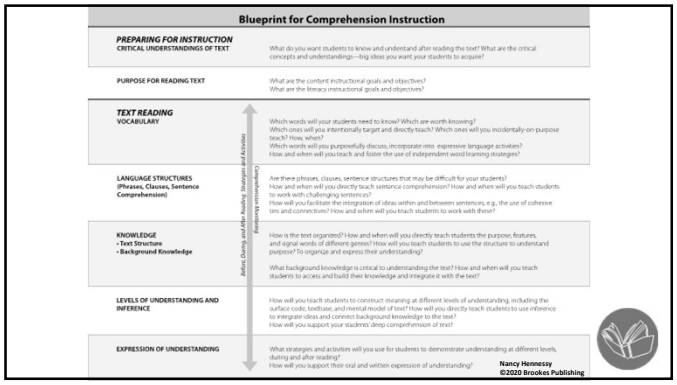

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Comprehension instruction resources

Understanding and Teaching Reading Comprehension: A Handbook

https://www.routledge.com/Understanding-and-Teaching-Reading-Comprehension-A-handbook/Oakhill-Cain-Elbro/p/book/9780415698313

Robust Comprehension Instruction with Questioning the Author

https://www.guilford.com/books/Robust-Comprehension-Instruction-with-Questioning-the-Author/Beck-McKeown-Sandora/9781462544790

The Reading Comprehension Blueprint

https://products.brookespublishing.com/The-Reading-Comprehension-Blueprint-P1197.aspx

Literacy How Professional Learning Series: Syntax

https://www.literacyhow.org/blog/professional-learning-series-syntax/

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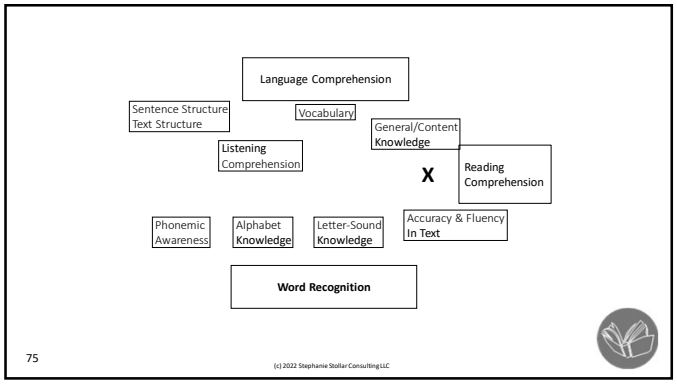

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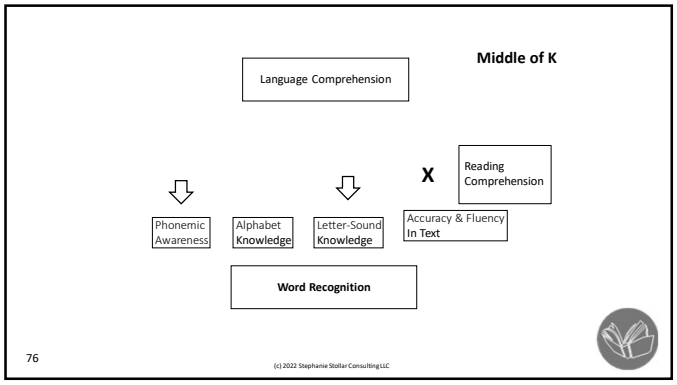
Middle of K
Language Comprehension
X
Reading Comprehension
Phonemic Awareness
Alphabet Knowledge
Letter-Sound Knowledge
Accuracy & Fluency In Text
Word Recognition
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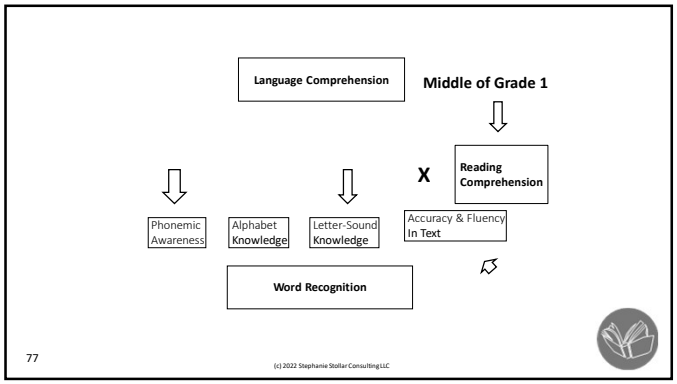
Language Comprehension
Middle of Grade 1
X
Reading Comprehension
Phonemic Awareness
Alphabet Knowledge
Letter-Sound Knowledge
Accuracy & Fluency In Text
Word Recognition
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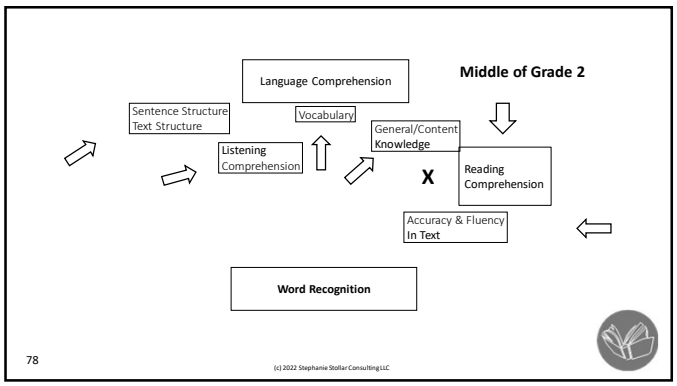
Language Comprehension
Middle of Grade 2
Sentence Structure Text Structure
Vocabulary
General/Content Knowledge
Listening Comprehension
X
Reading Comprehension
Accuracy & Fluency In Text
Word Recognition
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Research on How to Teach Reading

Features of Effective Instruction

- Reducing task difficulty and breaking tasks into smaller units
- Providing scaffolds and support
- Teaching in a planful sequence, from easier to harder
- Providing explicit models of new skills
- Supported practice with immediate corrective feedback
- Extensive independent practice with cumulative review

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How to Teach

Explicit	Systematic	Sequential
New skills are directly modeled Students are guided to the correct response Error response includes immediate corrective feedback Skills are practiced to mastery and automaticity	Consistent instructional routines are used to guide students to correct responses Instructional time is carefully allocated to maximize time on task Cumulative review	Skills are taught in order from easier to harder; Pre-requisites are taught first Component or foundational skills are taught directly to support higher-order skills Intentional sequence within and across lessons; within and across grades

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Explicit Instruction

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Explicit, Systematic & Sequential Lessons

Scripted
State the goal
Brief review
Attention to sounds in a word
Explicit intro of new sound-spelling pattern (I Do It)
- Mapping phonemes to graphemes
- Blending letter sounds
- Reading the word
- Discuss word meaning as needed

Practice reading the words in a list, phrase, sentence
Spelling, Dictation
Practice in controlled, decodable text

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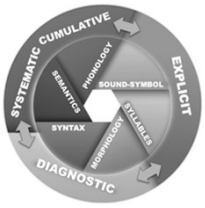
Structured Literacy



https://dyslexiaida.org/what-is-structured-literacy/

What to Teach
- Phonology
- Orthography
- Morphology
- Syntax
- Semantics

How to Teach
- Explicit
- Systematic
- Cumulative
- Diagnostic

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Skill Area	Explicit Literacy Instruction	Typical Literacy Instruction
Phoneme Awareness	Emphasis on the sounds in spoken language distinct from and prior to phonics instruction; Phoneme awareness used as the starting point for print	Letters used as the starting point for reading; Reading treated as a visual skill; Confusion of phonemic awareness and phonics; Avoidance of segmenting spoken words
Phonics & Spelling	Intentional instruction in letter-sound combinations; Sequenced from easier to harder for reading and spelling; Application of word reading in print	Phonics taught whole to part (analytic) incidentally as students make mistakes in text or by analogy (word families); Mini lessons responding to student errors
Vocabulary & Oral Language	Oral language as the reference point for print; Books used for reading aloud are more challenging than those students read independently; Scripted teacher dialogue	Modeling reading aloud from the leveled books students will read; Nondirective questioning and discussion
Text Reading Fluency	Young students read text that is controlled to include only those phonics patterns that have been explicitly taught; Fluency building only after accuracy; High degree of teacher-student interaction with immediate corrective feedback	Use of leveled or predictable texts that are not controlled for decoding difficulty; Error response focuses on picture cues or the use of context to determine words; High degree of independent silent reading; Miscue analysis
Reading Comprehension	Background knowledge, text structure, and strategies overtly modeled and practiced in a planned progression	Emphasis on teacher modeling (think aloud); Activities such as choral reading, shared reading and guided reading; Student book choice

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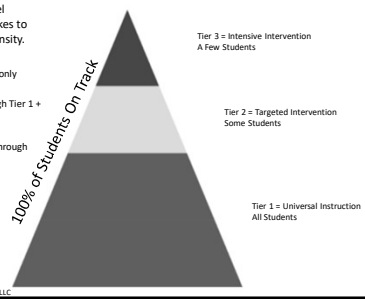
MTSS

All students reach grade-level reading goals, but what it takes to get them there varies in intensity.

- 80% reach goals through Tier 1 only
- Another 15% reach goals through Tier 1 + Tier 2
- The remaining 5% reach goals through Tier 1+ Tier2 and/or Tier 3



Tier 3 = Intensive Intervention
A Few Students

Tier 2 = Targeted Intervention
Some Students

Tier 1 = Universal Instruction
All Students

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Tier 1: Core Reading Instruction

All students

Purpose – Primary Prevention - get most students to grade level reading performance

- 90-120 minutes every day
- Evidence-aligned scope and sequence, instructional routines, materials
- Highly differentiated
- Whole group and small group formats
  - Flexible skill-based groups (5-7 students)
- Planned by grade-level team using universal screening data
- Causes at least 80% of students to reach grade-level expectations

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	K	1	2	3
8:00 – 8:30 **8:00 – 9:30**	Whole Group	Whole Group	WIN	Math
8;30 – 9:30 **8:30 – 9:15**	Small Group	Writing	Writing	
9:30 – 10:15 **9:15 – 10:15** **9:15 – 10:00**	writing	Small Group	Specials	sSience
10:00 – 10:45 **10:15 – 11:00** **10:15 – 11:30**	S pecials	Math	Whole group	Social studies
10:45 – 11:45			Small Group	
11:00 – 11:45 **11:30 – 12:15** **11:45 – 12:15** **12;00 – 12:45**	Lunch and Recess	Lunch & recess	Lunch and recess	Whole Group Lunch and recess
11:45 – 1:00 **12:15 – 1:00** **12:30 – 1:45** **12:45 – 1:30**	Math	Specials	Math	Writing
1:00 – 1:30	WIN	WIN		
1:30 – 2:15 **1:30 – 2:30**	Science	Science		Small Group
1:45 – 2:30			Social studies	
2:15 – 3:00	Social Studies	Social Studies		
2:30 – 3:00			Science	WIN

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Instruction	Time	Configuration						Skill
90 minutes	25-30 minutes	Whole Group (Groups 1-4)						Oral Language Vocabulary Listening Comprehension
	60 minutes	15 mins each group	M	T	W	Th	F	Phonemic Awareness, Phonics, Spelling, Reading Fluency, Reading Comprehension
		Cycle 1	1	1	1	1	1	
		Cycle 2	2	2	2	2	2	
		Cycle 3	3	4	3	4	3	
		Centers						When students are not at the teacher led station receiving explicit instruction, students will be working in small groups at literacy centers/stations reinforcing skills taught during whole group/ teacher led small group.

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Select Programs Based On:

- Alignment with Research
- Match with Student Needs
- Usability and Organization
- Assessments
- Professional Development
- Cost

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Across Grades

Sequence of Domains in the *Core Knowledge Language Arts* P–2 Listening and Learning Strand

Preschool	Kindergarten	Grade 1	Grade 2
1. All About Me	1. Nursery Rhymes and Fables	1. Fables and Stories	1. Fairy Tales and Tall Tales
2. Families	2. The Five Senses	2. The Human Body	2. Early Asian Civilizations
3. Animals	3. Stories	3. Different Lands, Similar Stories	3. The Ancient Greek Civilization
4. Plants	4. Plants	4. Early World Civilizations	4. Greek Myths
5. Habitats	5. Farms	5. Early American Civilizations	5. The War of 1812
Dispersed throughout the year:	6. Native Americans	6. Astronomy	6. Cycles in Nature
• Classic Tales	7. Kings and Queens	7. The History of the Earth	7. Westward Expansion
• Important People in American History	8. Seasons and Weather	8. Animals and Habitats	8. Insects
	9. Columbus and the Pilgrims	9. Fairy Tales	9. The U.S. Civil War
	10. Colonial Towns and Townspeople	10. A New Nation	10. Human Body: Building Blocks and Nutrition
	11. Taking Care of the Earth	11. Frontier Explorers	11. Immigration

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Across Skills

Overview of First Grade Open Court Lesson Plans

Weather Unit 5: Lessons 1-5		
Phonics	**Comprehension**	**Language Arts**
• /j/ Spelled ge, gi_ • Long /e/ Spelled e and e_e • Review: /u/ Spelled u; Long /u/ Spelled u, u_e; /j/ Spelled ge, gi_; Long /e/ Spelled e, e_e • Review Long e Spelled e, e_e • Long /e/ Spelled ee, ea	Strategies: • Asking Questions • Monitoring and Clarifying • Making Connections Skills: • Main Idea and Details	• Concept Vocabulary • Writing: Instructions • Grammar: Adjectives • Listening: Fact or Opinion? • Penmanship: The Letter Hh
Weather Unit 5: Lessons 6-10		
Phonics	**Comprehension**	**Language Arts**
• Long /e/ Spelled _y, _ie_ • Long Vowels Followed by r • Long /a/ Spelled ai_, _ay • /i/ Spelled igh • Review: Long /a/ Spelled ai_; Long /e/ Spelled ea, _y, _ie_; Long /i/ Spelled igh	Strategies: • Visualizing • Summarizing • Making Connections • Monitoring and Clarifying Skills: • Comparing and Contrasting • Cause and Effect • Classifying and Categorizing	• Vocabulary: Context Clues • Writing: Signs and Labels • Grammar: Verbs • Speaking: Clear Speech • Penmanship: The Letter Dd
Weather Unit 5: Lessons 11-15		
Phonics	**Comprehension**	**Language Arts**

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Across Days

Lesson	Day	Sound/ Spelling	Core Decodables	Practice Decodables	High-Frequency Words Introduced
GETTING STARTED					
	1	Aa, Bb			
	2	Cc, Dd			
	3	Ee, Ff, Gg	*Core Pre-Decodable 1 Sad*	*Practice Pre-Decodable 1 See the Backpack*	are, the
	4	Hh, Ii, Jj			
	5	Kk, Ll, Mm	*Core Pre-Decodable 2 Up*	*Practice Pre-Decodable 2 The Flag*	is, up
	6	Nn, Oo, Pp			
	7	Qq, Rr, Ss	*Core Pre-Decodable 3 I Have*	*Practice Pre-Decodable 3 Up, Up, Up*	have, I
	8	Tt, Uu, Vv			
	9	Ww, Xx, Yy, Zz	*Core Pre-Decodable 4 There Is*	*Practice Pre-Decodable 4 Up the Hill*	a, there
	10	Review Aa-Zz			
Unit 1					
Lesson 1	1	/s/ spelled s			
	2	/m/ spelled m	*Core Pre-Decodable 5 I Can See*	*Practice 5 Pre-Decodable See the Bike*	can, on
	3	/a/ spelled a	*Core 6 Sam, Sam, Sam*	*Practice 6 Sam on the Hill*	am
	4	/t/ spelled t and tt	*Core 7 Matt and Sam*	*Practice 7 Matt!*	and
	5	Review	*Core 8 On a Mat*	*Practice 8 A Mat*	
Lesson 2	1	/d/ spelled d	*Core 9 Dad Sat*	*Practice 9 Sad*	
	2	/n/ spelled n	*Core 10 Ants*	*Practice 10 A Sad Ant*	
	3	/i/ spelled i	*Core 11 Sit*	*Practice 11 Sis and Sat*	did, it
	4	/h/ spelled h	*Core 12 A Hat*	*Practice 12 A Hat!*	had, him, said
	5	Review	*Core 13 Mitch*		in
Lesson 3	1	/p/ spelled p	*Core 14 Pat's Map*	*Practice 13 Pam and Hap*	
	2	/l/ spelled l and ll	*Core 15 Lin and Hal*	*Practice 14 A Plan!*	
	3	/u/ spelled u	*Core 16 A Spot*	*Practice 15 Tom and Pop*	has

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	Component	Purpose	Time
1.	Purpose of the Lesson	Gain attention, clearly state purpose	30 sec-1 min
2.	Review (PA, phonics skill, sight words)	Actively engage students in demonstrating what they remember and don't remember from previous lessons	2 min
3.	Phonological Warm Up (listen for sound, pronounce sound)	Activate phonological processor; anchor patterns to be learned in speech	2-3 min
4.	Phoneme-Grapheme Mapping (regular and irregular words)	We Do It Match speech sounds to letters used to represent them in print	5 min
5.	Word Reading (blend and read words, word sort, word chaining, flip books, speed drills)	We Do It Practice accurately reading words with the new pattern; Learning to write words with the new pattern; Building fluency and automaticity of reading words with the new pattern	10 min
6.	Spelling to Dictation (words, phrases, sentences)	We Do it Practice encoding words with the new pattern	5 min
7.	Transfer to Text (choral reading, partner reading, independent reading, retelling, summarizing)	You Do It Practice accurately and fluently reading words with the new pattern in the context of controlled, decodable text to support comprehension; Practice writing sentences and stories that include the new patterns.	10 min

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Review Tools

1. Reading League Curriculum Evaluation Tool
https://www.thereadingleague.org/wp-content/uploads/2020/08/Curriculum-Evaluation-Tool-August-2020.pdf
2. Arkansas Literacy Curriculum Tool
https://dese.ade.arkansas.gov/offices/learning-services/curriculum-support/approved-science-of-reading-curriculum
3. Colorado Instructional Program Rubrics (core, supplemental, intensive)
https://www.cde.state.co.us/coloradoliteracy/advisorylistofinstructionalprogramming2020

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Small Group Instruction

Effective because teachers can provide more:
- targeted instruction
- immediate corrective feedback
- opportunities to respond

Rather than grouping based on leveled text and using guided reading:
- Base groups on patterns of skills
- Use principles of effective instruction
- Provide double dose in Tiers 1 and 2 to students at risk

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Grade	Group	Reading Comp			Word Recognition					Focus of Small Group Instruction
				Fluency	Accuracy	AP & Basic Decoding		Phonemic Awareness		
		Maze	ORF-Retell	ORF-WC	ORF-ACC%	NWF-WWR	NWF-CLS	PSF	FSF	
2-6	1	X	X	X	X					Grade level reading & writing
	2		X	X	X					Check grammar, syntax, vocabulary
	3			X	X					Reading comprehension
	4				X					Reading fluency
	5				Warning					Decoding; Possible errors include multi-syllable words, irregular words, skipping rows, random Check NWF, perhaps PSF
1	1		X	X	X	X	X			Reading comprehension, reading fluency, decoding
	2			X	X	X	X			Reading comprehension,
	3				X	X	X			Reading fluency
	4					X	X			Decoding beyond CVC
	5						X			Blending letter sounds
	6						Warning			Letter sound and blending, Check PSF
K	1					X	X	X	X	Decoding beyond CVC
	2						X	X	X	Blending letter sounds
	3							X	X	Letter-sound and blending
	4								X	Segmenting all sounds
	5								Warning	Isolating beginning sounds

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Flexible Service Delivery

Prioritize the needs of the students to drive the schedule

Create a schedule that allows resource personnel to support differentiation of Tier 1 classroom reading instruction

Consider "Walk to Read" and "All Hands on Deck" to differentiate Tier 1

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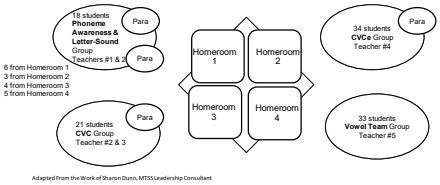
Grouping in Tier 1
106 students; 10 staff



Adapted from the Work of Sharon Dunn, MTSS Leadership Consultant

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Tier 2: Strategic Reading Instruction

Some students

Purpose – Secondary Prevention - catch up students who are at risk

- 30-45 minutes; 3-5 days/week; in addition to core instruction
- Evidence-aligned scope and sequence, instructional routines, materials
- More explicit, systematic, supportive
- Smaller, flexible, skill-based groups, narrow range of skills (3-5 students)
- More frequent progress monitoring
- Planned by grade level team with screening & diagnostic data
- Causes an additional 15% of students to reach grade-level expectations

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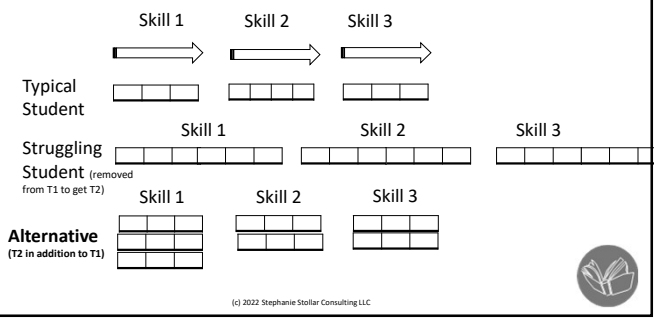

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Tier 3: Intensive Reading Instruction

A few students

Purpose – Tertiary Prevention - keep students' skills from getting worse, help them catch up

- 45–60 minutes; 5 days/week; in addition to core
- Evidence-aligned scope and sequence, instructional routines, materials
- More explicit, systematic, supportive
- Smaller, flexible, skill-based groups, narrow range of skills (1-3 students)
- More frequent progress monitoring
- Planned by student-level team with screening, diagnostic and progress monitoring data
- Causes the remaining 5% of students to reach grade-level

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Elements of Intervention

Look for intervention that includes:

- Small group
- Explicit and systematic instructional routines
- Targeting one priority skill
- Integration across skills
- Frequent opportunities to apply new skills in reading and writing

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How to Intensify Support

- More Explicit Model
- More Targeted Skill
- More Opportunities to Respond
- More Immediate Affirmative and Corrective Feedback
- More Practice
- More Individualized Incentives

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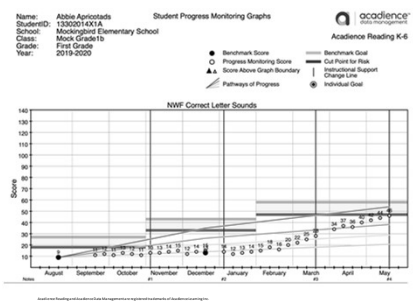

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Strategies for Talking About the Science of Reading With Others

- Connect to something of urgent interest
- Start with on focus on the willing
- Offer to learn together
- Share research become a resource
- Focus on the WHY, not the what or how

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Conclusions

- All students deserve to learn to read
- All teachers deserve the knowledge that will support students to be readers
- What is known about how children learn to read can inform our work
- What and how we teach really matters
- A focus on prevention will ensure more children learn to read and reduce the need for intervention

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Where To Start?

Proposed Sequence for Analyzing & Improving Tier 1

Phase 1

- 1. Establish an assessment system – build consensus and urgency
- 2. Learn about the science of reading
- 3. Learn the collaborative problem solving process

Phase 2

- 4. Use universal screening data to analyze Tier 1 curriculum and instruction
- 5. Implement a Tier 1 schedule for K and 1
- 6. Adopt flexible service delivery
- 7. Group based on foundational skills during Tier 1 instruction

Phase 3

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