

Who we are

Sandra Guth and Cindy Dupuy

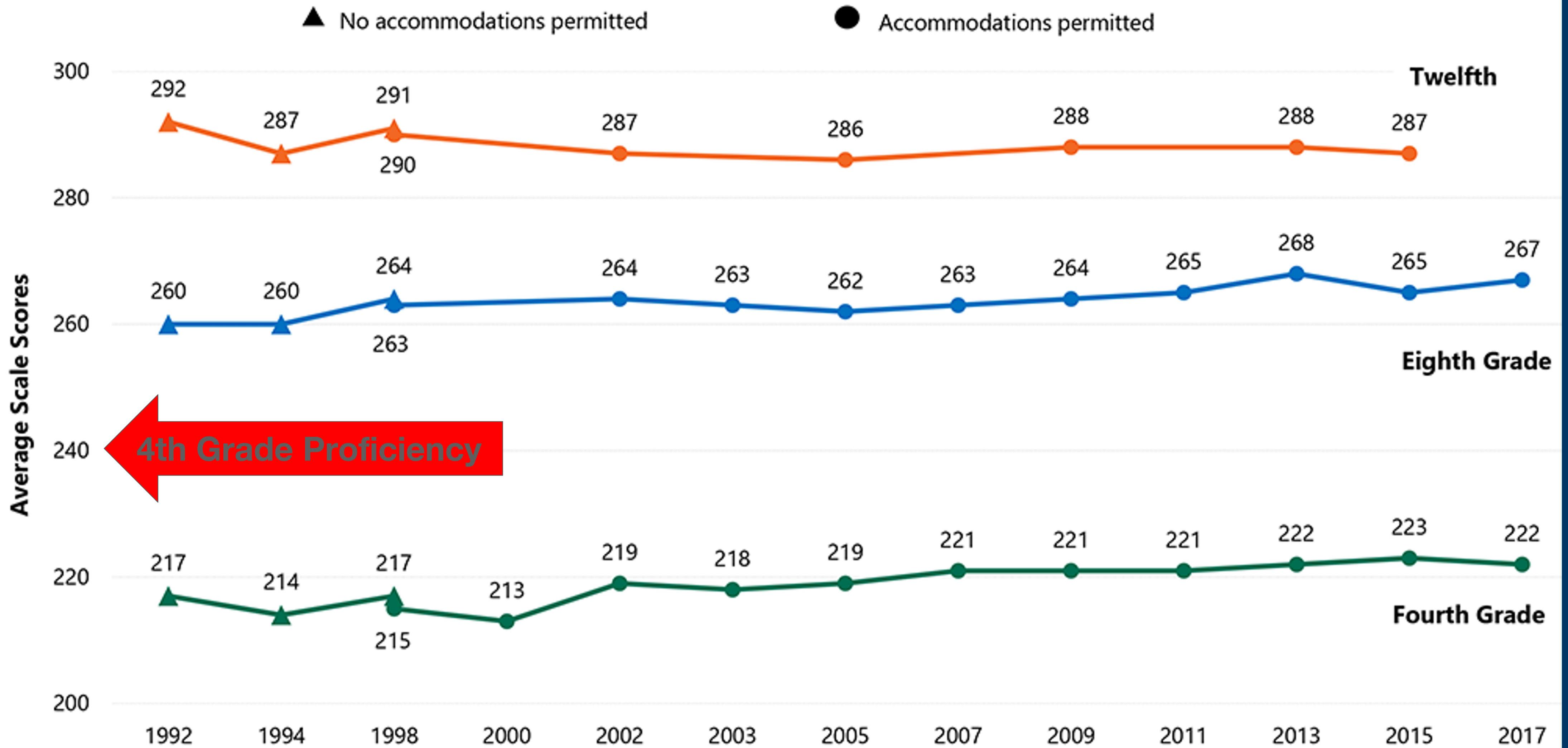
On behalf of the **Washington Branch of the International Dyslexia Association**

(WABIDA)

Why WABIDA?

Our goal is: Literacy for All

Trends in NAEP Reading Scale Scores, by Grade: 1992-2017



In a **random** sampling of 100 4th graders across the USA, 65 students will not read proficiently.



The Science of Reading

An Introduction

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Board Members, with Washington Branch of the International Dyslexia Assoc.

Overview

- Myths and facts learning to read
- The six elements of effective reading instruction supported by science
- Activities you can do tomorrow to help your reader

Goals

- Understand skills needed to learn to read
- Identify characteristics of effective reading instruction based in science
- Have strategies to improve your student's reading

Fact or Myth?

Take some time. Are these statements true or false?

- Reading is a developmental skills and most kids will read when they are ready, including late bloomers.
- Lack of effort and motivation in this age of screens is a real reason many kids are behind in reading.

Fact or Myth?

Continued:

- Kids will learn to read naturally if we expose them to print and read to them.
- Phonics should be used with caution because written English is so irregular.
- Vision and tracking problems are a common cause of delayed reading.

Fact or Myth?

MYTH

Reading is a developmental milestone. It will “click” for kids when they are ready.

Facts

- Acquiring language is developmental
- Learning to read is NOT
- Optimal progress evidence-based reading
- Poor reading may be due to weaknesses in language skills.

Facts

- Don't grow out of those weaknesses, BUT
- Appropriate instruction builds underlying skills in ALL kids
- The “wait-and-see” approach requires failure before help

Fact or Myth?

MYTH

Kids fall behind in reading because they lack motivation.

Facts

- Kids want to succeed and be like their peers
- A lot of stuff can look like “laziness” – discouragement, fear of continued failure, too hard to be any fun
- ADHD and executive functioning challenges can impede a child’s progress in reading and need to be addressed

Fact or Myth?

MYTH

Kids will learn to read if they are exposed to print.

Facts

- We need to read to our kids because it supports their growth as readers, BUT it doesn't teach them to read
- Reading is not a single brain function hard-wired into us. Rather, it draws together an array of other brain functions, repurposing them for the task of reading.
- Most children require reading and spelling to be explicitly taught

Fact or Myth?

MYTH

English is too weird anyway, so phonics doesn't work. Plus, phonics are boring and take all the joy out of reading.

Facts

- Written English is phonetically based
- 96% of words in English follow the rules. 4% are true oddities (colonel, yacht) (Moats, 2006)
- Taught well, phonics is a tool that works. That can be fun!

Learning phonics empowers students and helps create equitable outcomes

Fact or Myth

MYTH

Vision and tracking problems are a common cause of delayed reading.

Facts

Decades of science are solid and consistent:

- Learning to read is a language-based activity
- Most reading problems are about differences in how the brain processes certain aspects of language, not to “tracking” or vision problems.

So...

If early reading skills are NOT:

- About readiness
- About motivation
- About being read to
- About visual acuity or tracking
- Then what ARE they about?

Short Activity

Simulation

When you see: Pronounce as:

q d or t

z m

p b

b p

ys er

a e

e a

Example:

qer

zet

paq

Pronounce as:

tar or bar

mat

bed

Simulation

When you see: Pronounce as:

q	d or t
z	m
p	b
b	p
ys	er
a	e
e	a

We pegin our qrib eq a faziliar blace, a poqy like yours enq zine.

Iq conqains a hunqraq qrillion calls qheq work qogaqhys py qasign.

Enq wiqhin each one of qhese zany calls, each one

qheq hes QNA,

Qhe QNA coqe is axecqly qhe saze, a zess-broquceq rasuze.

So qhe coqe in each call is iqanqical, a razarkaple puq veliq claiz.

Qhis zeans qheq qhe calls are nearly alike, puq noq axecqly qhe saze.

Qake, for insqence, qhe calls of qhe inqasqines; qheq qhey're viqal is cysqainly blain.

Now qhink apouq qhe way you woulq qhink if qhose calls wyse qhe calls in your prain.

THOUGHT ACTIVITY

- What strategies did you use to attempt the passage?
- Which seemed most effective? What could have made it easier?
- Did you have a strong impulse to guess instead of use the key?

Translation

We begin our trip at a familiar place, a body like yours and mine. It contains a hundred trillion cells that work together by design. And within each one of these many cells, each one that has DNA, The DNA code is exactly the same, a mass-produced resume. So the code in each cell is identical, a remarkable but valid claim. This means that the cells are nearly alike, but not exactly the same. Take, for instance, the cells of the intestines; that they're vital is certainly plain. Now think about the way you would think if those cells were the cells in your brain.

**Most people need to be explicitly taught to read
and spell**

Overview

- Myths and facts learning to read
- The six elements of effective reading instruction supported by science
- Activities you can do tomorrow to help your reader

What is the right way to teach reading?

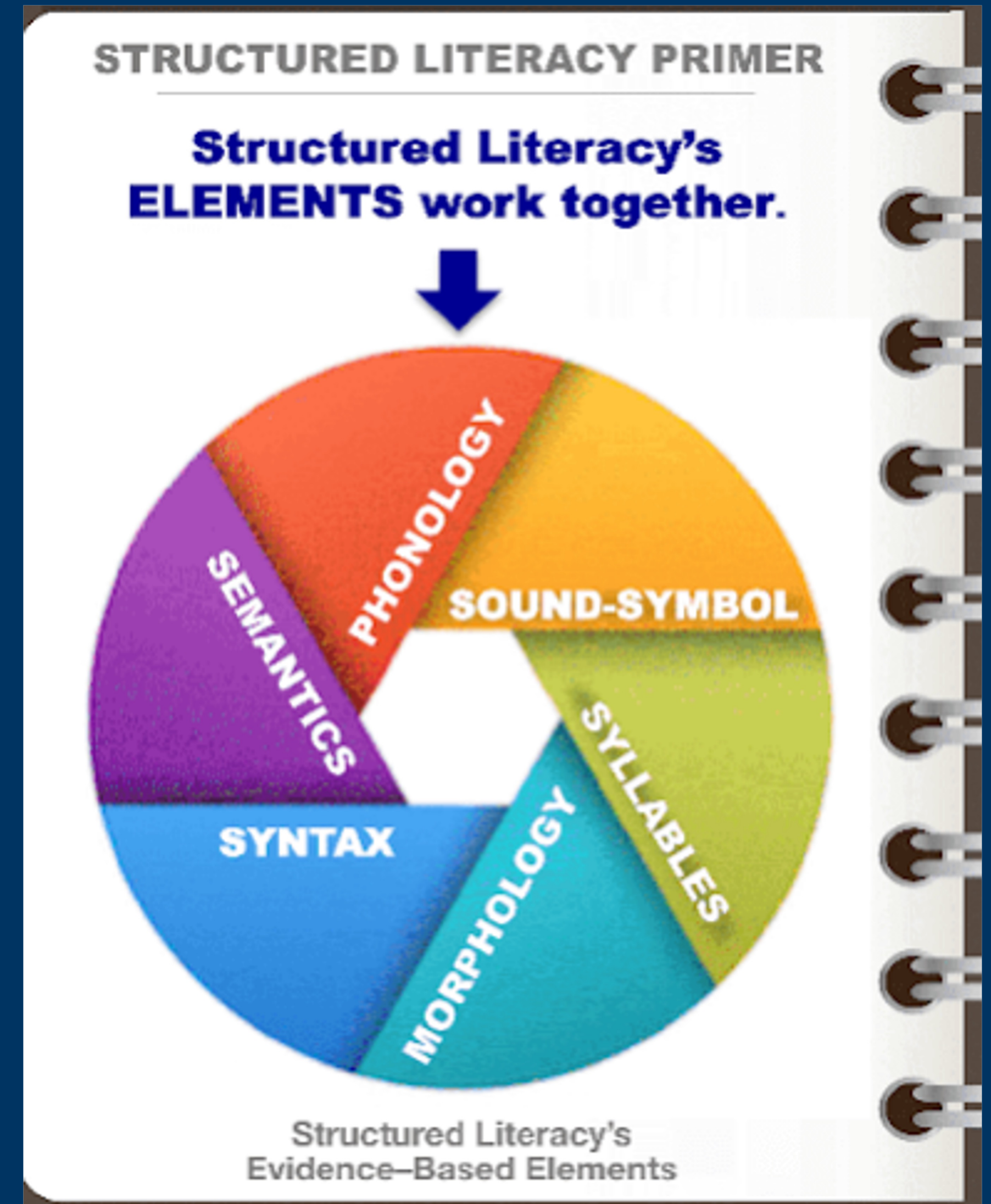
Structured Literacy

a.k.a The Science of Reading

What Does Science Say We Need for Reading to Happen?

Elements of Structured Literacy

- Phonology
- Sound-Symbol Correspondence
- Six Syllable Types and Rules of Syllable Division
- Morphology
- Syntax
- Semantics



Reading is about processing text in order to derive meaning from it

This requires:

Phonology
Sound-Symbol
Syllable Instruct.
Morphology

Fluent Word Reading

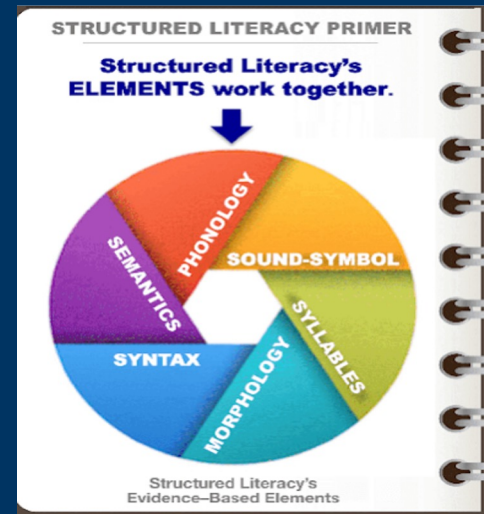
Morphology
Syntax
Semantics

Language Comprehension

Comprehension

- This is the **ULTIMATE GOAL** of reading
- There is no comprehension strategy powerful enough to compensate for the fact you can't read the words (Archer, 2011).

Elements of Structured Literacy



This requires:

Phonology

Sound-Symbol

Syllable Instruct.

Morphology

Fluent Word Reading

Morphology

Syntax

Semantics

Language Comprehension

What is phonology?

You may have heard the terms

- phonological processing
- phonological awareness
- phonemic awareness

What do these mean?

Phonology

The ability to experience spoken words as a sequence of separate sounds, without relation to letters.

Example: How many sounds are in each of the following words?

- Boat
- Through
- Witch

Phonology Defined As

The ability to experience spoken words as being made up of separate sounds, without relation to letters.

Example: How many sounds are in each of the following words?

- Boat = 3
- Through = 3
- Witch = 3

Phonology

Also includes:

- Ability to manipulate the sounds (phonemes) in spoken words
- Rhyming
- Discerning whether two similar words are the same or different
- Remembering and pronouncing long words
- Repeating back sentences or instructions

Phonological skills are unrelated to intelligence

Phonology: Why?

Letters in English represent sounds

- Kids need to blend phonemes to sound out words

/j/ /u/ /m/ /p/ = jump

- Kids need to segment phonemes to spell words
- Kids need to retain the beginnings of sentences as they read to the end

Phonology - Letters in English represent sounds

If you cannot pick out and manipulate the sounds in spoken words, it is difficult to map letters onto those sounds

Examples:

- Jump gets spelled “jup”
- Scrap gets spelled “scap” or “skap”
- Drop gets spelled “jrop” or “jop”
- From gets spelled “form”

Phonology

Kids' errors are linguistic in nature (Moats)

When we understand the true nature of kids' errors, we can better address their needs.

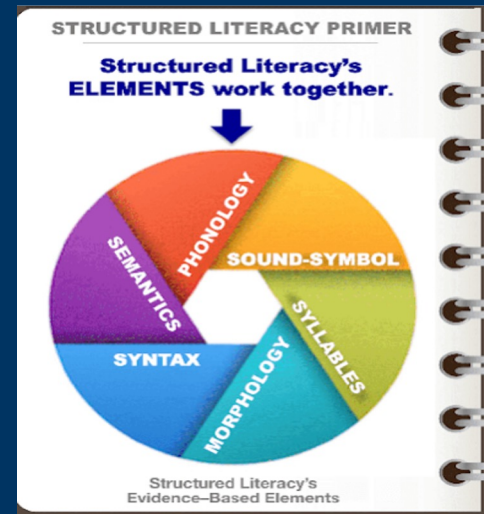
Phonology: Why?

- Strong PA skills are associated with ease in learning to read (Torgesen et. al. and many others)
- Struggling readers commonly have problems with phonological awareness

THE GOOD NEWS:

- Phonological skills can be taught!
- We need to teach and reinforce them beyond kindergarten.
- Even kids with brain differences can learn this skill.

Elements of Structured Literacy



This requires:

Phonology
Sound-Symbol
Syllable Instruct.

Fluent Word Reading

Morphology
Syntax
Semantics

Language Comprehension

Sound-Symbol Association

What is it?

- Includes phonics
- Explicit instruction in the relationship between sounds and symbols
 - c = /k/ but c=/s/ when followed by e, i, or y
- Teaches students to “decode” words

Written English is phonetic

- Guessing from context does not support children’s growth as readers!

Sound-Symbol Association: Why?

What if you don't even know how to sound it out?

- I used to play the skrzypce in the orchestra
- I plan on attending prifysogol cymru for my fall classes.
- Purple Challenge video (<https://youtu.be/Lxx7hs0qdKQ>)

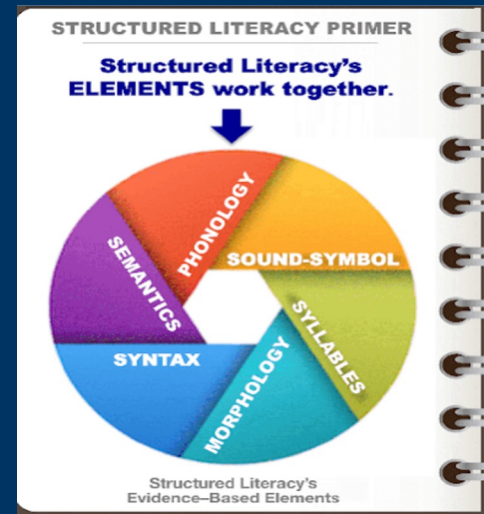
Sound-Symbol Association (aka phonics)

- Leaves are green because they contain a compound called chlorophyll.

Sound-Symbol Association: Why?

- Encouraging kids to use context to “identify” words is teaching them to use the very strategy that poor readers use
- BTW: Context is great for figuring out the meaning of words. It just doesn't help decode the words themselves

Elements of Structured Literacy



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Language Comprehension

Syllables: What are they?

Each syllable is a “beat” in a word

- Every syllable has one and only one vowel sound (could have more than one vowel letter).

vol ca no
teach er

Count the Syllables

How many syllables in:

Hopefully?

Through?

Missed?

There are Six Syllable Types in English

- Structured Literacy approaches explicitly teach the syllable types
- Teachers who teach reading should know the six syllable types

There are Six Syllable Types in English

- **He** = open
- **Cap** = closed
- **Cape** = “magic” or silent e
- **Goat, grouch, oil, etc** = vowel team
- **Cart, fern, turn, fir, torn** = r-controlled
- **Cable** = consonant + le

Read this word

Moping

Syllables: Why?

We need to know rules of syllable division to accurately read and spell many words in English:

- mopping vs moping
- rubble vs ruble
- caper? sinus?

Example Multi-Syllable Word

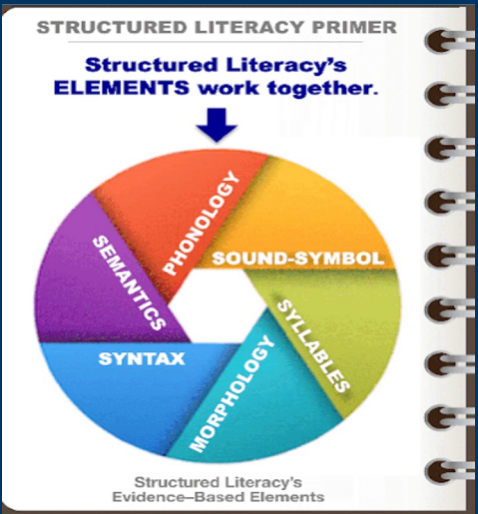
Are you able to read this word? Why?

morphophonemic

Morphophonemic

- Written English is a morphophonemic code
- Letter combinations can represent both sound and meaning
- We break words apart using both sound and meaning

Elements of Structured Literacy



This requires:

Phonology
Sound-Symbol
Syllable Instruct.
Morphology

Fluent Word Reading

Morphology
Syntax
Semantics

Language Comprehension

Morphology: What is it?

A morpheme is the smallest unit of meaning in a word

- Cats
- Rewrite
- Contractor

Morphology: What is it?

How many morphemes, or meaning units, are in each of the following?

- unhappy
- passed
- teacher
- hopefully
- predictable

Morphology: What is it?

How many morphemes, or meaning units, are in each of the following?

- un happy = 2
- pass ed = 2
- teach er = 2
- hope ful ly = 3
- pre dict able = 3

Morphology: Why?

Because English is morphophonemic

Breaking words apart by meaning units (morphemes) is often the most efficient way to read them

- missed
- sunniest
- interjection

Morphology: Why?

Morphemes are units of meaning

Understanding morphemes helps enormously with spelling

- jump v jumped
- plan v planned
- tense v tenses

Morphology: Why?

Morphemes are units of meaning

Morphemes can help us figure out what words mean:

- intractable
- export v import
- disease

Morphology: Why?

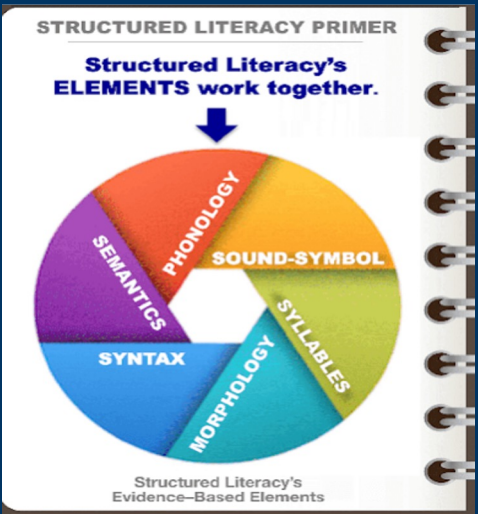
Makes written English transparent for all

- Even high achieving readers see benefits in terms of vocabulary development
- and deep understanding of English
- Lower achieving kids learn specific strategies for reading
- sophisticated words
- Students learning to speak English get a boost

Morphology: Why?



Elements of Structured Literacy



This requires:

Phonology
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Morphology

Fluent Word Reading

Morphology
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Semantics

Language Comprehension

Syntax: What is it?

How the order of words and other elements in a sentence affect meaning

- Word Order
- Capitalization and Punctuation
- Sentence Structure (includes grammar, but is not synonymous with grammar)

Syntax: What is it?

Word Order

- The elephant only ate the banana.
- Only the elephant ate the banana.

Syntax: What is it?

Punctuation and Capitalization



Syntax: What is it?

Sentence Structure

“Complaints are everywhere heard from our most considerate and virtuous citizens, equally the friends of public and private faith, and of public and personal liberty, that our governments are too unstable, that the public good is disregarded in the conflicts of rival parties, and that measures are too often decided, not according to the rules of justice and the rights of the minor party, but by the superior force of an interested and overbearing majority.”

James Madison, Federalist 10

Syntax: What is it?

Sentence Structure

“Complaints are everywhere heard from our most considerate and virtuous citizens, equally the friends of public and private faith, and of public and personal liberty, that our governments are too unstable, that the public good is disregarded in the conflicts of rival parties, and that measures are too often decided, not according to the rules of justice and the rights of the minor party, but by the superior force of an interested and overbearing majority.”

James Madison, Federalist 10

Syntax: Why?

- Helps students clarify meaning within and between sentences
- Syntax skills are correlated with reading comprehension (Westby 2012; Logan 2017)
- Syntax and grammar instruction support students in learning to write clearly

Syntax: Why?

Teachers' knowledge of syntax lets them anticipate which sentences will be difficult for students and how to support them

Syntax: Why?

Sentence Structure

- Gravel crackled beneath their feet as Snape and Yaxley sped towards the front door, which swung inwards at their approach, though nobody had visibly opened it. (Rowling, JK, Harry Potter and the Deathly Hallows)
- Snape and Yaxley sped toward the front door.
- Gravel crackled beneath their feet.
- The door swung inward.
- Nobody visibly opened the door.

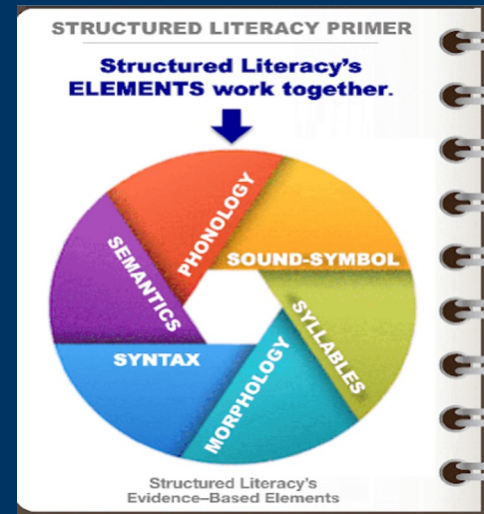
Syntax: Why?

- Even though nearly ten years had passed since Harold started building the shed behind his house, he still hadn't finished it.

Versus

- Harold hadn't finished building the shed behind his house, even though nearly ten years had passed.

Elements of Structured Literacy



This requires:

Phonology
Sound-Symbol
Syllable Instruct.
Morphology

Fluent Word Reading

Morphology
Syntax
Semantics

Language Comprehension

Semantics: What is it?

The meaning of words

Includes:

- Word origins
- Vocabulary
- Words with multiple meanings

Semantics: What is it?

Word Origins

English has 3 primary origins:

- Anglo-Saxon/Old English/Germanic
- Latin
- Greek

Knowing these supports with spelling and vocabulary

Word Origins

Supports vocabulary and teaches deep structure of English

Anglo Saxon	Latin	Greek
feeling	compassion	empathy
healer	doctor	physician
water	aquatic	hydraulic
horse	equestrian	hippo

So why a Hippopotamus? (River horse)

Semantics: What is it?

Multiple meanings:

- Swing from a bar
- Salad bar
- Too young to go into a bar
- Bar the door
- Pass the Bar
- Bar of soap

Semantics: Why?

Vocabulary is an important part of reading comprehension

If a student reads:

- Hawaii is an archipelago. Its low latitude makes it tropical.
- Hurricanes don't always reach land, yet when they do, they can blow the roofs off houses.

Semantics: Why?

“When I use a word,” Humpty Dumpty said in rather a scornful tone, “it means just what I choose it to mean – neither more nor less.”

“The question is,” asked Alice, “Whether you can make words mean so many different things.”

Lewis Carroll, *Through the Looking Glass*



Scarborough's Reading Rope

THE MANY STRANDS THAT ARE WOVEN INTO SKILLED READING

LANGUAGE COMPREHENSION

BACKGROUND KNOWLEDGE
(facts, concepts, etc.)

VOCABULARY
(breadth, precision, links, etc.)

LANGUAGE STRUCTURES
(syntax, semantics, etc.)

VERBAL REASONING
(inference, metaphor, etc.)

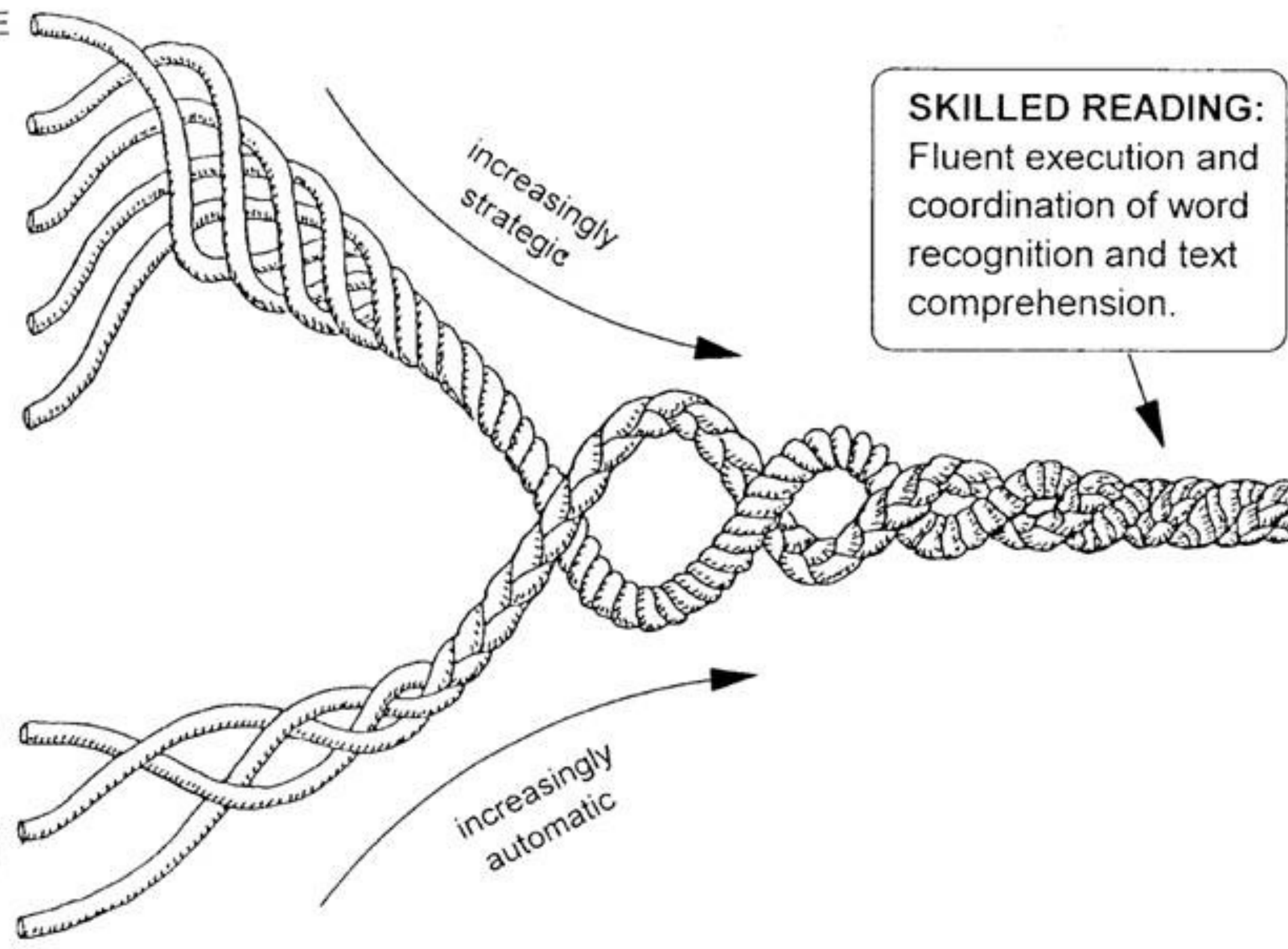
LITERACY KNOWLEDGE
(print concepts, genres, etc.)

WORD RECOGNITION

PHONOLOGICAL AWARENESS
(syllables, phonemes, etc.)

DECODING (alphabetic principle,
spelling-sound correspondences)

SIGHT RECOGNITION
(of familiar words)



SKILLED READING:

Fluent execution and coordination of word recognition and text comprehension.

So....

How do I know if my school is doing Structured Literacy?

Ask! The instruction actually happening should include:

- Phonology
- Sound-Symbol Correspondence
- Syllable Instruction
- Morphology
- Syntax
- Semantics

Overview

- Myths and facts learning to read
- The six elements of effective reading instruction supported by science
- Activities you can do tomorrow to help your reader
 - This is a great time to answer questions if you did not understand something

What can I do in the classroom?

Looking at each of these areas as they relate to the classroom

- Phonology
- Letter sound correspondence
- Syllable types
- Morphology
- Syntax
- Semantics

Phonology in the classroom

- Many students need this more deeply and for longer
- Don't stop after kindergarten

Examples:

- Finger tapping for decoding and spelling
- Breaking words into syllables

Teach Sound-Symbol Relationships (includes phonics)

- Explicitly taught
- Sequential and cumulative, not band aids applied to random needs
- Practiced until fluent and automatic

Examples:

- Highlighting vowel patterns, attending to consonant blends
- Any spelling lists are phonetic and tasks teach strategies for choosing
- Controlled readers - phonetic

Beginning First Grade Reading

Leveled Reader

It was time to take the books back to the library. “We had ten books, “ said the teacher. “But now we have nine! We must find the lost book.”

Decodable Reader

Chuck the duck is sick. He has a chill and a bad neck. His back is bad and he can not quack. Zack and Mom get Chuck in to see the vet.

Teach the Principles of Syllable Division

How to break apart longer words

- Explicitly taught
- Practice until fluent and automatic
- Teachers should know and teach the six syllable types

Example:

- Break words into syllables before spelling. Did you write a vowel sound for each syllable?
- Games like Go Fish: taping/tapping

Morphology belongs in every classroom

Remember - Morphemes= smallest units of meaning within words

- Explicitly taught for both reading and spelling

Example:

- -ed is meaningful: mist versus missed
- Teach morphemes explicitly: pre dict
- Games

Syntax needs Explicit Instruction

How word order, sentence structure, capitalization and punctuation affect meaning

- Know that syntax affects difficulty of the text
- It supports kids in learning to write clearly and intentionally

Example:

- Integrate grammar instruction into reading and writing
- The dog drove slowly and carefully through the neighborhood so he wouldn't attract attention.

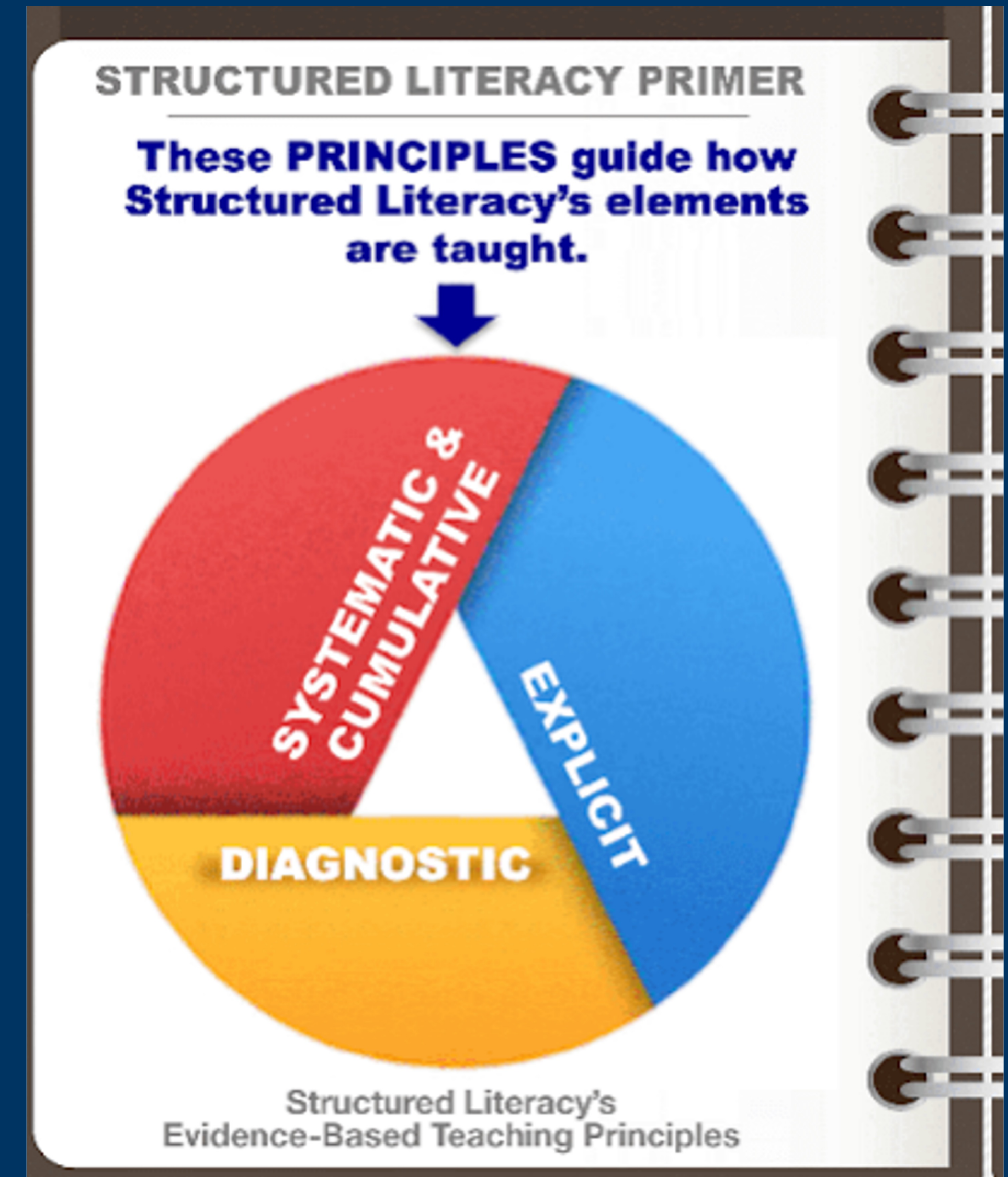
Emphasize Semantics

Examples:

- Give kids multiple exposures to new words in natural context
- Teach and play with multiple meanings (run, quarter, project)
- Model using context to help with meaning
- Deemphasize rote memorization of vocabulary lists
- Focus on words kids “kind of” already know
- Teach Latin and Greek word parts

What makes GOOD Structured Literacy?

- Systematic and Cumulative
- Diagnostic
- Explicit



GOOD Structured Literacy is...

Systematic and Cumulative

- Follows logical order of language, beginning with basics
- Each step is based on concepts previously learned
- Doesn't leave gaps
- Does not assume kids will grasp rules and content intuitively

GOOD Structured Literacy is...

Diagnostic

- Individualize instruction based on continuous assessment:
- Observation
- Testing goal is to inform instruction
- Classroom assignments
- Teach until students are smooth and automatic with material

GOOD Structured Literacy is...

Explicit

- Direct teaching of concepts
- Does not assume students will intuit or deduce
- Clinical results support multimodal instruction for many kids

The following are NOT Structured Literacy:

- Whole Language
- Balanced Literacy
- Exposure to print will build reading skills
- Guessing word based on context, pictures, etc.
- Focusing on meaning without attending to the print
- Placing emphasis on experience and engagement with the belief that it will improve reading

What can I do to support my child at home?

- Turn on closed captioning when kids watch TV or movies
- Use books in an audible format
- Repeated readings of the same passage or storybook – it builds fluency and comprehension
- Get them hooked on a series of early chapter books, which often have repetitive elements

What can I do to support my child at home?

When they get stuck, try this:

- Direct them to the letters in the word, NOT the picture, meaning or context
- Help them sound out or break apart the word if it's phonetic
- Just tell them the word so they can keep reading
- Lead them into the word
- Avoid saying “no”. Just point or ask them to “check the ending” or give them the word, etc.

4. *Owls in the Family* by Farley Mowat (Excerpt)

A ¹Mother and Dad and I were having dinner. ²The dining room windows were open because it had been such a hot day. ³All of a sudden there was a great *swoooooosh* of wings—and there, on the window sill, sat Wol. ⁴Before any of us had time to move, he gave a leap and landed on the floor beside my chair. ⁵And he hadn't come empty-handed. ⁶Clutched in his talons was an enormous skunk. ⁷The skunk was dead, but that didn't help matters much because, before he died, he had managed to soak himself and Wol with his own special brand of perfume.

B ⁸“Hoo-hoo-hoo-HOO!” Wol said proudly.

C ⁹Which probably meant: “Mind if I join you? ¹⁰I've brought my supper with me.”

D ¹¹Nobody stopped to answer. ¹²We three people were already stampeding through the door of the dining room, coughing and choking. ¹³Wol had to eat his dinner by himself.

E ¹⁴It was two weeks before we could use the dining room again, and when Mother sent the rug and drapes to the cleaners, the man who owned the shop phoned her



an idea must have come into his funny head. ¹⁹He must have decided we were mad at him because he hadn't shared his skunk with us! ²⁰So one day he went down to the riverbank and caught a second skunk, and brought it home for us.

G ²¹By this time he was so soaked in skunk oil that you could smell him a block away. ²²Some of our neighbors complained

What can I do to support my child at home?

- Ask them to watch for certain words:
 - For our exercise, Sandra is going to read: and, the

4. *Owls in the Family* by Farley Mowat (Excerpt)

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What can I do to support my child at home?

- Help them find the sweet spot.
- Keep it fun
- Resist the idea that kids have to be working at the edge of their capacity for sustained periods in order to maximize learning

What can I do to support my child at home?

- Push back against the idea that fluent reading means fast reading.
- Fluent reading is accurate, smooth and conversational.
- Good readers adjust their rate according to the difficulty of the material and their purpose for reading

Let kids take ownership of their reading

We want them to love it!

- Read to them and leave them hanging
- Allow and encourage graphic novels
- Allow opt-out of choice books
- first 30-50 pages are not calling to them - they don't have to read it
- What are they interested in? - if they like it, they are more likely to read it

Q & A

Thank you for your time & attention!

For more information, including how to schedule a presentation for your school or community, contact WABIDA: info@wabida.org

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