Conquer the Code: Sounds, Symbols, & Syllables

Florida Literacy Association
59th Annual Conference
January 21, 2024

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CERI Certified Structured Literacy Teacher
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Educational Consultant, Author, Wife, Mom, Grandma
Classroom Teacher and Clinician ~ 25 years
Began my educational journey in 1974 – almost 50 years 😊
Vision: ALL students in Florida will receive Structured Literacy instruction, provided by effective teachers, who understand the Science of Reading.

Mission: IDA-FL will be the state leader in the awareness and dissemination of current knowledge, research, and resources regarding dyslexia and related language-based learning disabilities. We will provide guidance, based on the Science of Reading, that informs appropriate assessment, Structured Literacy instruction, and intervention. This information will be available to all stakeholders, including children and adults with dyslexia, their families, teachers, and related professionals.
Dyslexia is a specific learning disability (SLD) in basic reading skills that can range from mild to severe. The primary characteristics include difficulties with accurate and fluent word recognition and spelling.

Note: Included in the glossary of the revised Reading Endorsement Competencies (2022), Florida DOE / Just Read, Florida!
Today’s Agenda

Focus on evidence-based strategies grounded in the:

**The Science of Reading**: The WHY
A vast, interdisciplinary body of scientifically-based research about reading and issues related to reading and writing.

**Structured Literacy**: The WHAT & HOW
The content, principles, and strategies that are beneficial for ALL students, but **vital** for those with dyslexia!
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.

https://www.thereadingleague.org/what-is-the-science-of-reading/
The Simple View of Reading
Gough & Tunmer (1986)

Decoding × Language Comprehension = Reading Comprehension
The Reading Rope
Dr. Hollis Scarborough (2001)

Language Comprehension
- Background Knowledge
- Vocabulary Knowledge
- Language Structures
- Verbal Reasoning
- Literacy Knowledge

Word Recognition
- Phonological Awareness
- Decoding (and Spelling)
- Sight Recognition

Skilled Reading
Fluent execution and coordination of word recognition and text comprehension.

Structured Literacy: What is it?

- The application of the Science of Reading!
- The most effective approach for students who experience difficulty learning to read and spell printed words.
- Refers to both the content (elements) and methods (principles) of instruction.
- Benefits ALL students but is vital for students with dyslexia.

(Moats, Spring 2019, Perspectives on Language and Literacy)
Structured Literacy: Elements (Content)
The WHAT: P-S-S / M-S-S

- **Phonology** . . . Phonemic awareness
- **Sound-symbol** . . . Alphabetic Principle
- **Syllables** . . . Syllable types & division
  
  Aligned with the SVR and Reading Rope: Word Recognition

- **Morphology** . . . Base words and affixes
- **Syntax** . . . Grammar, sentence structure
- **Semantics** . . . Meaning, comprehension

  Aligned with the SVR and Reading Rope: Language Comprehension
Structured Literacy: Principles (Methods) 
The HOW

- **Explicit**
  - Intentional, direct teaching; teacher–student interaction
  - Multimodal: visual, auditory, kinesthetic, tactile (VAKT) in activities directly related to reading and writing (e.g., saying and feeling the word in your mouth [place and manner of articulation], while reading and writing the word)

- **Systematic & Cumulative**
  - Organization of materials follows a logical order.
  - Each step is based on concepts previously learned.

- **Diagnostic**
  - Teacher must be able to individualize instruction based on careful and continuous assessment.
“an extraordinary ability, peculiarly human and yet distinctly unnatural.”

(Dr. Sally Shaywitz, *Overcoming Dyslexia*, 2020, p. 3)
Teaching Reading is Rocket Science!

*Teaching Reading Is Rocket Science: What Expert Teachers of Reading Should Know and Be Able to Do*

Louisa C. Moats, American Federation of Teachers, *American Educator*, 2020

[https://www.aft.org/ae/summer2020/moats](https://www.aft.org/ae/summer2020/moats)
Conquer the Code: Sounds, Symbols, and Syllables

- **Sounds**
  - Phonological Awareness
  - Phonemic Awareness /s/ /p/ /i/ /d/ /er/

- **Symbols**
  - Print Awareness
  - Alphabet knowledge spider

- **Syllables**
  - Vowel Patterns spī / der
  - Syllabication open / bossy r
Sounds: **Phonology**

The study of the sound structure of spoken words

The science of speech sounds

The speech-sound system of a language
Phonological Awareness

- Refers to all levels of awareness of the sounds and syllables heard in oral language, including Phonemic Awareness.
- Sensitivity to the sounds of language: words, syllables, and sounds (phonemes).
- Understanding of the different ways that oral language can be divided into smaller components and manipulated.
- Includes:
  - Phonological sensitivity: words, rhymes, syllables, onset-rime
  - Phonemic awareness: phonemes
Phonemic Awareness

- Awareness of the **individual sounds** that make up words and the ability to manipulate those sounds in words.

- Phoneme: The smallest unit of sound that distinguishes the meanings of spoken words.

- 44 sounds in the English language
  - 25 consonant sounds
  - 18 vowel sounds + schwa: /Ə/

https://dyslexiaida.org/building-phoneme-awareness-know-what-matters/
## 44 Sounds of the English Language (1)

### Vowels (10)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ă/</td>
<td>/ā/</td>
</tr>
<tr>
<td>/ĕ/</td>
<td>/ē/</td>
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<tr>
<td>/ĭ/</td>
<td>/ī/</td>
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<tr>
<td>/ŏ/</td>
<td>/ō/</td>
</tr>
<tr>
<td>/ŭ/</td>
<td>/ū/</td>
</tr>
</tbody>
</table>

*virgules = /* / */

### Consonants (18)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>/b/</td>
<td>/j/</td>
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<tr>
<td>/k/</td>
<td>/l/</td>
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<tr>
<td>/d/</td>
<td>/m/</td>
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<tr>
<td>/f/</td>
<td>/n/</td>
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<tr>
<td>/g/</td>
<td>/p/</td>
</tr>
<tr>
<td>/h/</td>
<td>/r/</td>
</tr>
</tbody>
</table>
44 Sounds of the English Language (2)

Vowel Diphthongs (2)
- /ou/
- /oi/

Vowel Variants (3)
- /au/
- /OO/ (moon)
- /oo/ (book)

Consonant Digraphs (7)
- /sh/
- /ch/
- /wh/
- /th/
- /th/
- /zh/
- /ng/

r-controlled (3)
- /ar/
- /or/
- /er/

Schwa (1) /ə/
How many sounds do you hear?

- in the word box
- in the word enough
- in the word though

Can you say *teach* backwards?
How about *enough*?
Are you phonemically aware?
Elkonin Boxes (Sound Boxes)

Students slide counters into boxes to represent the sounds they hear in a word - “push and say” (Phonemic awareness)

Gradually, letters can be used to show how print matches speech: sound to letter; oral to written (Phoneme-grapheme mapping)
Symbols: Orthography

- The writing and spelling system of a language.
- The system in which the **sounds (phonemes)** of a language are represented by written or printed **symbols (graphemes)** to spell words.

**cat** /k/ã/t/ = c-a-t: 3 phonemes, 3 graphemes, 3 letters

**sheep** /sh/ē/p/ = sh-ee-p: 3 phonemes, 3 graphemes, 5 letters

**though** /th/ō/ = th-ough: 2 phonemes, 2 graphemes, 6 letters
Sound-Symbol Association: The Alphabetic Principle

/k/ /ă/ /t/ = cat

- the **systematic** and **predictable** relationship between the **letters** of written language and the **sounds** of spoken language
- the way **print** matches **speech**
- the relationship between **phonology** and **orthography**
- also known as the alphabetic code and **phonics**
Phonics

- instructional practices that emphasize how spellings are related to speech sounds in systematic ways
- Graphemes represent or spell phonemes!
- *Itchy’s Alphabet* provides manipulatives and letters with embedded pictures and teaches from speech to print.
- See [https://itchysalphabet.com/](https://itchysalphabet.com/)
Ways to Teach Phonics

- Synthetic Phonics
  - c – a – t = cat [letter by letter]
- Body–Coda
  - ca – t = cat [beginning consonant + vowel]
- Analytic Phonics
  - c – at = cat [onset-rimes; word families]
- Vowel Patterns (syllable types)
  - cat = cat [closed pattern]
  - me = me [open pattern] etc.
## Color-Highlighting

<table>
<thead>
<tr>
<th>Vowels</th>
<th>Digraphs</th>
<th>Blends</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>sh</td>
<td>bl-</td>
</tr>
<tr>
<td>e</td>
<td>ch</td>
<td>cr-</td>
</tr>
<tr>
<td>i</td>
<td>th</td>
<td>str-</td>
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<td>o</td>
<td>wh</td>
<td>-nd</td>
</tr>
<tr>
<td>u</td>
<td>ph</td>
<td>-mp</td>
</tr>
<tr>
<td>-y</td>
<td>ck</td>
<td>-nt</td>
</tr>
<tr>
<td>-w</td>
<td>tch</td>
<td>etc.</td>
</tr>
<tr>
<td></td>
<td>dge</td>
<td></td>
</tr>
</tbody>
</table>
Orthographic Mapping

- A process by which words are stored in memory for instant, effortless, automatic retrieval while reading (in the word form area, the brain’s “letter box”)

- Context-free, accurate, and immediate word recognition (Kilpatrick, 2015)

- Sight words are ALL words that can be recognized immediately, without sounding out or guessing; you can’t NOT read a word you already know 😊

- Dyslexia can be characterized by difficulties with orthographically mapping words.
<table>
<thead>
<tr>
<th>Word</th>
<th>Phoneme 1</th>
<th>Phoneme 2</th>
<th>Phoneme 3</th>
<th>Phoneme 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>mat</td>
<td>m</td>
<td>a</td>
<td>t</td>
<td></td>
</tr>
<tr>
<td>strap</td>
<td>s</td>
<td>t</td>
<td>r</td>
<td>a</td>
</tr>
<tr>
<td>three</td>
<td>th</td>
<td>r</td>
<td>ee</td>
<td></td>
</tr>
<tr>
<td>punch</td>
<td>p</td>
<td>u</td>
<td>n</td>
<td>ch</td>
</tr>
<tr>
<td>bright</td>
<td>b</td>
<td>r</td>
<td>igh</td>
<td>t</td>
</tr>
</tbody>
</table>
Let’s try **phoneme-grapheme** mapping!
I’ll say the word.
You LISTEN and count the number of phonemes.
Write an x in each box for every sound you hear.
WRITE the grapheme that spells each phoneme below it.

Listen: shop  x  x  x  /sh/  /õ/  /p/  (3 phonemes)
Write:  **sh o p**  (3 graphemes)

Let’s try another one. Listen . . .

Tip: The number of phonemes always = the number of graphemes 😊
Syllables

- A syllable is a word or part of a word that includes one vowel sound.
- Syllable types help readers pronounce the vowel sound within each syllable.
- There are six basic syllable types.
- Also called vowel patterns or spelling patterns.
- English is 85-88% regular!
The English Language is Predictable

“Morphophonemic”

- A system that represents both sound and meaning (Moats, 2020, p. 97).
- 50% of common English vocabulary can be spelled by phoneme-grapheme correspondences alone, e.g.,
- 36% more can be spelled with one error, using only phoneme-grapheme correspondence rules.
- 10% more are spelled accurately if word origin, word meaning, and morphology are considered.
- Fewer than 4% are true oddities *(p. 124)


For more information on true “memory” or “heart words,” see: www.reallygreatreading.com/heart-word-magic
# Vowel Pattern Chart

**(Syllable Types)**

<table>
<thead>
<tr>
<th><strong>Closed</strong></th>
<th><strong>Open</strong></th>
<th><strong>Silent e</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>cat</td>
<td>me</td>
<td>ride</td>
</tr>
<tr>
<td>fish</td>
<td>go</td>
<td>cape</td>
</tr>
<tr>
<td>bub-</td>
<td>ta-</td>
<td>hope</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Bossy r</strong></th>
<th><strong>2 Vowels</strong></th>
<th><strong>C+le</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>star</td>
<td>Talkers</td>
<td>ta - ble</td>
</tr>
<tr>
<td>girl</td>
<td>Whiners</td>
<td>bub - ble</td>
</tr>
<tr>
<td>tur-</td>
<td>boat</td>
<td>tur - tle</td>
</tr>
<tr>
<td></td>
<td>boy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>meat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>clown</td>
<td></td>
</tr>
</tbody>
</table>
Two Important Questions

1. **How many vowels** do you see?

2. **Where** is it? (or are they?)

The number and position of the *vowel* is critical!

```
 a e i o u y w
ou/ow  oi/oy  au/aw/ew
```
Closed Vowel Pattern

A word or syllable that contains only one vowel followed by one or more consonants; the vowel is short.

“One lonely vowel squished in the middle, says its special sound just a little.”

sat       bed      fin       top       gum
sand      best      print     shop     lunch
at        Ed        in        on       up
Open Vowel Pattern

A word or syllable that ends with **one** vowel; the vowel is long.

“If one vowel at the end is free, it pops way up and says its name to me.”

me she hi go flu fly
Silent e (Magic e) Vowel Pattern

A word or syllable that ends in e, containing one consonant before the final e and one vowel before that consonant; the vowel is long.

“The silent e is quiet, but it has a claim to fame; it makes the vowel before it say its real name.”

The silent e is so powerful, it gives all its strength to the other vowel so that it can say its real name.

make    Steve    ride    hope    cube
Bossy r (r-controlled) Vowel Pattern

A word or syllable containing a vowel followed by r; the vowel sound is altered by the r.

The letter r is so bossy, it tells the vowel that it can’t say its real name (long vowel) or its special sound (short vowel) but must say the r sound (as in car, for, her).

“er girls”

car for her girl curl
Double Vowel Talkers Pattern

A word or syllable containing two adjacent vowels; the first one is long. [vowel digraphs]

When two vowels go walking, the first one does the talking and says its name.

rain  day  see  meat  pie
boat  toe  slow  suit  blue
Double Vowel Whinners Pattern

A word or syllable that contains two adjacent vowels; the vowels say neither a long or short vowel sound, but rather a very different sound. [diphthongs and variants]

Sometimes when two vowels are next to each other, they make a funny whining sound, like when you fall down and say “ow,” “aw,” “oy,” and get a “boo-boo.”

fault saw foil boy loud cow moon new
“oy boys” book
C+le Vowel Pattern

This syllable ends with “le” preceded by a consonant and occurs in two-syllable words. [consonant + le]

When a word ends with a consonant and “le,” the “le” grabs the consonant before it, and the word breaks into two parts right before that consonant.

bub–ble ca–ble ea–gle poo–dle pur–ple
Your Turn!

- Read the following poem.
- Find at least two words that represent each syllable type (vowel pattern).
- Write them on your Vowel Pattern Chart (VPC).
Idle Cable

Cable likes to dawdle,  
He’s easy as a bone.  
Her sets no example,  
Just circles like a drone.  
He could use his noodle  
And be a worker bee,  
But he just likes to doodle  
In the maple tree.

(Wright Group/McGraw Hill, Fast Track Reading, Word Work, Phonics)
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<td></td>
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<td></td>
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# Vowel Pattern Chart: *Idle Cable*

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</thead>
<tbody>
<tr>
<td>sets</td>
<td>i-</td>
<td>like</td>
</tr>
<tr>
<td>his</td>
<td>Ca-</td>
<td>bone</td>
</tr>
<tr>
<td>and</td>
<td>no</td>
<td>use</td>
</tr>
<tr>
<td>ex-</td>
<td>he</td>
<td>drone</td>
</tr>
<tr>
<td>-am-</td>
<td>be</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ma-</td>
<td></td>
</tr>
</tbody>
</table>

**Bossy r**  
cir-
work- -er

<table>
<thead>
<tr>
<th><strong>2 Vowels</strong></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Talkers</td>
<td>Whiners</td>
</tr>
<tr>
<td>bee</td>
<td>daw-</td>
</tr>
<tr>
<td>tree</td>
<td>noo-</td>
</tr>
<tr>
<td>doo-</td>
<td></td>
</tr>
</tbody>
</table>

i-dle          Ca-ble
ma-ple         noo-dle
daw-dle        doo-dle
cir-cles       ex-am-ple
Syllable Division

- **C+le: tur/tle**
  - bossy r & C+le

- **VC/CV: rab/bit**
  - closed & closed

- **V/CV: ti/ger**
  - open & bossy r

- **VC/V: cam/el**
  - closed & closed

- **V/V: li/on**
  - open & closed
Strategy for Syllabication

“Spot and dot” the vowels.  rabbit
Connect the dots.
Look at the number of consonants between the vowels.
If 2 – break between the consonants.  tiger
If 1 – break before the consonant.
If it doesn’t sound right, move over one letter.  camel
Your Turn!

- Atlantic
- professor
- entertainment
- accommodate

Try to divide these words, using the Spot & Dot strategy.
Atlantic  
professor  
entertainment  
accommodate  

This strategy helps spelling, too!!
# Vowel Pattern Chart
(Syllable Types)

<table>
<thead>
<tr>
<th>Closed</th>
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</thead>
<tbody>
<tr>
<td>At - lan - tic</td>
<td>pro - mo -</td>
<td>-date</td>
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<tr>
<td>-fes -</td>
<td>/ə/</td>
<td></td>
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<tr>
<td>-en -</td>
<td></td>
<td></td>
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<tr>
<td>-ment</td>
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<tr>
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</tbody>
</table>
Why teach phonics???

When students have the **MEANS** to **conquer the code**, they will reach the **GOAL**, and **master the meaning**!

(E. Judith Cohen, Ed. D.)
A Final Thought

“Do the best you can until you know better. Then, when you know better, do better!” (Maya Angelou)

Our challenge:
To provide **Structured Literacy**, based on the **Science of Reading**
to **ALL** children, in **EVERY** classroom!

We **know** better . . . it’s up to us to **DO** better!
A Few Books of Interest

1. **Conquering Dyslexia**
   - A Guide to Early Detection and Intervention for Teachers and Families
   - By Jan Hasbrouck, Ph.D.

2. **7 Mighty Moves**
   - Research-Backed, Classroom-Tested Strategies to Ensure K-to-3 Reading Success
   - By Lindsay Kemeny

3. **The Writing Rope**
   - A Framework for Explicit Writing Instruction in All Subjects
   - By Joan Sedita

Foreword by Jan Hasbrouck
Websites of Interest

http://www.decodingdyslexia.net  Decoding Dyslexia
https://dyslexiaida.org  International Dyslexia Association (IDA)
https://fl.dyslexiaida.org  IDA–Florida Branch
www.fcrr.org  Florida Center for Reading Research
www.ReadingRockets.org  Reading Rockets
www.thereadingleague.org  The Reading League
https://fl.thereadingleague.org/  The Reading League- Florida
https://ufli.education.ufl.edu/foundations/  UF Literacy Institute
www.understood.org  Understood
Awesome Resources

*Teaching Reading IS Rocket Science, 2020, Dr. Louisa Moats:*
https://www.aft.org/ae/summer2020/moats

*Dyslexia in the Classroom (IDA):*
https://dyslexiaida.org/dyslexia-in-the-classroom/

*What is Structured Literacy?*
https://dyslexiaida.org/what-is-structured-literacy/
The End!

Please feel free to contact me with any questions or concerns.

cohenj@fiu.edu
305-773-5087 (cell)
Questions are the path to learning