Planning for Differentiation & Appropriate Instruction in K - Grade 5
The newly emerging ability to characterize individual differences in the structural and functional properties of specific brain regions has the potential to aid in the formulation of a neurobiological phenotype of developmental dyslexia. Across several methodologies within cognitive neuroscience, evidence consistently points to two cortical areas that exhibit dysfunction in developmental dyslexia, and which, we propose, subserve the normal development of the cognitive achievement of reading. The first region—a left perisylvian area typically involving the superior temporal gyrus (STG)—is involved in phonological processing, and demonstrates significant structural and functional differences between dyslexic and nonimpaired individuals. The second region—a portion of the left occipito-temporal extrastriate visual system typically centered on or near the middle portion of the fusiform gyrus—has been associated with the automatic process of visual word form perception in skilled adult readers. Responsiveness of this region reflects a form of perceptual expertise which normally develops over the course of learning to read, but which has also been shown to develop differently in dyslexic individuals. We suggest below that these two regions interact during the typical development of reading skills. Under this proposal, regions associated with phonology in the preliterate child impact the functional specialization of the left fusiform regions during the first several years of reading development, and the typical development of rapid and automatic word recognition ability is therefore disrupted in children with phonological processing deficits. Finally, it is possible that atypical patterns of activity in these regions might be altered via interventions that stress particular strategic approaches in word recognition processes and provide extensive practice.
Objectives - Participants Will:

- Understand the Simple View of Reading, and the instructional domains that are involved in the development of skilled reading
- Explain the sequences of development of Early Literacy Skill
- Demonstrate multi-sensory strategies for reading instruction to meet the needs of all learners

Students learn to read from speech to print
The Simple View of Reading

Based on the Simple View of Reading by Gough and Tunmer, 1986

Word Recognition \times Language Comprehension = Reading Comprehension

Phonological Awareness
Decoding (Phonics, Advanced Phonics)
Sight Word Recognition

Background Knowledge
Vocabulary
Language
Verbal Reasoning

\[1 \times 0 = 0\]
\[0 \times 1 = 0\]
\[.50 \times .50 = .25\]
Both are necessary, but neither on its own is sufficient. In the early years, the word recognition skills are the greatest influence on reading comprehension. They need to be explicitly taught this. But as word reading skills increase, language comprehension skills plays a more critical role.

- Kate Cain, Ph. D., 2017

In **1st grade word reading** is very important. Word recognition is a barrier in later readers, 3rd grade and beyond. *If students are devoting brain space to word reading later, there is not cognitive deskspace available for comprehension.*

Language comprehension has a significant influence from the earliest of grades. In grades 2 & 3 language comprehension is a bigger predictor for how well students will read written text.
We can determine with over 90% accuracy whether or not a child in kindergarten will be in the bottom 10% of readers in 2nd grade by looking at:

- phonological awareness
- semantics (vocabulary)
- orthographic knowledge
# Changing Emphasis of the Subskills of the Five Components of Reading

<table>
<thead>
<tr>
<th>Component</th>
<th>K</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
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</thead>
<tbody>
<tr>
<td>Phonemic Awareness</td>
<td>Blend &amp; Segment</td>
<td>Phoneme Analysis: Addition, Deletion &amp; Substitution; Spelling Dictation</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Phonics</td>
<td>Sounds/Basic Phonics</td>
<td>Advanced Phonics &amp; Multisyllabic</td>
<td>Multisyllabic &amp; Word Study</td>
<td></td>
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<tr>
<td>Fluency</td>
<td>Sounds and Words</td>
<td>Words &amp; Connected Text</td>
<td>Connected Text</td>
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</tr>
<tr>
<td>Vocabulary</td>
<td>Speaking &amp; Listening</td>
<td>Listening, Reading &amp; Writing</td>
<td>Reading &amp; Writing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehension</td>
<td>Speaking &amp; Listening</td>
<td>Listening, Reading &amp; Writing</td>
<td>Reading &amp; Writing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Adapted from Michigan’s Integrated Behavior and Learning Support Initiative, 2017

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**Word Recognition Strategies - Phonological Awareness, Decoding**
Phonological vs. Phonemic Awareness

<table>
<thead>
<tr>
<th>Phonological = big units</th>
<th>Phonemic = smallest unit of sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>● <strong>Phonological awareness</strong> is a broad skill that includes identifying and manipulating units of oral language – parts such as words, syllables, and onsets and rimes.</td>
<td></td>
</tr>
<tr>
<td>● <strong>Children</strong> who have phonological awareness are able to identify and make oral rhymes, can clap out the number of syllables in a word, and can recognize words with the same initial sounds like ‘money’ and 'mother.'</td>
<td></td>
</tr>
<tr>
<td>● <strong>Phonemic awareness</strong> is a subset of phonological awareness that focuses specifically on recognizing and manipulating phonemes, the smallest units of sound.</td>
<td></td>
</tr>
<tr>
<td>● Phonemes combine to form syllables and words.</td>
<td></td>
</tr>
</tbody>
</table>

**Phonemics awareness** had an effect size of .86 (National Reading Panel)

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**Importance of PA:**

Explicit phonemic awareness instruction increases reading and spelling achievement among preschoolers, primary-grade children, and students with learning disabilities.

(Ball and Blachman, 1991; Lundberg, Frost, and Petersen, 1988; Yopp, 1992)
Phonology

Sentences
Words - big and small, compound words
Syllables, alliteration, onset - rime
Phoneme segmenting and blending
Stretch the sounds
Deletion, substitution, reversal

1:1
Digraphs
Trigraphs
Vowel Teams
Blends
Word families
Inflections
Syllable Types
Roots / affixes
Word origin

Orthography

Phonological Awareness

EARLY
- Word
- Syllables
- Alliteration
- Onset rime
- Rhyme recognition
- First sound matching

BASIC
- Syllable and Compound deletion
- Phoneme segmentation
- Phoneme Blending
- Phoneme Substitution

ADVANCED
- Phoneme Deletion
- Phoneme Deletion (middle)
- Phoneme Reversals
- Phoneme Chaining
Syllable Cards

- Using visual tools, aligned with what students with disabilities may be using in the inclusive environment.
- Teach the number of syllables in words.
- In kindergarten Tier 1, you can have the orthography. For interventions, however, do NOT include the orthography.

Multi Sensory - Oral Word Play

- **Same Sound Start**: Alliteration, early phonological awareness
  - I need to know beginning sounds but also have an oral language vocabulary
- **Rhyming**: Rhyming production is practiced in this activity, early phonological awareness
  - Use a cvc word from a word family to start (pop)
  - Pass koosh and come up with new words
  - Count how many words you can create
- **Beginning / Ending Sounds**: Phoneme Isolation, basic phonemic awareness
  - First person says a word - “sock”
  - Next person has to begin their word with the previous end sound - /k/, “cup”
**Onset Rime Cards**
Using visual tools, aligned with what students with disabilities may be using in the inclusive environment.
- Teach the sounds!
- In kindergarten Tier 1, you can have the orthography. For interventions, however, do NOT include the orthography.
Basic Phonemic Awareness

Phoneme Segmentation, Blending

Counting Phonemes

- Listen to the words as they are spoken.
- Tap out sounds by touching your thumb to each finger in succession as you say each phoneme (or tap up arm)
- Then hold up the number of phonemes in the word.
- Remember to blend the word again!
Sound Boxes / Elkonin Boxes

Phoneme Segmenting & Blending
Phonemic Awareness | Phonics
--- | ---
The main focus is on sounds/phonemes | Main focus is on graphemes/letters and their corresponding sounds
Deals with spoken language | Deals with written language/print
Mostly auditory | Both visual and auditory
Students work with manipulating sounds and sounds in words | Students work with reading and writing letters according to their sounds, spelling patterns, and phonological structure
Hear the language and play with it | See the text representing the language and play with it

- Phonics instruction (systematic & explicit) has an effect size of .6 (Hattie, 2009).

Tap it, Map it, Zap it

- Start by tapping the sounds in the word.
- Place a marker on the grid to map each sound.
- Then use your finger to blend the sounds.
- Finally, use your bingo wand to zap the sounds up, blending the word from left to right.
Tap it, Map it, Zap it, GRAPH IT!

- When students are ready and have mastered these skills, move to add the orthography.

Moving into alphabetic principle, 1:1 correspondence with phonemes and graphemes, beginning phonics

Physical Phonics & I'm Magic E

Beginning:
Consonants, initial blends, digraphs
(Use what you have taught!)

Middle:
Vowels & Vowel Teams
(Use what you have taught!)

Ending:
Consonants, ending blends, digraphs
(Use what you have taught!)

- Fifty Nifty, by Judi Dodson, pg. 45
### Physical Phonics - Morphology

#### Syllable Types

<table>
<thead>
<tr>
<th>Syllable Type</th>
<th>Examples</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed</td>
<td><em>deep, ple</em></td>
<td>A syllable with a short vowel, spelled with a single vowel letter ending in one or more consonants.</td>
</tr>
<tr>
<td>Vowel-Consonant-e (VCe)</td>
<td><em>hostel, beverage</em></td>
<td></td>
</tr>
<tr>
<td>Open</td>
<td><em>program, table</em></td>
<td>A syllable that ends with a long vowel sound, spelled with a single vowel letter.</td>
</tr>
<tr>
<td>Vowel Team (including diphthongs)</td>
<td><em>awful, train, con-spool</em></td>
<td>Syllables with long or short vowel spellings that use two to four letters to spell the vowel. Diphthongs <em>ou/ow</em> and <em>oi/oy</em> are included in this category.</td>
</tr>
<tr>
<td>Vowel-r (r-controlled)</td>
<td><em>injury, con-sort</em></td>
<td>A syllable with <em>er, ir, or, ar, or ur</em>. Vowel pronunciation often changes before /t/.</td>
</tr>
<tr>
<td>Consonant-le (C-le)</td>
<td><em>drizzle, beagle</em></td>
<td>An unaccented final syllable that contains a consonant before /l/, followed by a silent <em>e</em>.</td>
</tr>
<tr>
<td>Leftovers: Odd and Schwa syllables</td>
<td><em>damp, active</em></td>
<td>Usually final, unaccented syllables with odd spellings.</td>
</tr>
</tbody>
</table>

2. The lack of phonemic awareness is the MOST powerful determinant of the likelihood of failure to read (Marilyn Adams, 1990).

3. Teach orthographic mapping to increase sight word recognition (Ehri, 2014; Kilpatrick, 2015).

4. Phonemic awareness and phonics instruction should be systematic and explicit (Kilpatrick, 2016; Kilpatrick, 2015; Moats, 2015).

Phonemic Awareness / Phonics
Takeaways

Language Comprehension Strategies -
Oral Language Development, Vocabulary
• Children from high-income / professional families were exposed to 30 million more words than children from families on welfare by age 3.
• 86 - 98% of the words used by each child by the age of three were derived from their parents’ vocabularies.
• The number of words heard varied based on socio-economic status.
• Children raised in middle to high income class homes had far more language exposure to draw from.

Hart & Risley, 1995

http://thirtymillionwords.org/
Wash Them in Waves of Words

- Some children come to school with too little language to support comprehension.
- Washing our kids in words through READ ALOUDS gives them a background in language. (Judi Dodson)

Clothesline Sentences

- Help students communicate in long, elaborate sentences.
- Start with a sentence based on class content.
- Ask students to add details orally, and model with each new word on a card or post it.

50 Nifty Speaking & Listening Activities, page 69
• Our words can change student achievement.
• Predict - what has the bigger impact, the number of words or the quality of our words?

**Academic language use by teachers is critical for successful literacy outcomes** (Leseaux, 2014 & ALIAS, 2008).

• Despite national calls for instructional frameworks that focus on Reading, Writing, Listening, and Speaking, and although talk is one of the most powerful tools for comprehending and analyzing text, research tells us very clearly that **speaking is the neglected standard.** - Nonie Leseaux
**Garrulous**

*(gare-uh-lus)*

Garrulous means you talk too much!!!

1. Why are you so garrulous?
2. The garrulous boy was driving me up the wall.
Predictors of Reading Success

• Phonemic Awareness
• Letter Knowledge
• Vocabulary

You can’t identify phonemes if you don’t have a schema for the language, a mental model for the vocabulary.

Why - Vocabulary Instruction

Vocabulary is related to reading comprehension.

“Indeed, one of the most enduring findings in reading research is the extent to which students’ vocabulary knowledge relates to their reading comprehension.”

(Osborn & Hiebert, 2004)
“direct vocabulary instruction has an impressive track record of improving students’ background knowledge and comprehension of academic content”

Marzano, 2001, p. 69
Why - Vocabulary Instruction

• **Teaching word meanings** significantly improved children’s **vocabulary knowledge** as well as improving their **comprehension** of texts containing the taught words. (Effect size .97) (Stahl and Fairbanks, 1986)

• **Hattie Effect Size for Vocabulary Programs 0.67**

• **Additional studies** (Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983; McKeown, Beck, Omanson, & Pople, 1985)

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A Vocabulary Gap?

• Linguistically “poor” first graders knew 5,000 words

• linguistically “rich” first graders knew 20,000 words. (Moats, 2001)

• Children who enter school with limited vocabulary knowledge grow more discrepant over time from their peers who have rich vocabulary knowledge. (Baker, Simmons, & Kame’enui, 1997)
Closing the Gap

According to Biemiller (2003), because of the vocabulary gap, students in the lowest quartile need to learn **3-4 root words / day** to “catch up” to their peers.

Evidence suggests that as late as Grade 6, about 80% of words are learned as a result of direct explanation, either as a result of the child’s request or instruction, usually by a teacher.

(Biemiller, 2005)
Is direct instruction in vocabulary worthwhile? YES!

A Meta-analysis showed that direct instruction of vocabulary:

- Increases knowledge of words taught
- Improved performance on standardized tests
- Promoted learning of words beyond those explicitly taught. (Ex: teach aquarium, and kids easily learn aqueduct, aquatic) FOCUS on the morphology!

Direct Instruction = Explicit Instruction
Explicit Vocabulary Instruction

1. Touch the word and say it.
2. “This word is __________ __________.”
3. “Say it with me __________ __________.”
4. “What word, everyone?” “What word, everyone?”
5. Student Friendly Definition - “___________ means __________ __________.”
6. “What does ________ mean?”
7. Tell your partner what ________ means.
8. Use it in a sentence stem.
9. Make personal connections, give examples from text or life.
10. Ask critical think questions yes/no/why to demonstrate understanding.
Start With Self Assessment

• Have students rank their level of understanding before and after instruction of new vocabulary.
• Also see the Levels of Word Knowledge Chart

<table>
<thead>
<tr>
<th>Unknown</th>
<th>Known</th>
<th>Owned</th>
</tr>
</thead>
</table>

Semantic Mapping

• Create a visual depiction or relationship between words.
  • The major concept is placed in the center of the semantic map. Related items are placed in squares, circles, etc around the center.
**Word Maps - Interactive Vocab Cards**

- Use a notecard or piece of paper
- Deepen knowledge and understanding of words and how they can be used using GESTURE

<table>
<thead>
<tr>
<th>Vocabulary Word</th>
<th>Synonym(s):</th>
<th>Antonym(s):</th>
</tr>
</thead>
</table>
| **Stymie**      | Having a wish to do evil to others. | synonym: evil  
                 | The witch has malevolent eyes | antonym: kind |
|                 | synonym: vengeful, vicious, hostile | synonym: friendly, nice |

Write the definition (in a way that you understand)  
Use the word in a sentence.  
(Might need to use the back of the card.)

Draw a picture
Choosing Words to Teach

- Select words that are **unknown**.
- Select words that are **critical** to understanding.
- Select words that students are likely to encounter in the **future** and are generally useful. (Stahl, 1986)

<table>
<thead>
<tr>
<th>3 Levels (Tiers) of Vocabulary Words</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Common (Tier I)</strong></td>
</tr>
<tr>
<td>- Basic Words used often in everyday conversation</td>
</tr>
<tr>
<td>- House, go, happy, drink</td>
</tr>
<tr>
<td>- Do not need to be explicitly taught</td>
</tr>
<tr>
<td>- Some English Learners may need brief explanation</td>
</tr>
<tr>
<td><strong>Academic (Tier 2)</strong></td>
</tr>
<tr>
<td>- More complex, frequently occurring words in academic settings</td>
</tr>
<tr>
<td>- Coincidence, neutral, fortunately, synthesize, plead</td>
</tr>
<tr>
<td>- <strong>Teach these words!</strong></td>
</tr>
<tr>
<td>- Students will see and use these words often in academic texts</td>
</tr>
<tr>
<td><strong>Content-Specific (Tier 3)</strong></td>
</tr>
<tr>
<td>- Highly specialized words that are related to a specific discipline</td>
</tr>
<tr>
<td>- Pogrom, quagmire, locution, polyglot, isosceles</td>
</tr>
<tr>
<td>- Teach these words when a specific lesson requires knowledge of the word and underlying concepts</td>
</tr>
</tbody>
</table>
The 3 Tier Vocabulary Framework

- Helps teachers identify the vocabulary that students will most likely need to be taught.
- All words can be categorized into three levels or tiers.
- Tiers do not indicate the importance of a word just how intensively it might need to be taught.
- Words are “tiered” according to their level of utility.

Do NOT Confuse with the MTSS 3 Tiers!

- In Isabel Beck’s words, “Be careful not to confuse the instructional Tiers of RTI with the tiers that we have identified for vocabulary words. There is no correspondence.” EXCEPT...

  Direct vocabulary instruction should be in everyone’s core instruction (Tier 1) for ELA and every content area.
Choosing Words

• Select words that contain “meaningful parts” (prefix, suffix, root) that would generalize to other vocabulary terms.
  
  • Autobiography
    • Auto – self
  
  • Other words
    • Automobile
    • Autocrat
    • Autoimmune system
1. Replace “kid” language with academic language in the classroom (Leseaux, 2015; Himmele & Himmele, 2009).
2. Read aloud to students. Students’ vocabularies increase when they listen to text written at a higher level than they’re used to reading (Beck, 2013; Fisher, Flood, Lapp, & Frey, 2004).
3. Flood the classroom with words (Blachowicz, Fisher, Ogle, & Taffe, 2013).
4. Explicitly teach vocabulary (Beck, McKeown, & Kucan, 2013; Marzano, 2009).

Today’s Take-Aways

Administrators should be looking for (in classroom walkthroughs):
1. Explicit instruction in both word recognition AND language comprehension in classrooms.
2. The shift in emphasis of the big ideas of reading during the ELA block.
3. Multi-sensory instruction that is differentiated (based on data) and accessible for all students.
1. On a post it note, write down one strategy for each of the 2 parts of the Simple View of Reading that you plan to share with your staff immediately.

2. Tell someone at your table the Word Recognition strategy.

3. Tell someone at your table the Language Comprehension strategy.

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