Reading Comprehension

Decoding
• Ability to accurately read familiar words automatically (sight words) and decode unfamiliar words out of context
• Dependent on:
  • Phonemic Awareness
  • AP & Phonics

Fluency
• Ability to read text accurately, at an appropriate rate, with suitable prosody

Language Comprehension
• Ability to understand oral language
• Dependent on:
  • Background Knowledge
  • Social context
  • Vocabulary
  • Text/Story Structure
  • Verbal Reasoning

K-3rd - Reading Components

Comprehension
Fluency
Vocabulary
Phonemic Awareness
Phonics

Children with Williams Syndrome
• Vocabulary skills are the strongest in language realm
• Advanced grammatical/syntactical skills
• Systematic phonics instruction is imperative to alleviate cognitive load so comprehension can be focused on
• Comprehension is generally more challenging
• Areas of comprehension to focus on: retelling – beginning, middle, and end of a story; summarizing; sequence of events; monitoring
**Phonemic Awareness**

- Definition: the auditory ability to manipulate individual sounds (phonemes) within words.
  - Examples:
    - the sounds in sat = /s/ /a/ /t/
    - words that rhyme = dog, frog
    - words that start with the same sound = cat, car
  - This is the foundation for phonics instruction and should begin at the latest when children are in preschool

**Phonemic Awareness**

- Two most critical skills of phonemic awareness are segmenting and blending
  - Segmenting: taking a word and being able to break it into each sound; Used for spelling (i.e. fit = /f/ /i/ /t/)
  - Blending: taking the individual sounds (phonemes) and putting them together; used for reading (i.e. /f/ /i/ /t/ = fit)
  - Should be taught explicitly in kindergarten and fall of first grade
  - Students need about 20 hours or 10-15 minutes each day

**Natural Progression of Acquisition**

- As we grow, we first do everything orally (Phonemic Awareness)
  - We learn how to speak and use words before we understand there are symbols (letters) that correspond each of the words we have learned
  - Next we layer on the visual cue of understanding the sounds we know connect to a written symbol (Phonics)
  - Last we layer on the ability to write the symbol that corresponds to the sounds we know (Spelling and writing)
Alphabetic Principle/Phonics

• Definition: understanding the written letter/sound correspondence; letter sounds can be blended to read words and segmented to spell words
  
  Example: m = /m/ or slip = /s/ /l/ /i/ /p/

• This is the foundation for reading and decoding
• Basic skills include letter-sound correspondence, segmenting, and blending with the actual letters
• Basic phonics should be taught explicitly in kindergarten and fall of first grade
• Advanced phonics should start mid-year of first grade
• Advanced phonics includes understanding syllables and how words are chunked (prefixes, roots, suffixes)

Cueing Systems

• Phonological – using the letter-sound associations to decode a word

• Semantic and Syntax – using context clues, pictures, word order, and parts of speech to help determine the meaning of a word

Phonics Learning Progression

• RECOGNIZE it
• Become ACCURATE with it
• Become AUTOMATIC with it
Accessing the Code

<table>
<thead>
<tr>
<th>Sound by Sound</th>
<th>- inaccurate</th>
<th>- accurate</th>
<th>- accurate and with automaticity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound by Sound with blending</td>
<td>- inaccurate blending</td>
<td>- accurate blending</td>
<td>- accurate blending with automaticity</td>
</tr>
</tbody>
</table>

| Whole Word Reading     | - inaccurate                  | - accurate                  | - accurate with automaticity     |

Memorizing & Guessing ≠ Decoding

- Some children, especially those with strong language skills, can memorize words and use context clues when "reading"
- When in fact their decoding skills are weak and they are merely "guessing" their way through the text
- Reading difficulties may not being apparent until the third to eighth grade

Types of Words

- **Regular words**
  - A word in which all letters represent their most common sounds [e.g., mad, slump, trust]

- **Irregular words**
  - A word in which one or more letters does not represent the most common sound [e.g., was, of]

- **High frequency words** (can be regular or irregular)
  - Only 13 words (a, and, for, he, is, in, it, of, that, the, to, was, you) account for 25% of print (Shin, 1980)

- **Sight words**
  - Any word read at a regular rate without subvocalizing the individual sounds in the word
How do students become accurate and fluent?

• Lots and lots of correct practice!
• Decodable readers – what are they and how should they be used?

**Predictable**
- Excellent for teaching the structure of oral language
- If used as initial independent reading materials, may promote guessing

**Leveled**
- Useful in matching books to students who have “broken the code”
- Do not control for the order of intro of sounds or irregular words, so less useful for beginning readers

**Decodable**
- Text material in which the students can read ALL of the words because the words contain known sounds and the irregular words and story words (ex. names) have been taught

**Vocabulary**

• Definition: the words we need to understand and communicate in order to listen, speak, read, and write

• Three types of word acquisition (generally)
  - Explicit instruction of the words
  - Dictionary acquisition
  - Contextual acquisition (determined by situation surrounding the word used)

• Vocabulary accounts for 50-60% of the variance in reading comprehension (Stahl and Nagy, 2006)
### Narrative vs. Informative

<table>
<thead>
<tr>
<th>Vocabulary in narrative</th>
<th>Vocabulary in informative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept known</td>
<td>Concept unknown</td>
</tr>
<tr>
<td>Word unknown</td>
<td>Word unknown</td>
</tr>
<tr>
<td>Once in passage</td>
<td>Multiple uses in passage</td>
</tr>
<tr>
<td>Vocabulary words unrelated</td>
<td>Vocabulary words related</td>
</tr>
</tbody>
</table>

(Archer, 2011)

### Fluency

- Definition: ability to read words accurately, at an appropriate rate, with proper expression
- This does NOT mean reading fast!

### Comprehension

- Definition: ability to construct meaning from a text in order to apply what has been read
- If the foundation of phonemic awareness, phonics, and fluency have been laid – then the focus can move to comprehension
Comprehension

Fluency

Vocabulary

Motivation

Advanced Phonics/Word Study

- Definition: understanding syllables and how words are chunked (prefixes, roots, suffixes); understanding irregular words and patterns
- Applies to some

Motivation

- Definition: the student’s perceived probability of success
- Ways to help motivate:
  - Having students track their progress and successes
  - Setting learning targets
  - Explicit instruction that is scaffolded for student success
The Research on Reading

• It is a neurological activity; strong readers use the left hemisphere of the brain more
• Weak readers have a different brain pattern – instead their right hemisphere goes into overdrive
• When interventions are used, the left side of the brain begins to function similar to a strong reader as the skill of reading is improved
• Over time, with intervention, the reader’s brain can change to function similar to a strong reader’s brain
• Round robin reading is NOT helpful unless in a small group for purposes of instruction

(American Psychological Association, 2014)

Systematic Phonics Instruction

• Impacts growth in reading more than alternative programs or no phonics instruction or unsystematic approaches
• Instruction can happen individually, small group, or whole class – there is no great variance in results
• Instruction should happen prior to or in first grade
• Instruction must have included a foundation of phonemic awareness
• Systematic instruction impacts ALL children in their reading abilities, regardless of their socioeconomic status, prior ability, home life, etc.
• Alleviates cognitive overload
• Improves children’s decoding, word recognition, spelling, and reading comprehension skills

(John Hattie, 2009; National Reading Panel, 2000)

Explicit Vocabulary Instruction

• For children with WS – tier 3 words should be the focus
• Has a .97 effect size
• Explicitly teach words that cannot be learned in context
• Children with WS need explicit vocabulary instruction in relational concepts (big vs little, before vs after, first/next/after, etc.)

(Archer 2011; Hattie 2009)
Questions to ask at school

- Are children assessed on their phonemic awareness and phonics skills— and if so, how often? [should be at a minimum three times a year starting in kindergarten]
- What type of materials are used to teach reading? [should be a core reading program – Reading Street, Journeys, etc., that was developed or revised after 2010]
- How much phonics instruction does each child receive daily? [phonics instruction should happen daily starting as late as mid-kindergarten and finishing by the end of second grade – taking around two years]
- What opportunities to practice the phonics skills are given? [children should have decodable texts that align to the skills they are learning at the time they are learning them]

Phonemic Awareness Car Games to Play

- Sing rhyming songs (Banana Fana song)
- What rhymes with?
  - I spy something that starts with the ____ sound
- I’m going on a picnic and packing… [items that start with the /b/ sound]
- How many syllables do you hear?
- What’s the first sound in ____?
- What’s my pattern? [Jack, pack, sack or big, boy, ball]

Phonics Bath Games to Play

- Letter-sound correspondence (focus on matching the sound to the object)
- Find the letter that makes ____ sound (start small and limit options)
- Match objects/animals to the sounds/letters
- Make three letter words and make the sounds – dog - /d/ /o/ /g/
Vocabulary Activities

• Discuss the word meaning, pronunciation (have them repeat several times), include examples and non examples
• Help child use it in a sentence – sentence stems can help here
• Help child to understand difference forms (ie. hydrate – dehydration)

Fluency Activities

• Read and read and read the same passages/books/texts repeatedly
• Choral read with your child (read together at the same time)
• Partner read with your child (alternate reading)

Comprehension Activities

• After reading, ask what happened? Look for who (characters), what (plot/conflict), when (setting), where (setting), why (cause/effect); summarizing
• Retell looking for a beginning, middle, and end – this can be done to talk about one's day
• Help to use transition words in retelling: first, next, before, after, etc.
• Discuss monitoring for comprehension – when do they understand what they have read and when don’t they understand
• Discuss what to do when they don’t understand
Materials to Support

- Florida Center for Reading Research – www.fcrr.org
- Peer Assisted Learning Strategies (PALS) – Vanderbilt – kc.vanderbilt.edu/pals/reading (levels include Kindergarten, 1st, grades 2-6, high school PALS) can purchase from Voyager Sopris
- Phonics for Reading –www.curriculumassociates.com – basic phonics to early advanced - grades 2-6
- Rewards Intermediate and Advanced – advanced phonics - www.voyagersopris.com – grades 4-12
- Language! Live – grades 6-12 – www.voyagersopris.com - comprehensive reading program encompassing phonics, word study, vocabulary, comprehension

To Learn More...

- Children with Williams Syndrome: Language, Cognitive, and Behavioral Characteristics and their Implications for Intervention by Carolyn Mervis and Shelley Velleman http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3383614/

References