Prevention, Treatment, and Diagnosis of Specific Reading and Writing Disabilities within a Multi-Tiered System of Support (MTSS)



# **Resource Packet**

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# **Phonological Processing**

Try the following exercises related to phonological processing (Moats, 2000). After you complete all the items, you may check your answers with the Answer Key on the following page.

#### PHONEME COUNTING

Count the number of speech sounds or phonemes that you perceive in each of the following spoken words. Remember, the speech sounds may not be equivalent to the letters. For example, the word *spoke* has four phonemes: /s/, /p/, /o/, /k/. Write the number of phonemes in the blank to the right of each word.

ox	thrill	ring	shook	know
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## SYLLABLE COUNTING

Count the number of syllables that you perceive in each of the following words. For example, the word *higher* has two syllables, the word *threat* has one, and the word *physician* has three.

cats	capital	shirt	recreational	decidedly
				/

#### **PHONEME MATCHING**

Read the first word in each item and note the sound that is represented by the underlined letter or letter cluster. Then select the word that contains the same sound. Underline the word you select for each item.

1. p <u>u</u> sh			
although	sugar	duty	pump
2. w <u>eigh</u>			
pie	height	raid	friend
3. doe <u>s</u>			
miss	nose	votes	rice
4. in <u>t</u> end			
this	whistle	baked	batch

#### **Answer Key**

#### PHONEME COUNTING

Count the number of speech sounds or phonemes that you perceive in each of the following spoken words. Remember, the speech sounds may not be equivalent to the letters. For example, the word *spoke* has four phonemes: /s/, /p/, /o/, /k/. Write the number of phonemes in the blank to the right of each word.

 ox \_3\_
 thrill \_4\_
 ring \_3\_
 shook \_3\_
 know \_2\_

#### SYLLABLE COUNTING

Count the number of syllables that you perceive in each of the following words. For example, the word *higher* has two syllables, the word *threat* has one, and the word *physician* has three.

cats 1	capital 3	shirt 1	recreational 5	decidedly 4
	·			/

#### **PHONEME MATCHING**

Read the first word in each item and note the sound that is represented by the underlined letter or letter cluster. Then select the word that contains the same sound. Underline the word you select for each item.

1. p <u>u</u> sh			
although	<u>sugar</u>	duty	pump
2. w <u>eigh</u>			
pie	height	<u>raid</u>	friend
3. doe <u>s</u>			
miss	<u>nose</u>	votes	rice
4. in <u>t</u> end			
this	whistle	<u>baked</u>	batch

Moats, L. C. (2000). Speech to print: Language essentials for teachers. Baltimore: Paul H Brooks.

# Orthographic Processing

Review the sample lesson on pages 6-9 (from *Early Reading Intervention*)

1. Give an example of how the lesson targets orthographic processing.

2. Give an example of how the lesson employs explicit and systematic instruction. How does this lesson illustrate the use of standard-based protocols (i.e., errorless teaching)? (Think: Why would a standard-protocol approach be important for students with reading and writing disabilities)

3. Give an example of how student feedback is used in the lesson (e.g., use of task-specific or product feedback).

# Lesson 13 - Cycle 3 Overview

New Sound - † Review Sounds - c f p m Key Phonologic Skill - FIRST SOUND



- Teacher Letter Cards, **t c f p m**
- Activity 2 t Pictures t c f p m Letter Cards
- Activity 3 Letter Race Activity Sheets



Estimated Time and Sequence

# Activity 1 - Writers' Warm-Up

# Introduce **t**

- 1. Distribute a writer's warm-up sheet to each child.
- Review letter name and letter sound of the new letter. (Use letter side of teacher card).
- 3. Model tracing the new letter (letter side of teacher card). "Watch as I trace the letter \_\_\_\_."
- Have children trace the first two letters on their warm-up sheet.
   "Now you trace the first two letter \_\_\_\_\_ on your warm-up sheet."
- 5. Model tracing the new letter again (letter side of teacher card).
- 6. Have children trace the next two letters on their warm-up sheet.
- 7. Model writing the new letter (blank side of teacher card). "Watch as I write the letter \_\_\_\_. I start at the dot and write the letter."
- 8. Have children write the letter two times on their warm-up sheet.

(Remind students that it is important that they write their letters carefully and correctly).

- $\otimes$  If children make an error, ask them to write the letter again. If they need assistance, put your hand over their hand and guide them to write the letter. Have the child write the letter on his or her own. Repeat this procedure if necessary.
- 9. Model writing the new letter again (blank side of teacher card).
- 10. Have children fold their paper and write the letter two times from memory on their warmup sheet.
- 11. Have children uncover their paper and compare letters.

"Do your letters look the same? Circle the letter that is your best work."



# <u>Review c, f, p, m</u>

1. Have children trace and write each review letter one time each.

 $\otimes$  If children make an error, ask them to write the letter again. If they need assistance, put your hand over their hand and guide them to write the letter. Have the child write the letter on his or her own. Repeat this procedure if necessary.

# Activity 2 - Integrated Phonologic/Alphabetic 🌮 🕅 f

Choosing Letter that Matches a Picture's First Sound - Introduce t

- 1. Gather pictures and letter cards listed in the materials section of lesson cover page.
- 2. Tell children that they are going to choose the letter that goes with the first sound of some pictures.
- 3. Model 1 example:

Place a picture on the table facing the children.

"This is <u>tape</u>. The first sound in <u>tape</u> is /t/.

Place two letter cards ( $\mathbf{t}$  and  $\mathbf{m}$ ) on the table under the picture facing the students.

"I'm going to choose the letter that matches this picture's first sound. (point to the correct letter) t says /t/ like the /t/ in tape."

4. Test children with 4-6 more examples:

Display another picture.

e.g. "This is <u>tire</u>. What is this? The first sound in <u>tire</u> is /t/. What is the first sound in <u>tire</u>? That's right, /t/ is the first sound in <u>tire</u>."

Place two letter cards on the table. (Vary the letter choices and order of letters.)

e.g. "Your turn to choose the letter that matches this picture's first sound. Everyone, think of which letter makes the same sound as the /t/ in <u>tire</u>. Does everyone think they know?"

Call on an individual student to point to the correct letter.

e.g. "What's the name of the letter you pointed to? What sound does it make? That's right, t says /t/ like the /t/ in <u>tire</u>."

Reinforce letter name and sound with the group.

"Everyone, what's the name of the letter? What sound does it make?"

 $\otimes$  If children make an error, model the answer, have children repeat the answer, and return to the picture card a second time.

# Activity 3 - Phonological/Spelling



# New E <u>New E</u> Letter Race - Review c, f, p, m

- 1. Distribute a letter race activity sheet to each child.
- 2. Review the letter names and sounds on the activity sheet.
- 3. Introduce the activity: "We are going to have a letter race. I'm going to show you a picture and you are going to write the letter that goes with the picture's first sound on the right racetrack. Which letter do you think will win?"
- 4. Model 1 example:

Place a picture on the table facing the children.

"Let's do one together. This is <u>pig</u>. The first sound in <u>pig</u> is /p/. I'm going to write the letter on the racetrack next to the letter that makes the same sound as the /p/ in <u>pig</u>. (write the letter on an activity sheet next to the correct letter.) Now you write the letter that makes the sound /p/. Start at the dot and write the letter. That's right, p makes the sound /p/ like the /p/ in <u>pig</u>."

5. Test children on remaining examples (vary the order in which you test the pictures until one letter wins):

e.g. "This is <u>man</u>. What is this? What is the first sound in <u>man</u>? That's right, /mmmmm/ is the first sound in <u>man</u>. Now, write the letter on the racetrack next to the letter that makes the same sound as the /mmmmm/ in <u>man</u>. Start at the dot and write the letter."

Reinforce the group on the letter name and sound.

"Everyone, what's the name of the letter you wrote? And what sound does it make?"  $\otimes$  If children make an error, model the letter name and sound, have children repeat the letter name and sound, and have children write the correct letter.

# Morphological Processing

Try the following application related to morphological processing. . .Is the pattern able or ible?:

1. Review the following *able* and *ible* word lists.

dependable	credible
expendable	audible
passable	edible
profitable	plausible
breakable	visible
agreeable	feasible
predictable	compatible
perishable	terrible
acceptable	horrible
remarkable	possible
laughable	incredible
profitable	legible
punishable	

2. What generalization do you see that tells you when you spell the suffix *able* and when you spell it *ible*? In other words, what's the rule?

3. Review the following word sets (words that drop the *e* before adding able and words that keep the *e* when able is added).

presumable	noticeable
pleasurable	peaceable
desirable	marriageable
dispensable	bridgeable
blamable	manageable
usable	changeable
excusable	serviceable
loveable	
deplorable	
comparable	

3. What is the generalization that tells you when to drop the *e* and when to keep it? What's the rule?

# Four-Part Processing Model of Word Recognition

As we discuss the Four-Part Processing Model of Word Recognition, please take notes and draw on the Model provided below.

Phonological Knowledge	Orthographic Knowledge	Morphological Knowledge
<ul> <li>Awareness of the sound system of language.</li> <li>Identified as an essential skill in both reading and spelling development.</li> </ul>	<ul> <li>Knowledge of the sound/symbol correspondences of English, specifically the rules and generalizations of how sounds are represented in print.</li> <li>English is a less transparent orthography than many other languages, therefore it is essential to know the rules of written language and the constraints imposed by English letter order.</li> </ul>	<ul> <li>Awareness of the units of meaning in language.         <ul> <li>base words, roots, affixes</li> </ul> </li> <li>Structural analysis.</li> <li>English spellings have developed over time to keep the morphological meaning intact over phonological representation (morphological constancy).             <ul> <li>sign -&gt; signal</li> <li>discuss -&gt; discussion</li> </ul> </li> </ul>



# Learner Profiles – Application #1

Review the information listed below from Berninger and Wolf (2009, 2016) on the three learner profiles that describe students with reading and writing difficulties. After reviewing the descriptions of each learner profile, be ready to describe the learner profiles to members of your team. *In other words, read the information below and summarize using your own words.* 

# Learner Profile #1

# Morphological/Syntax – Phonological – Orthographic Learner Profile (Oral and Written Language Learning Disability - OWL LD)

- Problems in orthographic, phonological, and morphological coding; syntactic awareness; phonological and orthographic loops; and executive functions.
- Significant problems with reading comprehension, oral reading of real words, morphological awareness, syntactic awareness, and word retrieval.
- Oral <u>and</u> written language problems. (In contrast, children with phonological-orthographic learner profiles (dyslexia), often have oral language skills (morphological and syntactic awareness) that are average or better except in phonology (analyzing the sounds in spoken words).
- Primary difficulty with accurate and automatic reading of real words for which meaning cues can be used, oral reading accuracy and fluency when reading words in the context of passages, reading comprehension, written spelling, and syntax construction in written compositions.
- Word-level oral reading and spelling problems <u>and</u> text-level reading comprehension and fluency and written expression problems.
- Reading and writing problems are probably related to their oral language problems (phonological, morphological, and syntactic awareness; listening comprehension; and fluency in word retrieval).

# Instructional Implications:

- Specialized instruction in phonology, oral reading accuracy and fluency for single words and passages, and written spelling.
- Emphasize more than just phonological awareness and phonological decoding. Must also include real-word reading and/or spelling skills, which also require morphological awareness treatment. (Without morphological and syntactic awareness treatment, they are unlikely to make progress in reading comprehension or in written expression of ideas.)

Berninger, V. W., & Wolf, B. J. (2016). *Dyslexia, dysgraphia, OWL LD, and dyscalculia: Lessons from science and teaching.* Baltimore: Paul H. Brookes.

Berninger, V. W., & Wolf, B. J., (2009). *Teaching students with dyslexia and dysgraphia: Lessons from teaching and science*. Baltimore: Paul H. Brookes.

#### Learner Profile #2

# Phonological – Orthographic Learner Profile (Dyslexia)

- Problems orthographic coding, phonological coding, the phonological loop, and executive functions.
- The written language problems of individuals with dyslexia, for instance, cannot be explained on the basis of any other neurogenic, developmental, or learning disorders.
- Unexpected difficulty in the accuracy and fluency of word reading or phonological decoding in isolation or in a passage or in spelling; it is neurobiological in origin and related to impaired phonological processing.
- Word level skills in word reading and spelling are impaired not syntactic skills in listening comprehension
- Processing impairments in orthographic and rapid automatic naming difficulty.
- Often have oral language skills (morphological and syntactic awareness) that are average or better except in phonology (analyzing the sounds in spoken words).
- The number of students with dyslexia in the general population is often estimated to range from 15% to 20%, but the exact number is unknown due to differences in samples and how the disorder is defined.

#### Instructional Implications:

• Specialized instruction in phonology, oral reading accuracy and fluency for single words and passages, and written spelling.

Berninger, V. W., & Wolf, B. J. (2016). *Dyslexia, dysgraphia, OWL LD, and dyscalculia: Lessons from science and teaching.* Baltimore: Paul H. Brookes.

Berninger, V. W., & Wolf, B. J., (2009). *Teaching students with dyslexia and dysgraphia: Lessons from teaching and science*. Baltimore: Paul H. Brookes.

#### Learner Profile #3

# **Orthographic Profile – Learner Profile**

# (Dysgraphia)

- Problems in orthographic coding and orthographic loop and executive functions.
- Transcription difficulties related to handwriting and spelling.
- Not purely a motor problem. Also related to underlying problems in orthographic coding, the orthographic loop that coordinates orthographic coding and graphomotor output by the hands and fingers, and the executive functions involved in letter writing.
- Unusual difficulty with sub-word letter formation -producing legible letters that others can recognize and doing so automatically in a consistent way that does not drain limited working memory resources.
- Difficulty in serial production of strokes to form a handwritten letter and involves not only motor skills but also language skills -finding, retrieving, and producing letters, which is a sub-word level language skill.
- The impaired handwriting may interfere with spelling and/or composing, but individuals with only dysgraphia do not have difficulty with reading.
- Many children cannot complete written assignments that are legible, meet grade-appropriate standards for content and length, or finish assignments within time limits.
- Many teachers and psychologist report that students who do not complete their written assignments are not motivated. However, teaching, clinical, and research experiences suggest otherwise -many of these students are highly motivated to write but emotionally traumatized that others cannot read their writing or they cannot write adequately to succeed in school.
- Many of these children also suffer from emotional problems (e.g., impaired self-esteem, self-efficacy, or heightened anxiety) due to undiagnosed and untreated dysgraphia, rather than emotional or motivational problems caused by incomplete work.
- After continually having to keep up with the written assignments or written tests at school, some children with dysgraphia will begin to avoid written work and are described as being avoidant.
- Important point: Emotional problems are often the consequence, not the cause, of writing disabilities.
- Incidence of dysgraphia involving impaired letter writing by hand may increase from 4% due to handwriting difficulties in the primary grades to 20% or more in the middle school grades when written composition requirements become more complex. However, the probable number of children in the population who have handwriting only; spelling only; combined handwriting and spelling; and related orthographic, fine motor, orthographic-motor integration, and executive functions related to these transcriptions problems is unknown.

# Instructional Implications:

- The key to effective handwriting and spelling instruction is to draw students' attention to the orthographic word form in written word and the constituent letters.
- Emphasize self-regulation of attention to the orthographic word form.
- Incorporate explicit strategies for teaching students to pay attention to word spellings as part of spelling and composition instruction.
- Teach the alphabetic principle in phoneme-to-grapheme direction until it is automatic and teach specific, grade-appropriate spelling words through repeated, daily sentence dictation until spelling is automatic.

Berninger, V. W., & Wolf, B. J. (2016). *Dyslexia, dysgraphia, OWL LD, and dyscalculia: Lessons from science and teaching.* Baltimore: Paul H. Brookes.

Berninger, V. W., & Wolf, B. J., (2009). *Teaching students with dyslexia and dysgraphia: Lessons from teaching and science*. Baltimore: Paul H. Brookes.

# Learner Profiles – Application #2

For this activity, assume you have reviewed student data from Tier 1 and Tier 2 for the following two students, Miles and Cordelia, and have determined that both are not making expected progress (Tier 3 – Problem Solving: Step 1). You are now planning to conduct more in-depth assessment (Tier 3 – Problem Solving: Step 2). Read the descriptions about Miles and Cordelia and use the information we discussed on the three learner profiles to generate a hypothesis about each students' potential writing difficulties (e.g., What learner profile might best describe them?). After you draft a hypothesis, list the diagnostic assessment information you will need to collect to more fully determine student writing needs. (e.g., refer to an assessment like the PAL-II and determine what domains/sub-tests will help tell you the information you need).

# Case Study #1

#### Miles

- 3<sup>rd</sup> grade student
- Avoids writing whenever possible; not unusual to hear him making disparaging comments about his writing capabilities
- Miles' writing is characterized as "minimalist"
- Rarely plans in advance, prefers to "get his ideas" while writing
- Appears to use a least effort strategy when revising, as the changes he initiates are primarily limited to minor word substitutions and unsuccessful attempts to correct errors of spelling, punctuation, and capitalization
- Rarely does he make substantive revisions, such as adding or rewriting sections of text to make them better
- Takes much effort to read Miles' compositions; his handwriting is difficult to read, one out of every five words is misspelled, and punctuation and capitalization are irregular
- Despite these difficulties with written expression, Miles' overall comprehension is excellent.

Learner Profile Hypothesis:

What diagnostic assessment information will you need to collect? Refer to the PAL-II and determine what domains/sub-tests will help tell you the information you need about student writing needs.

## Case Study #2

Cordelia

- 3<sup>rd</sup> grade student with a history of speech and language problems, including phonological difficulties
- Cornelia's language and phonological difficulties affect her written expression abilities, as her writing contained numerous grammatical, morphological, and spelling errors
- Although she typically writes as much as the other children in her class, the overall quality of her work is generally weaker, as it is not as cohesive or well-organized
- Cordelia is very reticent about her writing, preferring not to share what she has written with others in class

Learner Profile Hypothesis:

What diagnostic assessment information will you need to collect? Refer to the PAL-II and determine what domains/sub-tests will help tell you the information you need about student writing needs.

\*Case study descriptions are from Graham & Harris, *The Road Less Traveled: Prevention and Intervention in Written Language*.

# Memory

Review the academic learning strategies from the National Center on Intensive Intervention and think about how these strategies address cognitive processing related to memory. As you review the list below, discuss how these strategies can be used when teaching writing.

Notes on How Academic Learning Strategies Can Be Used to Teach Writing

# Lesson Structure Review

Review the sample lessons (below and on the following page). What do you notice about the lesson's instructional design and the sequencing of activities? Specifically, how do the activities, and the sequence of activities, reflect the needs of students who have working memory deficits and challenges with phonological, orthographic, and morphological processing?



Notes:

Sample #2

# Sample Lesson Structure Sequoyah Writing Reading Club (Lessons 6-12)

- Warm-up
  - Spelling and word sorts
- Reading
  - Read excerpts from If You Lived with the Iroquois
- Summaries and Writing Journals
  - Main ideas and details
- Read Naturally
  - Oral reading fluency practice

(Berninger, V. W., & Wolf, B. J. (2009). *Helping students with dyslexia and dysgraphia make connections: Differentiated instruction lesson plans in reading and writing.* Baltimore, MD: Paul H. Brookes.)

Notes:



# Intervention Selection Template

Use the following Intervention Planning Template to determine Tier 3 instructional intervention.

**Step 1**: Use diagnostic assessment information to determine what areas on the Tier 3 Intervention Menu need to be considered for instruction. In other words, do students require language, spelling (reading), transcription, and/or composition instruction? Use the Tier 3 Interventions – Conceptual Framework (Appendix) to help with your planning.

	Language	Spelling (Reading)	Transcription	Composition
Intervention Menu	<ul> <li>Listening and Reading Comprehension</li> <li>Oral and Written Language Expressions</li> <li>Vocabulary</li> </ul>	<ul> <li>Phonological Awareness</li> <li>Word Reading</li> <li>Word Spelling</li> </ul>	<ul> <li>Tracing</li> <li>Copying</li> <li>Memory</li> <li>Fluency</li> <li>(Handwriting, Spelling, Mechanics)</li> </ul>	<ul> <li>Sentence-level</li> <li>Passage-level</li> <li>(Self-Regulated Strategy Development)</li> </ul>
Instructional Diet				

**Step 2**: Create a "specialized," instructional diet for the student from the Tier 3 Intervention Menu.

# Step 3: What programs will be used for intervention? What will the intervention look like across the week?

Tuesday	Wednesday	Thursday	Friday
	Tuesday	Tuesday Wednesday	Tuesday       Wednesday       Thursday

**Step 4**: Consider how micro- and macro-level skills are integrated across and within lessons. For example, what will individual lessons look like?

Notes:

# Spelling - Error Analysis Template

Use a writing sample from your case study student and complete a spelling error analysis using the chart below.

	Spelling Err	or Analysis	
Phonological (sounds)	Orthographic (letter and letter patterns)	Morphological (compounds, prefix, root, endings)	Comments
			Sophisticated Words:

	Spelling Error Analysis			
Phonological (sounds)	Orthographic (letter and letter patterns)	Morphological (compounds, prefix, root,	Comments	
(300103)	fielder and letter patternsy	endings)		
			Sophisticated Words:	

Appendix

# Tier 3 Problem Solving

Review the steps in the Tier 3 Problem Solving model. Add additional information about tasks required to complete each step (e.g., When thinking about Interventions, does scheduling also need to be considered?). Also consider the members on your school team and determine how each member will participate in the process.

Step	Tasks	Person(s) Responsible
<b>1. Review data from Tier 1 and Tier 2</b> a. Confirm student has not made expected progress		
2. Conduct more in-depth assessment (e.g., specific skill assessment, diagnostic assessment like the PAL-II, etc.)		
<ul> <li>3. Generate hypothesis (e.g., What is the student learning profile?)</li> <li>a. Student has not mastered specific skills</li> <li>b. Student has not had enough practice</li> <li>c. Student is unable to attend to instruction</li> </ul>		
<ul> <li>4. Select (and implement) Tier 3</li> <li>intervention</li> <li>a. Evidence-based intervention</li> <li>strategies</li> <li>b. Evidence-based strategies</li> <li>c. Evidence-based strategies</li> </ul>		
<b>Step 1</b> : Use diagnostic assessment information to determine what areas on the Tier 3 Intervention Menu need to be considered for instruction. In other words, do students require language, spelling (reading), transcription, and/or composition instruction? Use the Tier 3 Interventions – Conceptual Framework (Appendix) to help with your planning.		
<b>Step 2</b> : Create a "specialized," instructional diet for the student from the Tier 3 Intervention Menu.		
<b>Step 3</b> : What programs will be used for intervention? What will the intervention look like across the week?		
<b>Step 4</b> : Consider how micro- and macro-level skills are integrated across and within lessons.		

For example, what will individual lessons look like?	
<ul> <li>5. Monitor student progress</li> <li>a. Assess on a regular schedule (1x week)</li> <li>b. Analyze progress monitoring data</li> </ul>	
<b>6. Monitor the integrity of intervention</b> a. Schedule, intensity, fidelity	
<b>7. Analyze outcomes</b> a. Rate of improvement (slope) b. Goal attainment	

# **Other Planning Notes:**

# Tier 3 Interventions Conceptual Framework (03.15.16)

Tier 3 writing interventions are evidence-based instructional programs that require instructional intensity and highly specialized instructional design. Data-based instructional decision making must be used to select and monitor the effectiveness of interventions for students. *The list below is <u>not</u> an exhaustive list of practices and programs; it is also <u>not</u> intended as a "one size fits all" menu of programs for Tier 3 intervention.* 

LANGUAGE INTERVENTION
What?
Process(es) Underlying Potential Writing Difficulties
Aural/Oral language (Language by ear and mouth)
Oral Vocabulary
Aural-Oral Syntax
Aural-Oral Text Comprehension
Pragmatics
Word Finding
Oral Reading (Language by eye and mouth)
Oral Text Reading
Reading Comprehension (Language by eye and mouth)
Reading Comprehension: Text Accuracy
Silent Reading
Comprehension
Silent Reading Comprehension: Word-level and Content
Vocabulary
Composing (Word-, Sentences-, Texts)
How?
Interventions and Resources
GENERAL LANGUAGE
Language! (Gr 4-12)
http://www.voyagersopris.com/curriculum/subject/literacy/language-4th-edition/overview
LISTENING COMPREHENSION: AURAL TEXT LEVEL
Opitz, M. & Zbarachki, M. (2004). Listen hear! 25 effective listening comprehension strategies. Portsmouth, NH: Heinemann.
ORAL AND WRITTEN WORD-LEVEL VOCABAULARY AND TEXT-COMPREHENSION
Beck, I. L., & McKeown, M.G. (2004). <i>Elements of reading: Vocabulary</i> . Austin, TX: Harcourt.

Beck, I. L. & McKeown, M. G. (2004). Text talk. New York, NY: Scholastic.

Beck, I. L., & McKeown, M. G. (2006). *Improving comprehension with questioning the author: A fresh and enhanced view of a proven approach.* New York., NY: Scholastic.

Beck, I.L., McKeown, M. G., & Kucan, L. (2013). Bringing words to life: Robust vocabulary instruction (2<sup>nd</sup> ed.). New York, NY: Guilford.

Prescott-Griffin, M., Witherell, N. (2004). Fluency in focus: Comprehension strategies for all young readers. Portsmouth, NH: Heinemann.

# ORAL READING LINKED TO READING COMPRHENSION

Denton, C., Vaughn, S., Wexler, J., Bryan, D., & Reed, D. (2012). *Effective instruction for middle school students with reading difficulties: The reading teacher's sourcebook*. Baltimore, MD: Paul H. Brookes.

Heibert, E. H. (2003). Quick reads. Parsippany, NJ: Person Learning.

Read Naturally. (2006). Read Naturally Masters Edition. Saint Paul, Minnesota: Read Naturally.

# **READING COMPREHENSION: WRITTEN TEXT**

Carlisle, J. (2000). *Beginning reasoning and reading, reasoning and reading level one, reasoning and reading level two.* Cambridge, MA: Educators Publishing Service. (See paragraph understanding activities.)

Carlisle, J. (2002). *Improving reading comprehension: Research-based principles and practices*. Timonium, MD: York Press. (See the research-supported and discourse comprehension activities.)

# PLAYING WITH LANGUAGE

Spector, C. (2009). As far as words go: Activities for understanding ambiguous language and humor (Rev. ed.). Baltimore, MD: Paul H. Brookes Publishing.

# WRITING INSTRUCTION

Carlisle, J. (1996). *Models for writing: Levels A, B, and C.* Novato, CA: Academic Therapy.

Nelson, N., Bahr, C., & Van Meter, A. (2004). *The writing lab approach to language instruction and intervention*. Baltimore: Paul H. Brookes. (Offers practical suggestions for teachers to use in scaffolding instruction for students with a language learning disability.)

Troia, G. A. (Ed.). (2009). Instruction and assessment for struggling writers: Evidence-based practices. New York: Guilford.

# MORPHOLOGICAL AWARENESS AND VOCABULARY

Bear, D., Invernizzi, M., Templeton, S., & Johnston, F. (2000). *Words their way: Word study for phonics, vocabulary, and spelling instruction*. (2<sup>nd</sup> ed.). Upper Saddle River, NJ: Merrill.

Carlisle, J. (2000). *Beginning reasoning and reading, reasoning and reading level one, reasoning and reading level two.* Cambridge, MA: Educators Publishing Service. (See the vocabulary activities -analogies, using in another context, inferring from context.)

Carlislie, J., & Rice, M. (2002). *Improving reading comprehension: Research-based principles and practices*. Timonium, MD: York Press. (See the research-based principles and practices. Timonium, MD: York Press. (See the research-based principles and practices.)

Early Vocabulary Connections (Gr K-1)

http://www.voyagersopris.com/curriculum/subject/literacy/early-vocabulary-connections/overview

*Elements of Reading - Vocabulary* (Gr K-3) http://www.olivedesign.com/samples/harcourt/eor/eor.html

Fifer, M., & Flowers, N. (1993). Vocabulary from classical roots: Strategic vocabulary instruction through Greek and Latin roots. Grades 7-11. Cambridge, MA: Educators Publishing Service.

Hodkinson, K., & Adams, S. (2000). Wordly wise 3000. Systematic, sequential vocabulary development. Cambridge, MA: Educators Publishing Service.

Lubliner, S. (2005). *Getting into words: Vocabulary instruction that strengthens comprehension*. Baltimore, MD: Paul H. Brookes. (Includes strategies and cue sheets for clarifying, mining memory, all in the family (studying word structure, negative prefixes, root webs, root detectives, word trees), considering the context, signal words for sequence, cause and effect, compare and contrast, stop for, substituting synonyms, etc.)

Remedia. *Quizmo: Structural Skills*. Scottsdale, AZ: Author. (Provides five games in one -a bingo style game that develops understanding of the word formation process (bases, affixes) with application to vocabulary and spelling.

Rewards (Intermediate and Secondary)

http://www.voyagersopris.com/curriculum/subject/literacy/rewards/take-a-closer-look/rewards-intermediate

# SYNTACTIC AND TEXT AWARENESS AND PROCESSING

Brandon, L. (2006). Sentences at a glance. Boston, MA: Houghton Mifflin.

Carlisle, J. (2000). *Beginning reasoning and reading, reasoning and reading level one, reasoning and reading level two.* Cambridge, MA: Educators Publishing Service. (See the vocabulary activities -analogies, using in another context, inferring from context.)

Carlisle, J., & Rice, M. (2002). *Improving reading comprehension: Research-based principles and practices*. Timonium, MD: York Press. (See research-supported paragraph and discourse comprehension activities).

Ehrenworth, M., & Vinton, V. (2005). The power of grammar: Unconventional approaches to the conventions of grammar. Portsmouth, NH: Heinemann.

Goldstein, B., Waugh, J., & Linksky, K. (2004). Grammar to go: How it works and how to use it. Boston, MA: Houghton Mifflin.

Institute of Learning. Word shapes for teaching syntax. Tacoma, WA: ARK Institute of Learning.

LinguiSystems. <u>http://www.linguisystems.com/products/product/seriessearch</u> (Publisher of language-related programs and games).

Mar Ban Industries (2004). Sentence Says: The quick thinking sentence creation game. Chatsworth, CA: Mar Ban Industries. (This game can be played with children in grades 3-12. Children are dealt cards with letters that represent the first letter in words they choose, and must construct grammatically acceptable sentences that contain a word for each letter in cards they are dealt.)

Optiz, M., & Zbarachki, M. (2004). Listen hear! 25 effective listening comprehension strategies. Portsmouth, NH: Heinemann.

Remedia, Build a sentence: Who, what, where, when. Grades 1-5. Scottsdale, AZ: Author.

Terry, B. The sentence zone. <u>https://www.bonnieterrylearning.com/product/sentence-zone-english-grammar-writing-skills/</u>

Wong, L. (2002). Sentence essentials: A grammar guide. Boston, MA: Houghton Mifflin.

PHONOLOGICAL, ORTHROGRPAHIC, SEMANTIC, SYNTATIC, MORPHOLOGICAL

RAVE-O

http://www.voyagersopris.com/curriculum/subject/literacy/rave-o/overview

		SPELLING/READING INTERVENTION
	Dur	What?
	Pro	ocess(es) Underlying Potential Writing Difficulties
Orthographic Coding (Memory)		Receptive Coding: The student has difficulty encoding written words into temporal memory and then segmenting units of the written word – wholes, single letters, letter clusters – in working memory.
		Expressive Coding: The student has difficulty coordinating the internal coding and analysis of letters in written words and external output through the hand (the orthographic loop of working memory that coordinates orthographic coding and written output of words and letters).
Phonological Coding	Syllables	The student has poor phonological awareness of the syllables in multi-syllabic spoken words.
	Phonemes	The student has poor phonological awareness in spoken words.
Rimes		The student has poor phonological awareness for the part of the syllable remaining when the onset phoneme or blend is deleted.
Morphological/Syntactic Coding		<ul><li>Are They Related?: The student has difficulty identifying when spelling at the base of a word functions as a morpheme that relates a word with a suffix to a word without a suffix in meaning.</li><li>Does It Fit? The student has difficulty using the grammar information suffixes at the end of a word to decide if a word fits a sentence context.</li></ul>
Verbal Working Memory	Letters	The student has difficulty with fluent access to letter forms in alphabetic order in long term memory.
	Words	The student has difficultly holding written words in working memory while processing the letters in them.
	Word Choice	The student has poorly developed word-specific written spellings stored in long-term memory
Vocabulary	I	The student has limited word knowledge or difficulties with expressive language.
		How?
		Interventions and Resources

Adams, M., Foorman, B., Lundberg, I., & Beeler, T. (1998). *Phonemic awareness in young children: A classroom curriculum*. Baltimore, MD: Paul H. Brookes.

Berninger, V. W. (1998). *Process Assessment of the Learner (PAL): Guides for Intervention-Reading and Writing*. San Antonio, TX: Pearson. (Sound games for phonological awareness syllables and phonemes organized by four learning activities – pages 195-219).

Blachman, B. A., Ball, E. W., Black, R., Tangel, D. M. (2000). *Road to the code: A phonological awareness program for young children*. Baltimore: Paul H. Brookes.

O'Connor, R. E., Notari-Syverson, A., & Vadasy, P. F. (2005). Ladders to literacy: A kindergarten activity book (2<sup>nd</sup> ed.). Baltimore: Paul H. Brookes.

**LOOKING GAMES (ORTHOGRAPHIC AWARENESS AND LEARNING ACTIVITIES FOR BASES, PREFIXES, AND SUFFIXES (MORPHOLOGICAL AWARENESS)** Berninger, V., & Abbott, S. (2003). *PAL research-based reading and writing lessons and reproducibles.* San Antonio, TX: Pearson. (See Lesson Set 15.)

Nunes, T., & Bryant, P. (2006). Improving literacy instruction through teaching morphemes (Improving Learning Series). New York, NY: Routledge.

# PHONOLOGICAL, ORTHOGRAPHIC, AND MORPHOLOGICAL AWARENESS AND THEIR CONNECTIONS

Berninger, V., & Abbott, S. (2003). *PAL research-based reading and writing lessons and reproducibles*. San Antonio, TX: Pearson. (See Lesson Sets 11, 12, and 15 for instructional activities for teaching students in Grades 2-6 phonological, orthographic, and morphological awareness for words of different origin.)

Berninger, V. & Wolf, B. (2009). *Helping students with dyslexia and dysgraphia make connections; Differentiated instruction lesson plans in reading and writing*. Baltimore, MD: Paul H. Brookes. (Spiral-bound book with teaching plans from the University of Washington Research Program that explain how to teach phonological, orthographic, and morphological awareness and their interrelationships to students in Grades 4 to 9.)

Blachman, B., & Tangel, D. M. (2008). Road to reading: A program for preventing and remediating reading difficulties. Baltimore: Paul H. Brooks.

Scott Foresman *Early Reading Intervention* (See handwriting component; Gr K-1; Intervention 1-3) http://www.pearsonschool.com/index.cfm?locator=PSZu68&PMDbProgramID=13301

Lindamood-Bell

http://lindamoodbell.com/

(A method developed to teach auditory conceptualization skills and designed to complement any reading program; includes an emphasis on speech processes.)

Lovett's Empower Reading

http://www.sickkids.ca/empower/

(A program designed to develop accurate and efficient decoding and word recognition and strategies for applying to independent reading.)

Orton-Gillingham Approach <u>http://www.ortonacademy.org/</u> (The basis for most structured, sequential, and multisensory language programs.)

Sonday System http://www.winsorlearning.com/ (Originally used with older students, emphasizes the structure of the English language as well as phonology and morphology; includes prepared lesson plans.)

# Wilson Reading

http://www.wilsonlanguage.com/programs/wilson-reading-system/

(Systematic, interactive, thorough instruction with emphasis on encoding and decoding; can be used with Grades 3 and above or with Grades 1 and 2.) **TEACHING TO ALL LEVELS OF LANGUAGE AND LANGUAGE RELATED SYSTEMS** 

Berninger, V., & Abbott, S. (2003). PAL research-based reading and writing lessons. San Antonio, TX: Pearson.

Slingerland, B. (2013). *The Slingerland multisensory approach: A practice guide for reading, writing, and spelling (2<sup>nd</sup> ed.)*. Bellevue, WA: The Slingerland Institute.

RAVE-O

http://www.voyagersopris.com/curriculum/subject/literacy/rave-o/overview

# LINKING VOCABULARY, READING, AND SPELLING

Bear, D., Invernezzi, M., Templeton, S., & Johnston, F. (2000). Words their way: Word study for phonics, vocabulary, and spelling instruction (2<sup>nd</sup> ed.). Upper Saddle River, NJ: Prentice Hall.

# ORAL DECODING

Berninger, V., & Abbott, S. (2003). PAL research-based reading and writing lessons. San Antonio, TX: Pearson. (See Lesson Sets 1, 2, 6, 9, 11, 12, and 15.)

Blachman, B. & Tangelman, D. (2008). Road to reading: A program for preventing and remediating reading difficulties. Baltimore: Paul H. Brookes.

# Starfall

# http://www.starfall.com/

(This is an interactive web site to promote early decoding skills.)

# SPELLING INSTRUCTION

Berninger, V., & Abbott, S. (2003). *PAL research-based reading and writing lessons and reproducibles*. San Antonio, TX: Pearson. (See Lesson Sets 4, 5, 7, 8, 10, and 14).

Dixon, R., & Englemann. S. (2001). Spelling through morphographs. Columbus, OH: SRA/McGraw-Hill.

Fry, E. (1996). Spelling book: Grade 1-6: Words most needed plus phonics.

Materson, J., Apel, K., & Wasowicz, J. (2006). *Spelling Performance Evaluation for Language and Literacy (SPELL 2)*. Evanston, IL: Learning by Design. (Spelling assessment software for Grade 2 through adult, with assessment linked to instruction.)

Slingerland, B. (2013). *The Slingerland Multisensory Approach: A practical guide for teaching reading, writing, and spelling* (2<sup>nd</sup> ed.). Bellevue, WA: The Slingerland Institute.

Wasowicz, J., Apel, K., Masterson, J., & Whitney, A. (2004). SPELL-links to reading and writing: A word study curriculum and supplemental program for K-adult. Evanston: IL: Learning by Design.

Primary Spelling by Pattern http://store.voyagersopris.com/primary-spelling-by-pattern/

Phonics and Spelling by Phoneme Grapheme Mapping http://www.voyagersopris.com/curriculum/subject/literacy/phonics-and-spelling-through-phoneme-grapheme-mapping-book/overview

Rewards (Intermediate and Secondary)

http://www.voyagersopris.com/curriculum/subject/literacy/rewards/take-a-closer-look/rewards-intermediate

Spellography (Gr 4-5; Intervention 4-7)

http://www.voyagersopris.com/curriculum/subject/literacy/spellography/overview

Words Their Way

https://www.pearsonhighered.com/educator/series/Words-Their-Way-Series/10888.page

Zaner-Bloser Spelling Connections

https://www.zaner-bloser.com/spellingconnections?gclid=CLuf9L7qu8sCFYGFaQod5esAeA

	TRANSCRIPTION INTERVENTION (Handwriting)	
	What?	
Process(es) Underlying Potential Writing Difficulties		
Orthographic Coding (Memory)	Receptive Coding: The student has difficulty encoding written words into temporal memory and then segmenting units of the written word – wholes, single letters, letter clusters – in working memory.	
	Expressive Coding: The student has difficulty coordinating the internal coding and analysis of letters in written words and external output through the hand (the orthographic loop of working memory that coordinates orthographic coding and written output of words and letters).	
Motor Execution	Repetition: The child is slow in repeating single repetitive finger maneuvers that require grapho-motor control for execution but not sequencing.	
	Succession: The student is slow in repeating a sequence of finger maneuvers that require grapho-motor planning of serial finger movements and execution of the serial finger maneuvers.	
	How?	
MANUSCRIPT HANDWRITI	Interventions and Resources	
Diana Hanbury King's Writin	rs Assessment of the Learner: Handwriting lessons. San Antonio, TX: Pearson. Ing Skills Com/products/literacy/writing-handwriting	
Rubel, B. (1995). Big stroke.	for little folks. Tucson, AZ: Therapy Skill Builders. (Includes tracing, imitating, copying, associating sounds with letters.)	
	ng Intervention (See handwriting component; Gr K-1; Intervention 1-3) .com/index.cfm?locator=PSZu68&PMDbProgramID=13301	
Singlerland, B. (2014). Man	uscript writing instructional packet. Bellevue, WA: The Slingerland Institute for Literacy.	
Wolf, B. J, (2011). Teaching MD: Paul H. Brookes.	handwriting. In J. Birsh (Ed.), Multisensory teaching of basic language skills: Theory and practice (3 <sup>rd</sup> ed., pp. 179-206). Baltimore,	
Zaner-Bloser (Columbus, Ol https://www.zanerbloser.c	H) om/zaner-bloser-handwriting	
<b>CURSIVE HANDWRITING</b> Benbow, M. (1990). <i>Loops o</i>	and groups: A kinesthetic writing system. San Antonio, TX: Therapy Skill Builders.	

Slingerland, B. (2004). *Cursive writing instructional packet*. Bellevue, WA: The Slingerland Institute for Literacy.

Wolf, B. J, (2011). Teaching handwriting. In J. Birsh (Ed.), *Multisensory teaching of basic language skills: Theory and practice* (3<sup>rd</sup>ed., pp. 179-206). Baltimore, MD: Paul H. Brookes.

Zaner-Bloser (Columbus, OH) https://www.zanerbloser.com/zaner-bloser-handwriting

**TOUCH TYPING** Frey, E. (1999). *Dr. Fry's computer keyboarding for beginners*. Westminster, BVA: Teacher Created Resources.

King, D. (2005). *Keyboarding skills* (Rev. ed.) Cambridge, MA. Educators Publishing Service. (This program was developed specifically for students with dyslexia.)

Ten Thumbs Typing Tutor <u>http://www.tenthumbstypingtutor.com/</u> (Available online to use a school or home.)

## HANDWRITING TUNE-UPS AND REVIEWS

Berninger, V. (1998). *Process Assessment of the Learner (PAL): Guides for intervention – Reading and writing.* San Antonio, TX: Pearson. (See page 193 for 24 before-and-after alphabet retrieval games, which have benefits for finding letters in memory during word reading and spelling).

Berninger, V. (2009). *Helping students with dyslexia and dysgraphia making connections: Differentiated instruction lesson plans in reading and writing.* Baltimore, MD: Paul H. Brookes Publishing Co. (Spiral book with teaching plans from the University of Washington Research Program. See Units 1, II, III, and IV for ways to do handwriting warm-ups for review of handwriting with older students in Grades 4-9 during reading and writing.

## INTEGRATING HANDWRITING WITH OTHER LANGUGE SKILLS

Berninger, V., & Abbott, S. (2003). *PAL research-supported reading and writing lessons and reproducibles*. San Antonio, TX: Pearson. (See Lesson Set 3 for early grades and Lesson Sets 7, 8, and 10 for upper-elementary grades for teaching handwriting with transfer to word spelling and text composing in mind.)

COMPOSITION INTERVENTION		
		What?
		Process(es) Underlying Potential Writing Difficulties
Orthographic Coding (Memory)		Alphabetic Writing: The student has difficulty in fluent access in working memory to letter forms in long-
		term memory and producing them automatically in writing (legibly, quickly, and effortlessly).
Motor Execution		Repetition: The child is slow in repeating single repetitive finger maneuvers that require grapho-motor
		control for execution but not sequencing.
		Succession: The student is slow in repeating a sequence of finger maneuvers that require grapho-motor
		planning of serial finger movements and execution of the serial finger maneuvers.
Morphological/Syntactic Co	oding	Are They Related? The student has difficulty identifying when spelling at the base of a word functions as a
		morpheme that relates a word with a suffix to a word without a suffix in meaning.
		Does It Fit? The student has difficulty using the grammar information suffixes at the end of a word to
		decide if a word fits a sentence context.
Verbal Working Memory	Letters	The student has difficulty with fluent access to letter forms in alphabetic order in long term memory.
verbal working wemory	Letters	The student has difficulty with fuent access to letter forms in alphabetic order in long term memory.
	Words	The student has difficultly holding written words in working memory while processing the letters in them.
	Sentences	The student has difficulty holding sentences in working memory while constructing another sentence to be
		placed in designated place in text.
Conventions	Sentence Structure	The student has difficulty using word order, structure words, and suffixes to construct sentence grammar.
	Formulated	The student has difficulty producing semantically complete and grammatically correct sentences.
	Sentences	
Vocabulary		The student has limited word knowledge or difficulties with expressive language.
<b>Central Executive Function</b>	ing	The student has difficulty planning, organizing, and executing written compositions.
Attribution		The student does not demonstrate a positive learning mindset and use the self-talk that good writers use.
		How?
Interventions and Resources		
SENTENCE-LEVEL		
Writing Matters: Developing Sentence Skills in Students of All Ages		
http://www.wvced.com/wr	iting-matters/	
University of Kansas Center for Research and Learning's Sentence Writing Strategy		
http://www.kucrl.org/sim/strategies/sws_proficiency.shtml		

Teaching Beginning Spelling and Writing (LETRS Module 9) – Professional development series for educators

http://store.voyagersopris.com/letrs-second-edition/

## MACRO-LEVEL/WRITING PROCESS

Nelson, N. W., Bahr, C., & Van Meter, A. (2004). *The Writing Lab approach to language instruction and intervention*. Baltimore: Paul H. Brookes. (Offers practical suggestions for teachers to use in scaffolding instruction for students with a language learning disability.)

Paragraph Writing Strategy http://sim.kucrl.org/products/details/paragraph-writing-strategy

Step Up to Writing http://www.voyagersopris.com/curriculum/subject/literacy/step-up-to-writing-fourth-edition/overview

Framing Your Thoughts http://www.projectread.com/pages/Written-expression.cfm

Judith Hochman's *Teaching Basic Writing Skills* http://www.teachwritingskills.com/

Diana Hanbury King's Writing Skills

http://eps.schoolspecialty.com/products/literacy/writing-handwriting/writing-skills-2nd-edition/about-the-program

**Self-Regulated Strategy Development (SRSD)** with goal-setting, self-instruction, self-reinforcement. Have students keep a strategy notebook that they can consult at any time:

Harris, K. R., Graham, S., Mason, L. H., Friedlander, B. (2008). *Powerful writing strategies for all students*. Baltimore: Paul H. Brookes.

Mason, L. H., Reid, R., Hagaman, J. L. (2012). Building comprehension in adolescents: Powerful strategies for improving reading and writing in content areas. Baltimore: Paul H. Brookes.

Project Write
http://kc.vanderbilt.edu/projectwrite/

# **CENTRAL EXECUTIVE FUNCTIONING**

Dawson, P., & Guare, R. (2010). Executive skills in children and adolescents: A practical guide to assessment and intervention. New York: Guilford.

Juarez, B., Parks, S., & Black, H. (2000). Learning on purpose: A self-management approach to study skills. North Bend, OR: Critical thinking Co.

Levine, M. (1990). Keeping a head in school: A student's book about learning abilities and learning disorders. Cambridge, MA: Educators Publishing Service.

(For helping students understand and manage their attentional and learning difficulties. Other titles by M. Levine: All Kinds of Minds, The Myth of Laziness, and A Mind at a Time.)

#### See <a href="http://www.criticalthinking.com/">http://www.criticalthinking.com/</a>

(Information, programs, resources)

For additional information about research-based writing instruction and interventions for struggling writers:

## Data-Based Instruction on Beginning Writing (National Center on Intensive Intervention):

http://www.intensiveintervention.org/video-resource/what-dbi-tlc-project-and-how-it-supporting-implementation-data-based-instruction

http://dbitlc.missouri.edu/?utm\_campaign=referer&utm\_medium=prevention&utm\_source=http://www.intensiveintervention.org/video-resource/what-dbi-

Evidence-Based Writing Practices and Enhancing Outcomes via Fidelity of Implementation (Iris Center):

# http://iris.peabody.vanderbilt.edu/module/ebp\_02/#content

What Works Clearinghouse provides reviews of core instruction and intervention programs in reading/writing, as well as other academic areas. The site reviews existing studies and draws conclusions about whether specific intervention programs show evidence of effectiveness.

## http://ies.ed.gov/ncee/wwc/

Writing Intervention Strategies (Jim Wright's interventioncentral.org):

http://www.jimwrightonline.com/php/interventionista/interventionista\_intv\_list.php?prob\_type=writing

Cognitive Strategy Instruction (including SRSD):

# http://cehs.unl.edu/secd/writing/

**Free Reading,** an "open source," website includes free lesson plans that target writing instruction and intervention. <u>http://www.freereading.net/</u>

The **Standards Aligned System (SAS**), developed by the Pennsylvania Department of Education, is a comprehensive, researched-based resource to improve student achievement. SAS identifies six elements that impact student achievement: Standards, Assessments, Curriculum Framework, Instruction, Materials & Resources, and Safe and Supportive Schools. Schools and educators across Pennsylvania are supported in their efforts to implement SAS by the development of a state-of-the-art portal.

https://www.pdesas.org/