



SPEECH SOUND DISORDERS AND SPEECH TO PRINT

What They Have in Common

Abstract

There is significant research linking speech sound disorders with deficits in morphology and phonology. In turn, morphology and phonology skills are necessary for reading fluency and accuracy. Strategies will be presented for each language area and then how to use the strategies for speech sound development and the same strategies for speech to print development. Then generalization of SSD will be provided through targeting syntax, semantics, and pragmatics that are needed for reading comprehension.

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What is Our Role?

I believe that many of us often question what our role is in supporting students with literacy issues. As outlined in ASHA's position statement (2001), "The connections between spoken and written language are well established and spoken language provides the foundation for the development of reading and writing." We do know that the same skills that a student needs for speaking and listening are the same skills they need for reading and writing; therefore, we play a vital role in literacy development.

We also know that when we look at our five domains of language –morphology, phonology, syntax, semantics, and pragmatics- the each of these play a role in literacy develop. For example, morphology and phonology development is needed for reading fluency and accuracy as well as spelling and writing. Syntax and semantics play a vital role in reading comprehension.

Students also develop supralinguistic skills along the way. These are the skills needed for overall auditory (and reading) comprehension. That ability to understand more than just each word in a sentence.

Where do speech sound disorders (SSD) come into play? We have extensive research regarding the risk of literacy development for students with speech disorders. We will also, in this seminar, address these students and discuss language strategies that you can use while targeting speech to also address morphology and phonology development which will support reading fluency and accuracy. Syntax, semantics, and pragmatics can also support generalization of SSD.

With the implementation of Every Student Succeeds Act (2015) and state legislation and plans to screen all students in kindergarten through 2nd grade as well as any other student a teacher has concerns about for literacy development, SLPs should play a vital role since literacy is first and foremost language based. Our therapy for SSD and language can and should impact literacy outcomes.

Thank you for joining me today!

Margo Kinzer Courter, MBA, MA, CCC-SLP, BCS-CL

Objectives

1. Determine the link between speech sound disorders and literacy development
2. Discuss speech to print
3. Develop strategies for language domains as it relates to speech sound disorders and literacy development

Our Role as Speech-Language Pathologists

The American Speech-Language-Hearing Association (ASHA) in Roles and Responsibilities for Speech-Language Pathologists Working in Schools (2010) calls us to very specific roles while working with students. Regardless of our setting (school, private practice, hospital, or clinic), we must ensure the educational relevance for our students when we set our goals. School is their work and where they must be most successful.

★ Ensure Education Relevance

“SLPs address personal, social/emotional, academic, and vocational needs that have an impact on attainment of educational goals.”

★ Provide Unique Contribution to the Curriculum

- Offer assistance in addressing the linguistic and metalinguistic foundations of the curriculum learning for students with disabilities, those at risk, or struggling.
- The skills of speaking and listening are the same skills for reading and writing.

★ Highlighting Language and Literacy

- Current research supports the interrelationships across the language processes of listening, speaking, reading, and writing.
- SLPs contribute significantly to the literacy achievement of students with communication disorders, as well as other learners who are at risk for school failure, or those who struggle in school settings.

★ Collaboration with Other Professionals

- Provide service to support the instructional program.
- Provide our expertise in the areas of language that will impact speaking, listening, reading, and writing.

Range of Responsibilities

- Prevention
- Assessment
- Intervention
- Program Design —SLPs configure school wide programs that employ a continuum of service delivery models in the least restrictive environment for students with disabilities, and that they provide services to other students as appropriate.

Every Student Succeeds Act (ESSA)



Background

In December 2015, President Barack Obama signed Every Student Succeeds Act (ESSA) into law. This new major federal K–12 law replaces the No Child Left Behind Act (NCLB). ESSA renamed the category of school-based qualified professionals, which includes audiologists and SLPs, from pupil services personnel to specialized instructional support personnel (SISP). Speech-language pathologists are called upon to assist students in literacy including dyslexia as well as and early intervening services.

Key Issues for SLPs, as SISP, in ESSA:

In ASHA's (2016) *Every Student Succeeds Act: Key Issues for Speech-Language Pathologists*, guidelines for the SLPs role with the law are outlined. The following section provides some of the highlights.

Literacy Education for All

1. High-quality early literacy initiatives for children from birth through kindergarten
2. Literacy initiatives for children in kindergarten through grade 5 as well as for children in grades 6 through 12.
3. Programs to support school libraries, early literacy services (including pediatric literacy programs), and programs that regularly provide high-quality books to children.

Early Intervening Services

1. ESSA permits states and LEAs the flexibility to use both Title I and IDEA funding streams to develop innovative, evidence-based approaches to assist struggling learners in general education with the use of SISP. (Specialized Instruction Support Personnel) (the category of school based professionals that includes both audiologists and SLPs).
2. Identify or develop evidence-based assessment tools for identifying students who are at risk of not attaining full literacy skills due to a disability, including:

- (a) Dyslexia impacting reading or writing
 - a. Requires states to develop legislation or plans. This must include screening all students in K-2 and any student 3rd grade and forward for dyslexia. Refer to the following website or your state website for specific information
<https://www.dyslexia.com/state-dyslexia-laws/>
<https://www.dyslexia.com/resource-links/state-resources/> (Links to states)
- (b) Developmental delay impacting reading, writing, language processing, comprehension, or executive functioning.

Identify evidence-based literacy instruction, strategies, and accommodations

This includes assistive technology, designed to meet the specific needs of such students.

Implement evidence-based instruction designed to meet the specific needs of such students.

Reflection:

Do you know Kentucky's plan/legislation?

What is your role?

Kentucky Dyslexia Legislation

HB187 (Ready to Read Act) amends KRS Chapter 158 to "define 'dyslexia' and 'qualified dyslexia screening tool'; require the Department of Education to make available a dyslexia toolkit that includes guidance on the instruction of students displaying characteristics of dyslexia; require the Department of Education to collaborate with the Kentucky Collaborative Center for Literacy Development to update professional development for teachers related to dyslexia; **require each local board of education to develop policies for identifying and assisting students in kindergarten through grade three with dyslexia and other learning disabilities; require school districts to report data to the Department of Education regarding dyslexia screening and results; require teacher preparation programs to include instruction on dyslexia;** require the commissioner of education to select three school districts to serve as dynamic laboratories of learning. Amend KRS 158.305 to revise the definition of "dyslexia"; require local boards of education to **develop policies related to the implementation of response-to-intervention**, require the Department of Education, in

collaboration with the Kentucky Center for Education and Workforce Statistics, to report to the Interim Joint Committees on Education and Health and Welfare by November 30 of each year regarding school districts' implementation of response-to-intervention.

<https://improvingliteracy.org/state-of-dyslexia/kentucky#:~:text=HR187%20amends%20KRS%20Chapter%20158,Education%20to%20collaborate%20with%20the>

Kentucky Dyslexia Toolkit

<https://education.ky.gov/curriculum/standards/teachtools/Pages/dyslexiatoolkit.aspx>

Building Blocks of Literacy

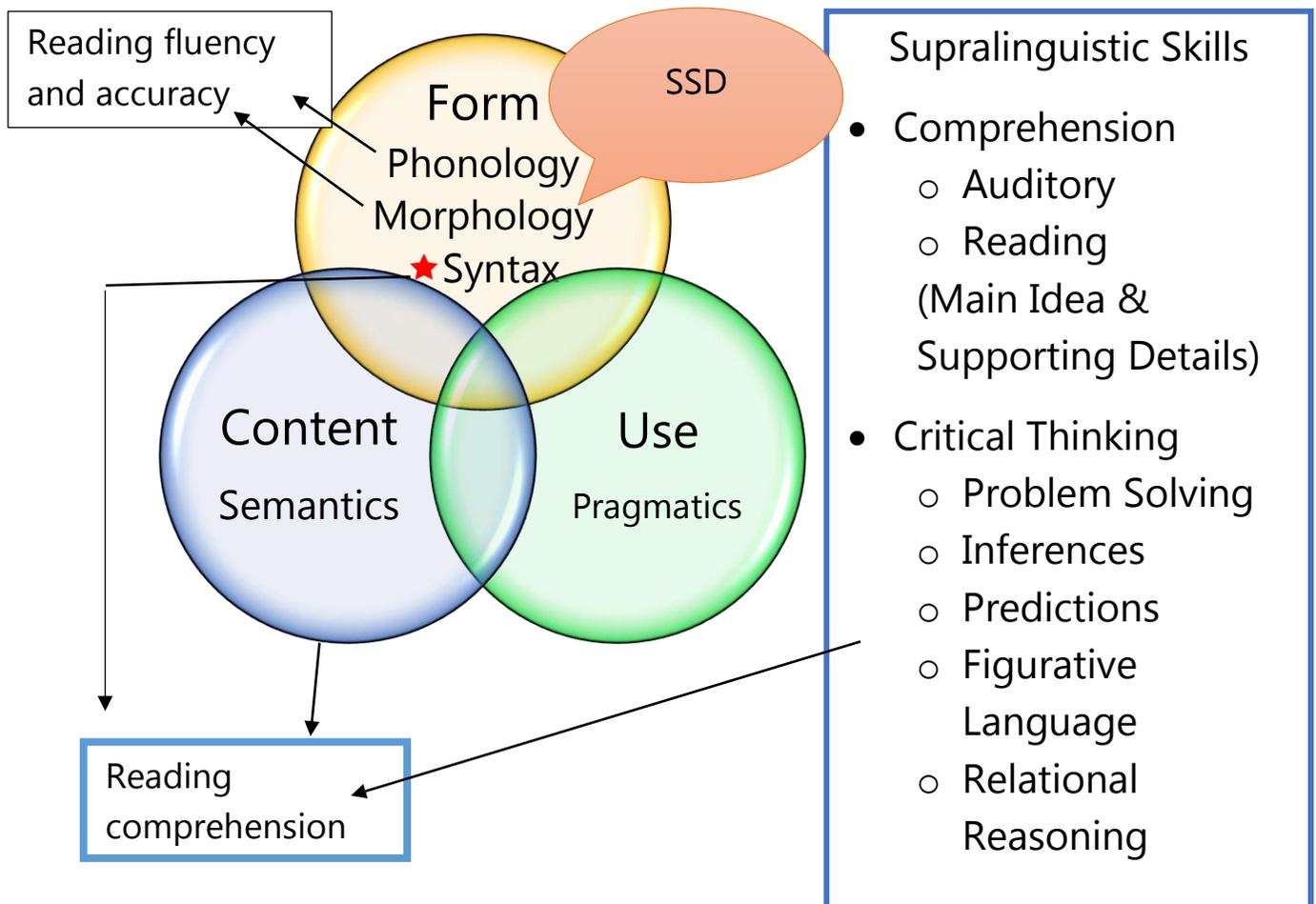
The Research Building Blocks for Teaching Children to Read: Put Reading First from the National Institute for Literacy identify the building blocks of literacy (Armbruster, Lehr, Osborn, and Adler 2006). These include:

- **Oral Language** – spoken words to express one’s knowledge and ideas.
- **Phonemic/Phonological Awareness** - ability to perceive and discriminate individual sounds, rhyming, blending, segmenting, and manipulating speech sounds
- **Phonics** – rules between phonemes and graphemes (letters)
- **Reading Fluency** - ability to read with speed, accuracy, and proper expression
- **Vocabulary** – the words in a language
- **Text Comprehension** - ability to process text, understand its meaning, and to analyze using the reader’s background knowledge relies on syntax, semantics, and supralinguistic skills including relational reasoning.
- **Plus 1: Morphology** – supports reading fluency, phonological awareness, syntax, and vocabulary acquisition
- **Plus 2 – Speech Sound Acquisition** – students with speech sound disorders often show difficulties in phonology and morphology

Reflection

1. What do you feel your role is in the Building Blocks of Literacy?
2. Which of these areas do you treat or collaborate with other colleagues?
3. Are there any areas in the Building Blocks of Literacy that you wish you could be a bigger part of?
4. Does your daily practice align with ASHA’s position statement and ESSA?

Speaking, Listening, Reading, Writing



As with receptive and expressive language development, the same components of language - phonology, morphology, syntax, semantics, and pragmatics - play a vital role in reading and writing (Wolf Nelson, Catts, Ehren, Roth, Scott, and Staskowski, 2009)

The following chart offers a crosswalk from the skills needed for speaking and listening to what this means for reading and writing.

Speaking and Listening to Reading and Writing

The skills students need for speaking and listening are the same skills they need for reading and writing. Children develop oral language first; therefore, strong receptive and expressive skills are needed for reading and writing.

As with receptive and expressive language development, the same components of language - phonology, morphology, syntax, semantics, and pragmatics - play a vital role in reading and writing (Wolf Nelson, Catts, Ehren, Roth, Scott, and Staskowski, 2009).

Spoken Language			Written Language	
5 Language Domains	Listening	Speaking	Reading	Writing
Phonology Smallest unit of sound (Phonemic awareness, rhyming, blending, segmenting, and manipulating sounds)	Ability to identify and distinguish phonemes while listening (i.e., phonemic & phonological awareness). Understanding rhymes Recognizing syllables in sentences and words Recognizing manipulation of words (silly sally)	Appropriate use of phonemes (sounds) while speaking Producing rhymes Stating how many words in a sentence, syllables in words and sounds in words Manipulating sounds in syllables and words.	Understanding of letter-sound associations while reading (i.e., phonics) Ability to sound out words while reading Recognizing rhymes when reading Segmenting syllables and sounds Using word families to figure out unfamiliar words	Accurate spelling of words while spelling & writing Using rhymes while writing Segmenting syllables and sounds Blending sounds to form words

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<p>Morphology</p> <p>Smallest unit of meaning</p> <p>(Inflections, compound words, affixes)</p>	<p>Understanding morphemes when listening including verb tenses</p>	<p>Using morphemes correctly when speaking including inflections, derivations, and verb tenses</p>	<p>Understanding semantics with affixes & roots in reading</p> <p>Sounding out words by recognizing affixes</p> <p>Understanding morphology with sentence structure and grammar (morphosyntax)</p>	<p>Appropriate use of compound words, roots & affixes when writing</p> <p>Using affixes to spell</p> <p>Using verb tense appropriately within sentence structure</p>
<p>Syntax</p> <p>(sentence structure and grammar)</p>	<p>Understanding sentence structure elements when listening</p>	<p>Using and expanding correct sentence structure elements when speaking</p>	<p>Understanding sentence structure with increasing complexity while reading</p>	<p>Using correct and expanded sentence structure when writing</p>
<p>Vocabulary</p> <p>(semantics)</p> <p>(Basic concepts, common words, high content words, curriculum based)</p>	<p>Listening vocabulary</p>	<p>Speaking vocabulary</p>	<p>Reading vocabulary</p>	<p>Writing vocabulary</p>

<p>Pragmatics/ Social Language</p> <p>Requires integration of information across numerous cognitive systems - supralinguistic and executive functions (Martin & McDonald, 2003)</p>	<p>understanding of the social aspects of spoken language</p> <p>Taking a listener's perspective</p> <p>Understanding the main idea of the conversation</p> <p>Making inferences and predictions</p> <p>Organizing and planning what one wants to say</p>	<p>social use of spoken language</p> <p>Understanding more than one side of a conversation or situation</p> <p>Managing speaking time</p> <p>Using background knowledge to contribute to a conversation</p>	<p>understanding point-of-view (character and author perspective), needs of the audience,</p> <p>Main idea & supporting details</p> <p>Understanding positions other than their own</p>	<p>conveying point-of-view, needs of the audience, etc.</p> <p>Justifying more than one position</p>
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Adapted from Language in Brief: American Speech, Language, and Hearing Association

The Science of Reading (SoR)

The National Reading Panel Report (National Institute of Child Health and Human Development [NICHD], 2000) summarized several decades of scientific research that clearly shows effective reading instruction addresses five essential areas: • Phonemic awareness • Phonics • Fluency • Vocabulary • Comprehension

Effective instructional programs and materials emphasize the five essential components of effective reading instruction: Instruction in these five components is explicit (focused, clear, and involves much modeling of how to use each skill) and systematic (precisely planned, sequenced, and comprehensive).

Speech to Print

Students first learn how to attend to the sound structure of spoken English words and then how to connect and combine sounds, letter patterns, and meanings to read and spell words (Moats, 2000 and Moats, 2005).

It begins with hearing the word, isolating the sounds within the word (*phonemic awareness*), learning the relationship between the sounds and letters (*sound-symbol association*), and manipulating the sounds and letters sequentially to read and spell new words.

A “speech to print” approach puts spoken language first to leverage the brain's innate, biological wiring and organization for oral language.

Resource

<https://learningbydesign.com/wp-content/uploads/2021/09/Wasowicz-A-Speech-to-Print-approach-to-teaching-reading.pdf>

Definitions

Speech Sound Disorders (SSD)

According to the American Speech, Language, and Hearing Association (ASHA), SSD is an umbrella term referring to any difficulty or combination of difficulties with perception, motor production, or phonological representation of speech sounds and speech segments—including phonotactic rules governing permissible speech sound sequences in a language.

https://www.asha.org/practice-portal/clinical-topics/articulation-and-phonology/#collapse_3

Literacy

Literacy encompasses the knowledge and skills students need to access, understand, analyze, and evaluate information, make meaning, express thoughts and emotions, present ideas, and opinions, interact with others and participate in activities at school and in their lives beyond school (Ewing, 2016).

Dyslexia

The following definition comes from the International Dyslexia Association and has been adopted by the State of Kentucky.

International Dyslexia Association (2002)

“Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.”

Kentucky’s Definition

It is the same as the International Dyslexia Association.

[https://education.ky.gov/curriculum/standards/teachtools/Documents/Dyslexia Toolkit 2019.pdf](https://education.ky.gov/curriculum/standards/teachtools/Documents/Dyslexia_Toolkit_2019.pdf)

Specific Learning Impairment

The term ‘specific learning impairment’ means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken, or written that may manifest itself in the imperfect ability to listen, think, speak, read, spell, or do mathematical calculations. (IDEA 2004, §602.30, Definition). Dyslexia falls under the category for inclusion in special education under specific learning impairment.

“The purpose of this letter is to clarify that there is nothing in the IDEA that would prohibit the use of the terms dyslexia, dyscalculia, and dysgraphia in IDEA evaluation, eligibility determinations, or IEP documents. … However, regardless of whether a child has dyslexia or any other condition explicitly included in this definition of “specific learning disability,” or has a condition such as dyscalculia or dysgraphia not listed expressly in the definition, the LEA must conduct an evaluation in accordance with 34 CFR §§300.304-300.311 to determine whether that child meets the criteria for specific learning disability or any of the other disabilities listed in 34 CFR §300.8, which implements IDEA’s definition of “child with a disability” (Yukin, 2015. United States Department of Education).

Phonemic Awareness

The ability to perceive and discriminate individual sounds (phonemes). The focus of phonemic awareness is narrow identifying and manipulating the individual sounds in words. Phonemic processing occurs at the level of Heschl’s Gyrus and includes:

Auditory discrimination

Distinguishing sounds as the same or different

Auditory analysis

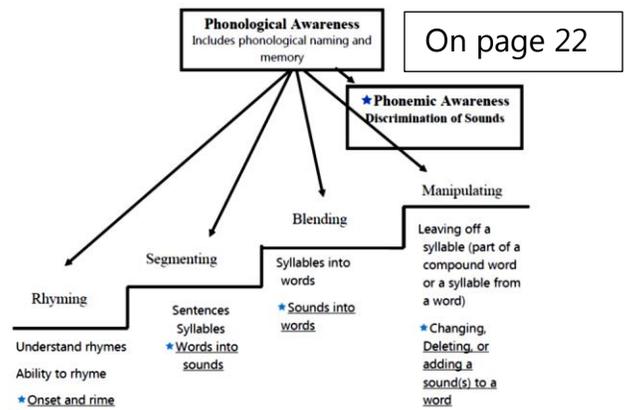
Segmenting a word into its sounds (phonemes)

Auditory synthesis

Blending sounds together

Auditory sequencing

Auditory memory for auditory information in a specific order



Phonological Awareness (PA)

The understanding that the sounds of spoken language work together to make words. The focus of phonological awareness is much broader. It includes identifying and manipulating larger parts of spoken language, such as words in a sentence, syllables in words (segmenting and blending), and onsets and rimes (word families). It also encompasses awareness of other aspects of sound, such as rhyming, alliteration, and intonation, phonological memory, and naming.

Phonological Working Memory (auditory sequencing)

- The ability to store verbally presented information with the cognitive system long enough to act on the information.
- Needed for blending sounds into words (saying the individual sounds then being able to hold those sounds into memory to blend the word)

Phonological Naming (Retrieval)

- Providing sounds to go with the letters
- Matching phonemes and graphemes (sound –symbol)
- Decoding
- Errors in pronunciation of words (beenoculars, conoculars for binoculars)

Phonics

The understanding that there is a predictable relationship between phonemes and graphemes, the letters that represent those sounds in written language. It is the rules of a specific language for spelling.

Reading Fluency and Accuracy

Fluency is important because it provides a bridge between word recognition and comprehension. Because fluent readers do not have to concentrate on decoding the words, they can focus their attention on what the text means. They can make connections among the ideas in the text and between the text and their background knowledge. In other words, fluent readers recognize words and comprehend at the same time. Less fluent readers, however, must focus their attention on figuring out the words, leaving them little attention for understanding the text (Armbruster, Lehr, Osborn, and Adler 2006). Phonology and morphology are keys to reading fluency and accuracy.

Goals

Goals will be defined for the purpose of this presentation as the long-term goal or the annual goal.

Smart Goals

SMART goals should be written for the annual goal and the objectives. The acronym SMART includes:

Specific, Measurable, Achievable, Relevant and Time-bound

Objectives:

Objectives, or benchmarks, are the short-term goals to meet the annual goal.

The Evidence

The following research supports the connection between speech and language (speaking and listening) to reading and writing.

Language Impairments

1. "80% of students identified as having a learning disability have a language disorder" (Reed, 2018).
2. A student's **socioeconomic context** holistically influences language development for lexical diversity, syntactic complexity, narrative, and literacy development, and general processing skills (Hoff, 2013).

Broca's and Wernicke's Areas

1. Phonological coding occurs in the left Broca's area
2. Orthographic coding occurs in the right Broca's area (Aylward, et al, 2003)

3. Brain imaging show structural and functional differences occur between typical readers and writers and those with specific learning disorders (i.e.: dyslexia) in both Broca's and Wernicke's area.
4. Children with dyslexia commonly have a history of **poor oral language skills in early childhood** (Bishop & Adams, 1990/2006; Magnusson & Naucmér, 1990; Scarborough, 1990; Snowling & Melby-Lervåg, 2016).
5. Children that are late talkers are at greater risk for academic difficulties especially in literacy and reading skills (Lewis, Freebairn, Hansen, Miscimarea, Iyengar, & Taylor, 2007).

English Learners

1. 70% of 4th grade and 71% of 8th grade **English Learners (EL)** scored below basic reading levels but research shows that effective literacy instruction can lead to grade level literacy skills (Waits, Campbell, Gau, Jacobs, Rex, & Hess, 2006)
1. For EL students, **alphabet knowledge, phonological awareness, writing, oral language skills, and concepts about print in preschool children are predictors of reading and writing success in elementary children** (The National Early Literacy Panel, 2004).

Speech Sound Disorders (SSD)

As speech-language pathologists, we often see students in preK, kindergarten, first, and second grade for speech sound errors. If developmental sounds have been remediated, we often discharge by second grade. Reading difficulties (dyslexia) is often not evaluated for until the end of second grade or beginning of third grade. It is recommended that before we discharge students with speech sound errors that we at least screen for phonological awareness skills. Research tells us that students with speech production errors also may show difficulty with phonological awareness skills, thus, literacy development.

Speech Delays and Literacy/Dyslexia

1. Children whose speech production problems persist until **age 6; 9** perform worse on tests of reading, spelling, and phonological awareness than controls matched for age and performance IQ (Nathan et al., 2004).
2. Studies indicate that at **age 4**, children with speech delay are at **higher risk for impaired phonological awareness skills** (e.g., rhyme matching, onset segmentation, onset matching) compared to children who are typically developing,

although in one such study significant differences between,(Rvachew, Ohberg, Grawburg, 2003).

Familial Connections to Speech Sound Errors and Dyslexia

1. In early development, young children **with familial risk for dyslexia have shown significantly poorer speech production accuracy**. In addition to their overt errors in speech production, children with speech sound disorder have shown deficits for a variety of other phonological tasks, including phonological awareness (Bird, Bishop, & Freeman, 1995; Carroll & Snowling, 2004; Preston, Hull, & Edwards, 2013; Rvachew & Grawburg, 2006), phonological memory (Couture & McCauley, 2000; Farquharson, Hogan, & Bernthal, 2017; Munson, Edwards, & Beckman, 2005), spelling (Bird et al., 1995; Carroll & Snowling, 2004; Clarke-Klein & Hodson, 1995), and word reading itself (Apel & Lawrence, 2011; Overby, Trainin, Smit, Bernthal, & Nelson, 2012) native to children without familial risk (Carroll, Mundy, & Cunningham, 2014; Carroll & Snowling, 2004; Elbro, Borstrom, & Petersen, 1998; Scarborough, 1990).
 - a. These studies have noted that even in toddlerhood, children with familial risk of dyslexia who eventually develop dyslexia produce **more consonantal errors** (Lambrecht Smith et al., 2010; Scarborough, 1990)
2. In early development, young children with **familial risk for dyslexia have shown significantly poorer speech production accuracy** relative to children without familial risk (Carroll, Mundy, & Cunningham, 2014; Carroll & Snowling, 2004; Elbro, Borstrom, & Petersen, 1998; Scarborough, 1990).

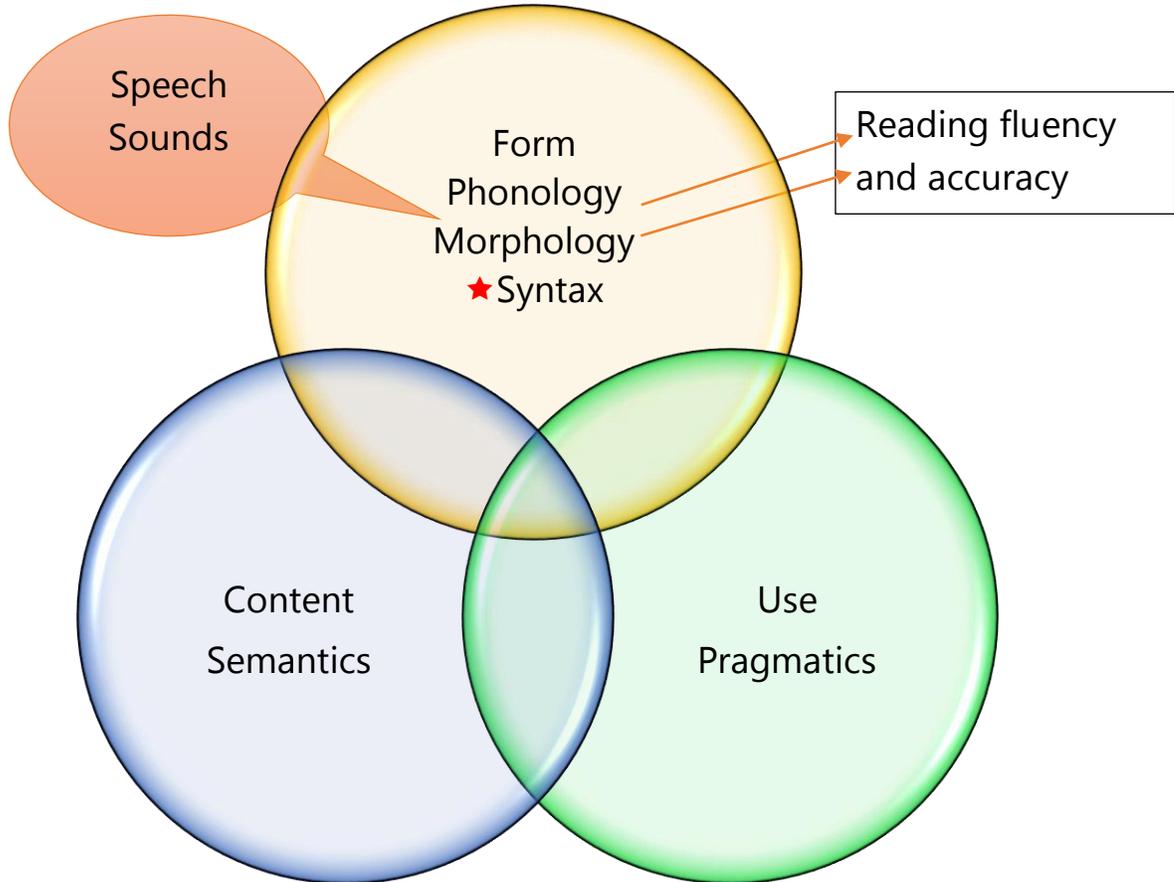
Activity

What speech sound errors do you see mostly with young children?

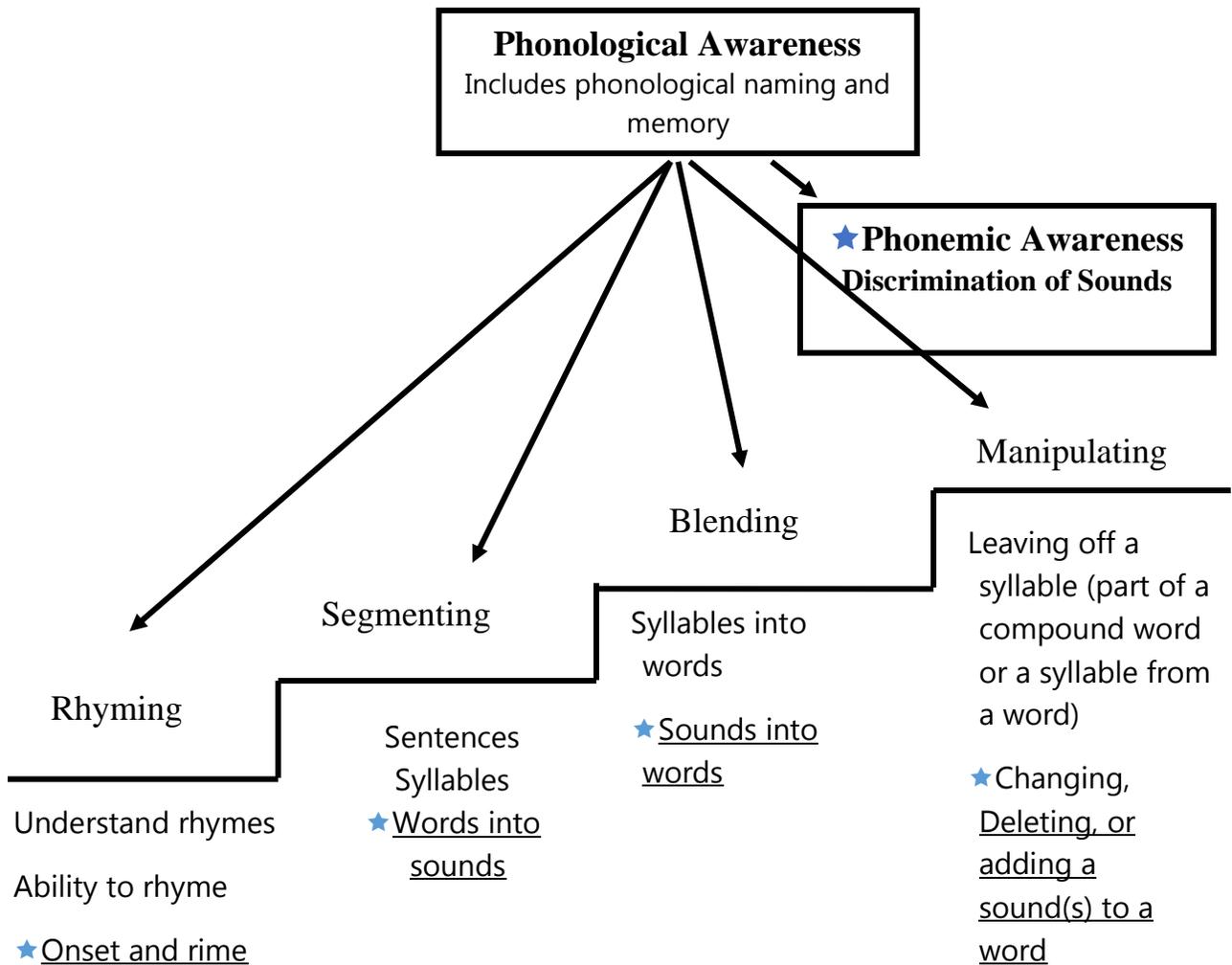
What phonological processing errors do you see mostly with young children?

As we move through the day, think about both the speech and language (morphology and phonology) components together while treating speech sound disorders.

Phonology and Morphology: Reading Fluency and Accuracy



Phonological Awareness (PA) Skills



★ Phonemic Awareness includes:

- Auditory discrimination (ability to distinguish specific sounds)
- Auditory analysis (segmenting a word into sounds)
- Auditory synthesis (blending sounds together)
- Auditory manipulation (perceiving phonemes correctly in order to distinguish changes in a word)
- Auditory sequencing (auditory memory in specific order)

The Evidence

The following research supports not just phonology as a domain of language but the impact that a speech sound disorder can have on the acquisition of the form of the language.

Phonological Awareness Skills

1. One of the strongest indicators of phonological weakness is **poor phonemic awareness** (Farquharson, Centanni, Franzluebbers, & Hogan, 2014; Swan & Goswami, 1997)
2. Children's **phonological awareness ability at preschool and kindergarten** is a powerful predictor of later reading and writing success (Bradley and Bryant, 1983); (Lundberg, Olofsson, and Wall, 1980); (Torgesen, Wagner, & Rashotte, 1994, Ehri & Wilce, 1980/1985); (Lieberman, Shankweiler, Fischer, & Carter, 1974); (Perfetti, Beck, Bell, & Hughes, 1987).
3. The degree of phonemic awareness that the child has developed **upon entry into school is widely held to be the strongest single determinant of the child's reading success** (Adams, 1990; Stanovich, 1986; Snow, Burns, & Griffin, 1998).
4. Even after learning to read, individuals with **dyslexia continue to show poor phonological awareness**, particularly for tasks that require phoneme level sensitivity (Pennington, Orden, Smith, Green, & Haith, 1990; Snowling, Nation, Moxham, Gallagher, & Frith, 1997; Wilson & Lesaux, 2001).

Phonology and Speech Production

1. Numerous studies have documented that children with SSD are more likely to display lower performance on measures of reading and spelling than are children with typical speech abilities (Bishop & Adams, 1990; Catts, 1993; Peterson, Pennington, Shriberg, & Boada, 2009)
2. Like children with dyslexia, a core deficit in the **phonological system has been implicated in children with speech sound disorder** (Anthony et al., 2011; Pennington & Bishop, 2009; Sutherland & Gillon, 2007).
3. In addition to their overt errors in speech production, children with **speech sound disorder have shown deficits for a variety of other phonological tasks**, including phonological awareness (Bird, Bishop, & Freeman, 1995; Carroll & Snowling, 2004; Preston, Hull, & Edwards, 2013; Rvachew & Grawburg, 2006), phonological memory (Couture & McCauley, 2000; Farquharson, Hogan, & Bernthal, 2017; Munson, Edwards, & Beckman, 2005), spelling (Bird et al., 1995; Carroll & Snowling, 2004;

Clarke-Klein & Hodson, 1995), and word reading itself (Apel & Lawrence, 2011; Overby, Trainin, Smit, Bernthal, & Nelson, 2012).

4. Kirk and Gillon (2007) provided an integrated speech, phonemic awareness, and letter knowledge intervention approach to children with SSD. They found that children who received an intervention that facilitated phonemic awareness and letter knowledge in addition to speech sound production outperformed children who received an intervention for speech sound production alone.
5. Speech production is, after all, heavily reliant on an intact phonological system. (Cabbage, Farquharson, Iuzzini-Seigel, Zuk, and Hogan, 2018)

Assessments

The following assessments are available to assess each of the phonological areas and subsections under each of the areas that are provided on the chart at the beginning of the chapter.

Language/Literacy

- Test of Integrated Language and Literacy Skills (TILLS) (Nickola Nelson, Elena Plante, Nancy Helm-Estabrooks, and Gillian Hotz, 2016)
 - Includes the Student Language Scale (SLS) for dyslexia screening
 - TILLS includes core subtests for 6-7, 8-11, 12-18 dyslexia, language, or both.

<https://tillstest.com/>

Phonemic Awareness

- Lindamood Auditory Conceptualization Test 3rd Ed (ProEd: ages: 5;0-18;11) Measures the ability to perceive and conceptualize speech sounds using a visual medium (norm referenced)

Phonemic and Phonological Awareness

For phonemic awareness, analyze the results of the areas listed for Phonemic Awareness which gets to the sound level

- Comprehensive Test of Phonological Processing2 (CTOPP2) [Wagner, Torgesen, Rashotte, & Pearson. (2013). Austin: Pro-Ed. (phonological memory and RAN)
- Phonological Awareness Test 2 (ProEd 2018 5-9;11)
- Profile for Phonological Awareness (ProPA) (app by Smarty Ears)
- ★ Phonological Awareness Skills Test (PAST) Kilpatrick 2019 (Free online)
<https://www.thepasttest.com/>
- Access to Literacy Assessment System (free online) <https://accesstoliteracy.com/>

Dyslexia Screener

- Free dyslexia screener (<https://www.lexercise.com/tests/dyslexia-test>)
- Dyslexia Question App for IPAD

The games are designed to assess working memory, phonological awareness, processing speed, visual memory, auditory memory, and sequencing skills.

Supplemental Assessments

- ★Rapid Automatized Naming (RAN)
Performance on a RAN test is based on how fast a child can name in order *all* the items (letters, colors, numbers, or simple objects) presented on the page, compared to other students. Students with reading issues are frequently slower on RAN tests.
- Working memory (word and sentence repetition)
 - TAPS 4 (A language processing skills assessment)
 - ★Michigan Memory Test for Unrelated Sentences (Daly, 1996)
- Test of Word Finding 3 (German, 2015)

Order of Acquisition of Phonological Awareness Skills

The following chart provides information regarding typical development of phonological awareness skills as provided by Moats and Tolman, 2009.

Age	Skill
4 years	Rote imitation of rhymes and alliteration
5 years	Rhyme recognition (which word doesn't belong)
	Recognize phonemic change in a word (Brown Pear, Brown Pear, What do you see?)
	Clap out syllables (Target 2 and 3 syllables then move to 1)
5 ½ years	Can separate a word into its phonemes (segmenting sounds in a word)
	Blend onset and rhyme (c at = cat)
	Produce a rhyming word
	Tell the first sound in a word
6 years	Can delete (manipulate) part of a compound word or a syllable from a two syllable word
	Blends 2 or 3 phonemes
	Segment two or three phonemes in a word

6 ½ years	Segment three or four phonemes in a word
	Manipulate (substitute) a sound in a simple word to form a new word (Change the l in lip to /s/)
7 years	Delete sounds in the initial and final position (not including blends)
8 years	Delete initial sounds including blends
9 years	Sound deletion for medial and final sounds

Moats, L, & Tolman, C (2009). Excerpted from *Language Essentials for Teachers of Reading and Spelling (LETRS): The Speech Sounds of English: Phonetics, Phonology, and Phoneme Awareness (Module 2)*. Boston: Sopris West.

<https://www.readingrockets.org/article/development-phonological-skills>

Collaboration Ideas

Subject/ Assignment	Lead Teacher	Speech Language Pathologist
Phonological awareness/ phonics instruction	<ul style="list-style-type: none"> Follows hierarchy of development based on science of reading and the KY state standards (reading and writing) https://www.readingrockets.org/article/development-phonological-skills Establishes or follows curriculum Knows which students in K-3 are demonstrating literacy development difficulty based on required screening. Refers students (3rd grade and older) for screening if difficulty is noted in development, spelling, reading, and writing Collaborate with SLP and Others 	<ul style="list-style-type: none"> Participate in or be aware of screening students regardless of grade level demonstrating difficulty with spelling, reading, and writing Through MTSS or therapy, target phonemic/phonological awareness skills for speaking and listening Target discrimination of phoneme sounds <ul style="list-style-type: none"> Minimal pair activities for sounds that are similar Target speech sound disorders using phonological awareness activities Collaborate with Teachers and Others Use classroom materials to target morphology, phonology, and integrate SSD into these tasks.

		<p>Others (i.e.: Resource/Reading Specialists)</p> <ul style="list-style-type: none">• Screen all students in K-3 as required by law• Screen any students in 3rd or older with concerns for literacy development• Provide Tier II and Tier III MTSS
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General Ideas for Speech to Print

- Instead of spelling a word for a student, segment the sounds in the words and have the student say each sound and figure out the spelling pattern.
- Always keep in mind, speech to print. Incorporate the student saying the sounds, the syllables, the words targeted aloud. Then move to writing.
- By having the student say the sounds in words or the word, we can better judge the discrimination of each sound.
- Keep sounds very pure. For example, /b/ does not say /ba/.

Kirk and Gillon (2007) provided an integrated speech, phonemic awareness, and letter knowledge intervention approach to children with SSD. They found that children who received an intervention that facilitated phonemic awareness and letter knowledge in addition to speech sound production outperformed children who received an intervention for speech sound production alone.

General Ideas for Speech Sound Disorders

- Review dyslexia screening or benchmark assessment (Dibels, NWEA map, STAR testing, etc.) for any red flags for difficulty in phonological awareness (or morphology) skills.
- If screening/assessment information is not current, screen phonological awareness skills.
- If difficulties are noted, use strategies below to target SSD.
- If PreK or K, always use strategies below to target SSD.

Strategies for Phonemic Awareness & Sound/Symbol

The following section will provide strategies that we will discuss in this seminar and additional strategies for you as you work with your students.

Visual Phonics program

Use the Visual Phonics program used by your school if it has gestures to go with the sounds.

Examples

- Lively Letters <https://www.livelyletters.com/>
- Zoo Phonics <https://zoo-phonics.com/>
- See It & Say It Visual Phonics Program (designed for SLPs) <https://shop.courtercommunications.com/main>



See It & Say It Visual Phonics Program

See It and Say It Visual Phonics written by Margo Kinzer Courter (2011) is designed for speech-language pathologists and includes all of the sounds in the English language and provides a method to target phonemic and phonological awareness skills.

Phonemic Awareness/Segmenting/Blending

We will first discuss therapy strategies that can be used for phonemic awareness. Many of these strategies will also support segmenting and blending. How to use for speech sound therapy will also be included.

Supporting Speech Sounds for Articulation Therapy

Begin with words that are being used in the classroom and then find words with the speech sounds being targeted that fit within the rhyme or pattern. Use the words that are being targeted in speech therapy for the words that the student will discriminate and segment. Begin with VC, CV, VCV, or CVC first. For medial sounds, start with simple VCVC or CVCV words. Once the student can discriminate and segment these, move to CCVC or CVCC. Then move to 2 syllable words

Example for /s/ and /z/.

s/z CV, VC, CVC				s/z CVCV VCVC	s blends		s/z syllables
CV	CV	CVC	CVC	seesaw	fence	sleep	address
zoo	sew	zap	sit	city	lips	slip	surprise
	see	zone	soup	zany	class	slide	seven
VC	sigh	knees	yes	zero	dress	slap	music
is	say	nose	bus	busy	soft	skinny	Tuesday
as	saw	hose	face	tacos	scout		zip code
eyes	soy	boys	seal	pillows	scale		
ooze	sow	bees	sick	commas	skill		
		bows	sun	pizza	skip		

	VC us ice	shoes keys		amaze	skull		
--	------------------------	---------------	--	-------	-------	--	--

Supporting Speech Sounds for Phonological Processing Therapy

Initial or Final Consonant Deletion		Fronting or Backing		Cluster Reduction
cab	ban	at	bag	flag
fab	can	cat	gag	drag
gab	San	bat	lag	brag
lab	fan	fat	rag	glad
tab	man	hat	sag	plan
bam	pan	mat	tag	slab
dam	ran	gnat	wag	crab
ham	tan	pat	flag	sped
lamb	van	rat	brag	sled
mam		sat	back	black
Sam		vat	lack	blame
		that	sack	
		chat	rack	
		slat		
		spat		

Specific Therapy Strategies

The following strategies will support SSD and literacy development from speech to print.

Slide and Say

Use words that are presented in the classroom for this activity. This can be spelling or vocabulary words, words from stories or words that the teacher uses in the classroom on a consistent basis.



Directions

- Use a chenille stem and Perler Beads. Place the number of beads needed for segmenting and blending the words chosen for the activity. The color of the beads nor the pattern matters for this activity.
- Twist each end to make a loop.
- Have the students place all beads to the right.
- Provide a one syllable word.

- For SSD, the words would contain the speech sound or phonological process being targeted.
- Have the student state each sound.
- As the student segments each sound, have him or her move a bead to the left to represent the sound.
- Once each sound has been represented, the student can then put the chenille stem on a piece of paper. While touching each bead, the student writes down the letter or letters that represent the sound.
- This can also be used for multisyllable words. The student would clap out the syllables. Then move the beads for the sounds that are heard in each syllable.

Phonetically Regular Multisyllable Words

2 Syllable	3 Syllable	4 Syllable	5 Syllable
hotdog	nevertheless, addition	historical	multiplication
rainbow	playfulness, subtraction	gigantic	hippopotamus
outdoors	redoing, division	dandelion	mathematical
redo	cowritten, coauthor	autocorrect	apologetic
remake	vitamin	disqualify	misunderstanding
playful	documents	impractical	condominium
rocket	basketball		
panther	principal		
chicken	apricot		
jacket	yesterday		

Resources

<https://www.readingresource.net/support-files/cvcwordslistbymedialsound.pdf>

<https://www.themeasuredmom.com/free-printable-cvc-word-list/>

Target Minimal Pairs

- A phoneme pair such as the /f/ and voiceless /th/ are articulated in similar (yet different) ways, and so they sound similar, but they are, in fact, acoustically different.
- These sound pairs are more difficult to distinguish than other sound pairs because the way they are spoken (articulated).
- They should be perceived and recognized by listeners as two different phonemes, even in the absence of visual cues, i.e., by listening alone” (Wasowicz, J. via SPELLTalk, On Dec 22, 2020).

Sample from: <https://en.commtap.org/phonology-articulation/auditory-discrimination-minimal-pairs>

SSD and Speech to Print: What They Have in Common

- Have the student either point to the correct picture or write the word.
- Use a visual phonics cue to support discrimination of the sounds.

Minimal Pairs

<p>Back sounds to front sounds (/k, g/ and /t, d/)</p> <ul style="list-style-type: none"> • car/tar • Kim/Tim • key/tea • come/tum • cap/tab • coffee/toffee 	<p>/s, z, f/ and /t, d, p/ (Stopping)</p> <ul style="list-style-type: none"> • four/paw • fan/pan • cuff/cup • half/harp • sea/tea • sail/tail
<p>f, s, sh' and 'b, d,' (Stopping and voicing fricatives)</p> <ul style="list-style-type: none"> • fatman/batman • phone/bone • fox/box • funny/bunny 	<p>Final sounds</p> <ul style="list-style-type: none"> • car/cart • tar/tart • bee/bean • no/nose • moo/move/moon/moose
<p>Simplifying blends</p> <ul style="list-style-type: none"> • pay/play • goo/glue • fat/flat • go/grow • door/drawer 	<p>Context sensitive voicing</p> <ul style="list-style-type: none"> • pea/bee • pear/bear • tear/deer • curl/girl • fan/van
<p>/w, r/ and /l, y/</p> <ul style="list-style-type: none"> • rich/witch • ring/wing • yapping/lapping • fight/white • tire/wire 	<p>/t/ final versus vowel</p> <ul style="list-style-type: none"> • cart/car • note/no • fort/four • shoot/shoe • start/star

Margo's Word List for vowel + /l/, vowel + /n/, & vowel + /m/

This list is based on real words. The blanks represent the inability to think of a real word with the specific vowel + /l/. Based on dialect, words may move to a different vowel.

SSD and Speech to Print: What They Have in Common

eel	il	el	al (short)	al	ail	ile	uel	oil	owl
	bill	bell		ball	bail	bile		boil	
	built	belt							
deal	dill	dealt		dull		dial			
feel	fill	fell		fall	fail	file	fuel	foil	fowl
heal	hill	hell	Hal	hall	hail				howl
	kiln	kelp							
eel	il	el	al (short)	al	ail	ile	uel	oil	owl
kneel				null	nail				
peal	pill		pal		pail	pile			
real					rail	rile		roil	
seal	sill	sell		Sal	sail			soil	
eel	il	el	al (short)	al	ail	ile	uel	oil	owl
steel	still			stall	stale				
	spill	spell						spoil	
	till	tell		tall	tail	tile		toil	towel
		yell			Yale		yule		
ene	in	en	ain/ane	an	un	oon	one	ine	oin
	bin	bend	bane	ban	bun		bone		
			cane	can			cone		coin
Dean	din	den	Dane	Dan	done			dine	
	fin			fan	fun		phone	fine	
		lend	lane	land			loaned	lined	
mean		men	mane	man		moon	moan		
		mend					moaned	mind	
	pin	pen	pain	pan	pun			pine	
			rain	ran	run				
	sinned	send		sand				signed	
			stain	Stan	stun		stone		
	spin		Spain	span	spun	spoon		spine	
teen	tin	ten		tan	ton	tune	tone		

SSD and Speech to Print: What They Have in Common

eme	im	em	aim /ame	am	um	oom	ome	ime	oim
beam				bam		boom			
	brim					broom			
			blame			bloom			
			came		come		comb		
deem	dim						dome	dime	
	him	hem		ham	hum				
				lamb		loom		lime	
ream	rim			ram		room	roam	rhyme	
seam			same	Sam	some				
	slim			slam				slime	
team	Tim		tame					time	

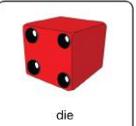
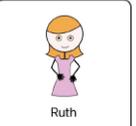
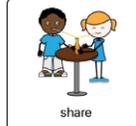
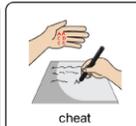
Minimal Pairs for SSD

Articulation

Phonological Processing

/s/ /z/		Fronting/backing
face/phase race/raise bus/buzz fuss/fuzz ice/eyes place/plays	peace/peas once/ones dose/does foes/toes base/bays	bug/bud/but/buck mug/mud/mutt, muck knot/knock/nod tap/cap/gap key/tea/

★ Examples of Boards on <https://courtercommunications.com/therapy-materials>

/b/ /d/ boards	/f/ /th/ boards	/sh/ /ch/ boards
 buck  duck  bye  die	 loaf  loathe  roof  Ruth	 share  chair  sheet  cheat

 bug	 bud	but	 buck
 mug	 mud	 mutt	 muck
 nod	 knot	 knock	 cog
 tap	 gap	 cap	

Bingo Boards

Free download from Ms. Jocelyn TeachersPayTeachers

<https://www.teacherspayteachers.com/Product/Minimal-Pairs-BINGO-FREEBIE-440150>

Word Lists

https://www.speech-language-therapy.com/index.php?option=com_content&view=article&id=134:mp2&catid=9:resources&Itemid=108

Perceiving Phonemes

Students perceive phonemes in the following order:

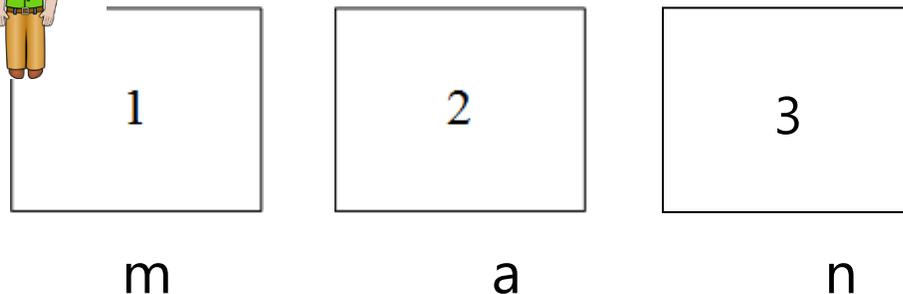
First: initial sound (5 ½ years)

Second: final sound (late kindergarten/early first grade)

Third: medial sound (late kindergarten/early first grade)

Next: add consonant blends to beginning or end

1. Place numbered squares on the floor and have the student step on each square as they say each sound.
2. Have them identify a specific sound (i.e.: beginning, middle, ending)



<https://www.amazon.com/Learning-Resources-Alphabet-Center-Pocket/dp/B00009YOMM>



1	2	3	4
---	---	---	---

p

l

a

n

p

l

a

ne

p

l

ai

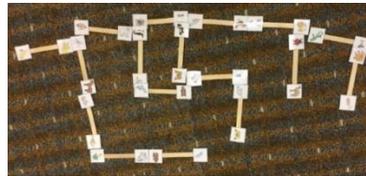
n

Phoneme Isolation Pictures

https://dpi.wi.gov/sites/default/files/imce/ela/bank/RF_PA_Isolation.pdf

Dominoes

1. Use craft sticks with a picture on each end or make cards with 2 pictures on each set.
2. Students take turns picking up a craft stick or card to match initial, medial, or final sounds. (Could also use for rhyming words)



Activities for Phonological Awareness

The following activities will support increases in overall phonological awareness skills. The activities will be presented in the order of acquisition.

SSD Link to Phonological Awareness

Include the speech sounds or phonological processes to adapt each activity. Use the following activities to target speech sound disorders in order to provide the support for students for literacy development.

Activities for Rhyming

According to Moats and Tolman (2019), understanding of rhymes begin around 4 years of age with rote imitation. By 5 years of age, children are able to recognize a word that

doesn't rhyme with two other words. By 5 ½, children should be able to produce a rhyme as well as blend an onset and rhyme.

Read stories with rhymes.

By age 4, children should enjoy books that rhyme and have rote imitation.

Directions

Talk about the rhyming words and how they sound the same. Mention that they rhyme because the ends of the words sound the same. Recite the rhymes yourself, leaving off the rhyming word. Have the children fill in the missing word.

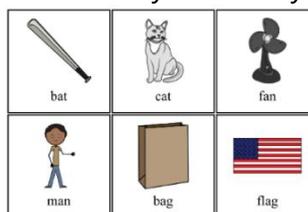
★Which One Does Not Belong?

By age 5, children are supposed to be able to state which one does not belong.

Directions

Show three consonant-vowel-consonant (CVC) pictures/words (e.g., "cat, log, dog").

Tell the children, "Two of these words rhyme, one does not rhyme. Can you tell me which one does not rhyme with the others?"



Hopscotch

By 5, children can determine rhyme recognition.

Directions

Draw a hopscotch board on the floor with masking tape, or with chalk if you are outdoors. Tape or place pictures in each square. Have the child toss a beanbag on a square, hop to that square, and then say what is in the picture. You read another word (sometimes a rhyming word, sometimes not) and ask the child if it rhymes or not. If they answer correctly, they get another turn. If you have a group of children, have them take turns.

Onset and rime (word families)

By 5 ½, children are supposed to be able to blend an onset and rime. For kindergarten and first grade, please, use spelling words that can be used to produce rhymes. Concentrate on the onset and rhyme pattern. If the teacher is not using onset and rime, use the spelling list and attempt to find any rimes that you can build on.

Directions:

1. The educator writes down /at/ or has the student write down /at/.
2. The educator states, "If that says "at," show me "bat."
3. Then the first sound can be manipulated. "If that says 'bat,' show me 'sat.'"

___at	___at	___at

Rime Units (example)

at (bat, cat, hat, fat, mat, pat, rat, sat, vat, gnat, splat, spat, flat) in (bin, fin, pin, sin, win) an (can, Dan, fan, man, pan, ran, tan, van) it (bit, fit, hit, pit, sit, wit) et (bet, let, met, net, pet, set, vet, wet)	ot (cot, dot, got, hot, lot, not, pot, rot, tot) est (best, nest, pest, rest, test, vest, west) ind (bind, find, hind, mind, rind, wind) ild (child, wild, mild,) and (band, hand, land, sand)
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★ **Matching Pictures**

By 5 1/2, children are supposed to be able to rhyme words.

Directions

Find pairs of pictures that rhyme. Place one set of pictures in a container and all the rhyming pairs in another container. Have the children draw out two pictures (one from each container) and ask them if the two words rhyme. If they do not, continue pulling out pictures from the second container until the child finds a matching rhyme.

★ **Mystery Objects**

By 6 1/2, students can substitute sounds to build a new word.

Directions

Place several small objects in a covered basket. The teacher/SLP reaches into the basket and says, "It starts with /f/ and rhymes with 'dish.'" The children raise their hands when they know what the mystery object is. As the children become more experienced, they may be able to give the clues to their peers.

Examples

- hat (cat) - bear (hair)
- mug (rug) - soap (rope)

Example for SSD

Starts with and rhymes with s/z	Starts with and rhymes with cluster reduction
Starts with /z/ and rhymes with cone Starts with /s/ and rhymes with tea Starts with /s/ and rhymes with pay Starts with /s / and rhymes with my	Starts with /fl/ and rhymes with tag Starts with /br/ and rhymes with bag Starts with /cr/ and rhymes with cab Starts with /pl/ and rhymes with pan
Starts with and rhymes with s/z continued	Starts with and rhymes with cluster reduction
Starts with /s/ and rhymes with boy Starts with/s/ and rhymes with mitt Starts with /h/ and rhymes with nose Starts with /b/ and rhymes with toys	Starts with /sl/ and rhymes with gab Starts with /sl/ or can use /br/ and rhymes with sled Starts with /bl/ and rhymes with back Starts with /bl/ and rhymes with tame

Segmenting

Words in Sentences

1. Have the student clap for each word while reading nursery rhymes, poems, or sentences with varying length and syllables in words.

★Syllables in Words

By age 5, students should be able to count syllables in words.

Clap out syllables moving from left to right across body.

- a. Begin with 2 syllable words.
- b. Move to 3 syllable words.
- c. Then, try one syllable words.
- d. Move to 4 syllable words.

★Sounds in Words

By age 6, students should be able to segment words with two to three phonemes without blends. By 6 ½ students should be able to segment words that have 3-4 phonemes including blends.

1. Use fingers for each sound or have the student move down his/her arm
2. Can use nonsense words so that the student must rely on phonological awareness and phoneme knowledge.

The following progression is suggested from

https://www.readingrockets.org/strategies/blending_games

1. Begin with continuant sounds which include fricatives (f, v, s, z, sh, zh, h, and the two /th/ sounds -ð, θ.), nasals (m, n, ŋ), liquids (l, r), and vowels. (Have students practice blending and segmenting words with continuous sounds by holding the sounds using a method called "continuous blending" or "continuous phonation." (e.g., "aaaammmm ... am")
2. Then, introduce a few stop sounds (p, b, d, t, k, g) that students articulate. Make sure these sounds stay pure. (/b/ does not say /ba/.)
3. As students are ready, progress to words with three phonemes, keeping in mind that words beginning with continuous phonemes (for example, *sun*) are easier to blend and segment than those with stop sounds (for example, *top*).
4. As students become more skilled at blending and segmenting, they may no longer need to hold sounds continuously, transitioning from "ssssuuunnn" to *sun*.

Use **Direct Mapping** to move from speech to print.

Direct Mapping

Once the student is able to discriminate sounds in words in all positions, direct mapping should be targeted in order for the student to begin to lock words into memory. Remember, speech to print! Direct mapping relies on phonemic awareness as well as sound/symbol representation.

1. Start with the oral word and map to the letters.
 - a. Before presenting the word in its written form, discuss the sounds that make up the word including single sounds, consonant blends, and rime units.
 - b. Requires the student to isolate phonemes (do not present in order so the student has to rely on the isolation)
2. Introduce the written word

Example: flat

Educator: Say all of the sounds you hear in the word "flat"

Student: /f/, /l/, /a/, /t/

Educator: Shows the word "flat"

Educator: Which part of the word says /at/?

Educator: Which part of the word says /fl/

Backward Chaining

The student sounds out the word from back to front. The student then activates onset and rime for word study.

Example: One Syllable Word

Student sees the word *flat*.

Educator covers up the /fl/ and asks the student what they see.

Student states /at/.

Example: Multisyllable Word

Word: basketball

Student identifies final rime unit /all/

Student adds the onset to the final rime unit /ball/

Student identifies second to last rime unit /et/

Student adds onset /ket/

Puts with final onset and rime /ketball/

Student identifies initial onset and rime /bas/

Student puts the word together *basketball*

For SSD

Begin with continuant sounds even if you are targeting stops. This will support students in understanding segmenting. Then move to words that contain the sounds you are targeting. If targeting stop sounds like /k/ and /g/. Place these in the final position if possible, keeping them pure and use a continuant sound in the beginning to support segmenting (and blending).

Blending

Students begin blending two or three phonemes by 6 years of age. As stated in the Segmenting section, begin with continuant sounds. Next, move to stop sounds making sure sounds remain pure.

Hear It and Write It

Give words in writing of increasing complexity (VC, CV, CVC, CCVC, CVCC, and CCVCC) and have the student say each sound then blend the word together.

Speech Sound Disorders

Use the sounds or processes targeted.

★Mystery Card/Object

Place a set of picture cards or small objects in a bag. Have the children take turns drawing an item from the bag; you may choose to have them keep the card or object hidden from the others. Have the child say the word in its sounds while the others guess what the word is. When the word is guessed correctly, the item is shown.



Scene It

Provide each child with paper and drawing utensils. Explain to them that you will be naming several things for them to draw on their paper. With a list of objects, say each object's name broken down into its sounds. The children will then identify what object you named by blending the sounds into the word.

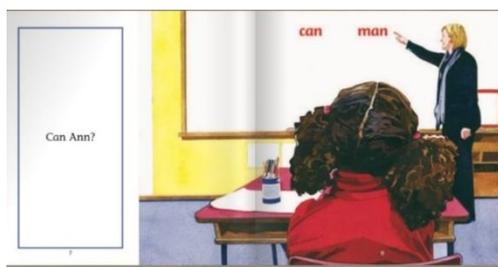
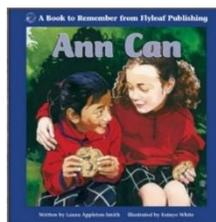
I S-P-Y

Play the familiar game "I Spy" with a different twist. For example, using the names of objects in the room, tell the children "I spy a p-e-n" and see if they can guess what it is. If the children can segment words, have them take turns choosing things to spy.

Phonetically Regular Books

By 6 years, a student should be able to blend two and three sound words.

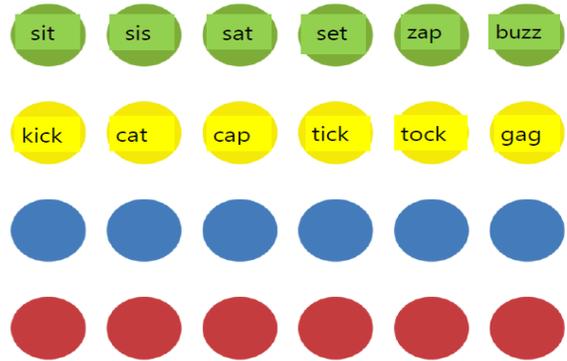
The following books are available at Flyleaf Publishing.com. Books and teacher's guides are available for purchase on the main website www.FlyleafPublishing.com. Flyleaf Publishing has graciously made these digital books available free for the 2020-2021 school year at portal.flyleafpublishing.com. This first example is from *Ann Can* by Laura Appleton-Smith.



Twister

1. Use a Twister game board.
2. Place words you are targeting on each circle.
3. Spin the spinner.
4. The student must segment and blend the word before he/she places hand or foot on the circle.

Example with speech sounds



Letter Vests

Letter vests are a fun way to target discrimination, segmenting, blending and manipulation. (Available @

https://www.amazon.com/gp/product/B000GKW5L6/ref=as_li_qf_asin_il_tl?ie=UTF8&tag=mywebsit08ef9-20&creative=9325&linkCode=as2&creativeASIN=B000GKW5L6&linkId=85a3a8d80b5f18cc386d7e16a816325d

1. Place vests (can also make out of cardstock and yarn) around the room.
2. Give a picture or a word to the student.
3. One student takes a turn finding the vests while the other students line up to be given a vest to put on to spell the word.
4. The student whose turn it is, when they have all the sound in order, moves from student to student (left to right) and says each sound. Then blends the word together.



Other Activities for Letter Vests

Make a Word

The SLP provides a word or a picture. The student has to segment the sounds. They give the letter vest to the other students to put on to form the word and then repeats the sounds and blends it together.

Substituting Sounds

Assign each child to represent a letter; it may be helpful to provide them with a piece of paper with their letter. Choose the children to stand in front of the group to spell out a word (e.g., cat). After the group has identified the word, have the child representing the letter "s" replace the child representing the letter "c." The new word would then be "sat."

Beach Balls

Place words that include the pattern that is being targeted. Toss the ball. The word that the student's thumb lands on is the word to sound out. May have to choose a specific thumb as the student may look between the two words and choose the one they know.

Manipulation

Children begin to isolate initial sounds by 5 ½ years of age. This is the beginning of being able to understand manipulating sounds in words. By age 6 1/2, students can substitute phonemes to build new words.

Link to SSD

Choose words that uses the speech sounds or phonological processes that are being targeted.

Silly Words

By age 6, a student can delete part of a compound word or a syllable of a two syllable word.

Directions

Provide each child with connector pieces of a toy or game (e.g., Legos, pop-beads, trains). These connected pieces will represent each syllable. Take off the first or last connector piece while also removing the first or last syllable of the word. As the student is successful, then increase the number of syllables (connector pieces).

** Can easily incorporate inflectional, derivational, and compound words.*

Compound Words	2 syllable words	3 syllable words
hotdog	season (take off sea or son)	computer (take off -er)
rainbow	raccoon	observing
snowball	reptile	invention
moonlight	invite	subtraction
sunlight	stolen	addition
sunset	robot	division
sunshine	spoken	understand
keyboard	smiling, running, jumping	reporter
goldfish	action, fiction	carpenter
airplane	replay, refold, redo	bicycle
	unfold, unkind	tricycle
	driver	

Think about using prefixes and suffixes for 2 and 3 syllable words. Increase meaning for the affixes as you introduce them.

Resources

<https://www.playosmo.com/kids-learning/compound-words-for-kids/>

Substitute Syllables in Words

Snack Talk

At snack time, choose a special syllable to use. All the snacks (and conversations about them) must contain that syllable at the beginning of each word. For example, if the snack were apple juice and graham crackers, they could be zoo-ple juice and graham zoo-kers. Encourage the children to talk in this new “language” during the entire snack time. Initiate several questions and conversations about the snacks to give them numerous opportunities.

Delete Sounds from Words

By age 7, a student should be able to delete initial and final position including blends. Begin with initial sound to make sure the student understands the concept.

★ Drop Off, Add, or Change

Use pictures and place them in a basket. Have a child draw out a picture and name it. That child can then call on another child to tell the group what that word sounds like when you remove, add, or change a sound of the word (e.g., “cat” becomes “at”). That child can then draw the next picture, name it, and then call on another child.

Cotton Cups

Provide each child with 10 cotton balls and a plastic cup. While reading a book to the group, occasionally leave off the first sound of some of the words. When the children notice this, they are to quietly place a cotton ball into their cup. Take a break to discuss what sound was left off, and then continue the story. When all the cotton balls are gone, make sure every child filled their cup.

Resource

https://dpi.wi.gov/sites/default/files/imce/ela/bank/RF_PA_Substitution.pdf (great color pictures)

<http://tickledpinkinprimary.com/2015/02/phoneme-substitution.html> (sound spinners and flip books)

Overall Resources for Activities

Resources for Activities

- Florida Center for Reading Research (Student activities)
<https://fcrr.org/student-center-activities>
- Reading Rockets
https://www.readingrockets.org/strategies/blending_games
- Online Games
<https://www.ateachableteacher.com/online-phonemic-awareness-games/>

APPS:

abc PocketPhonics

L'Escapadou Montessori Crosswords

★Phonics Rules

Phonics instruction teaches children the relationships between the letters (graphemes) of written language and the individual sounds (phonemes) of spoken language. It teaches children to use these relationships to read and write words (Armbruster, Lehr, Osborn, and Adler 2006).

Vowels

Every word must contain a vowel.

*Old McDonald had a vowel
A, e, I, o, u and sometimes y*



Teach Vowels through Visual Cues

Use visual cues to support discrimination between the vowels. For diphthongs, use arm like one sound is at the top of the slide and the other is at the bottom of the slide. Have students turn your visual cues into their own tactile/kinesthetic cue by cueing themselves.

Vowels at the End of an Unaccented Syllable

This vowel may be produced as a schwa (away, afraid)

Many of the rules below are adapted from Osewalt (2019).

Letter “y”

The letter y has three sounds. It says “y” in words like yellow. At other times the letter y, as mentioned earlier, makes the same sound as a vowel. It can make an eee sound as at the end of a 2 syllable word like “silly”. At other times it can make an i sound as at the end of a one syllable word like “cry.” It can also make the short /i/ sound as in “gym.”

The “y” Rule

Change the “y” to “i” when the suffix that is being added begins with a vowel except when the suffix begins with “i:” (carry/carrying)

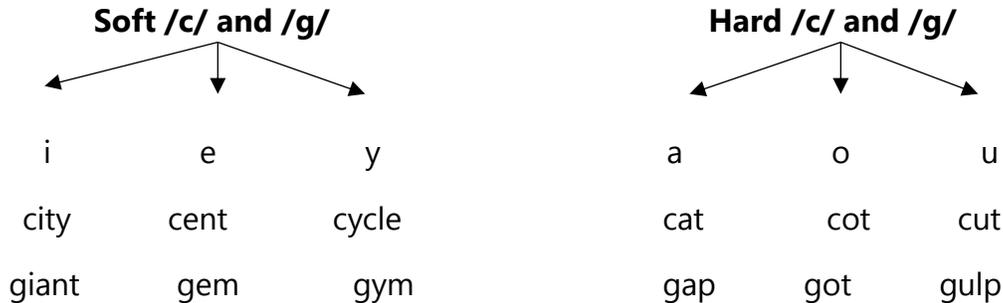
“y” to “i” and add “es”

cherry/cherries, pony/ponies, story/stories, baby/babies, lady/ladies, sky, skies

“y” to “i” and add “ed”

bury/buried, fry/fried, copy/copied, empty/emptied

Soft c and hard c, and soft g and hard g



Ending in /c/ or /ck/

When a one-syllable word ends with the /k/ sound immediately following a short vowel, it is usually spelled with ck, as in duck. When the /k/ sound follows a consonant, consonant blend, long vowel sound, or diphthong, it is usually spelled with k, as in task, cake, soak, and hawk.

The /j/ sound

In a one-syllable word, when a /j/ sound immediately follows a short vowel, it is spelled --dge as in badge, hedge, bridge, dodge, and smudge. (The d “protects” the vowel from the “magic e” rule.)

The /ch/ sound

In a one-syllable word, when a /ch/ sound immediately follows a short vowel, it is usually spelled tch as in catch, fetch, stitch, blotch, and clutch. The exceptions to this rule are such, much, rich, and which.

Drop the e with -ing

Drop the /e/ and add /ing/. Examples: bike/biking

Doubling

For short vowel words, double the consonant at the end (run, running, runner)

Double Letters at the End of One Syllable Words

One syllable short vowel words that end in "s," "l," "f," "z" are doubled. (Sam likes fried zebras.)

Plurals

For most words, add s to make them plural, as in cat/cats. But when a singular word ends with s, sh, ch, x, or z, add es to make it plural, as in classes, brushes, and foxes

Types of Syllables

The following syllable types increases proficiency for reading and writing. It is often referred to as CLOVER with each letter representing the syllable pattern.

Closed Syllable

A closed syllable ends in a consonant. The vowel has a short vowel sound, as in the word bat.

Open Syllable

An open syllable ends in a vowel. The vowel has a long vowel sound, as in the first syllable of apron. This applies to one and two syllable words (me, go, repeat)

Consonant -le

A consonant+le syllable is found in words like handle, puzzle, and middle.

Vowel Team

A vowel team syllable has two vowels next to each other that together say a new sound, as in the word south.

When 2 vowels go walking, the first one does the talking


wait

Long E

- A vowel-consonant-e syllable is typically found at the end of a word. The final e is silent and makes the next vowel before it long, as in the word name.
- Magic "e" does not get to talk. He just makes the other one says its name.


bake

R Controlled

An r-controlled syllable contains a vowel followed by the letter r. The r controls the vowel and changes the way it is pronounced, as in the word car.

Goals and Objectives

For SSD and Phonological Processes

Write goals and objectives as one would for articulation goals with adding specific progression. The activities above would be the activities used to achieve these goals.

Example Goal

At the end of the second semester, student will perceive and use initial /r/ and vocalic /r/ in words in structured activities in 8 out of 10 opportunities with minimal cueing as demonstrated through correct production.

Sample Activities

Slide and Say



Choose words with targeted sound(s) in position(s) being targeted.

Give the student the word and have them use the beads to segment each sound, listening for correct production of all sounds.

Have the student then produce the word with blending the sounds together.

This allows the student to produce the sound in isolation and at the word level. Several repetitions can be targeted.

If targeting phrases or sentences, the therapist can either give the student the phrase/sentence to repeat or have the student generate one.

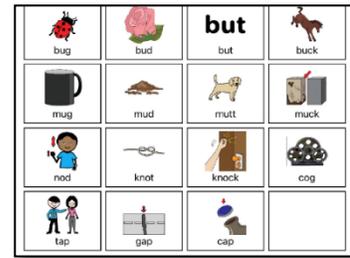
Target Minimal Pairs

Choose words with targeted sound(s) in position(s) being targeted.

Give the student the word and have them point to the picture.

- No visual support
- Add visual if needed
- Add visual phonics cue
- No visual

Have the student state the word.



If targeting phrases or sentences, the therapist can either give the student the phrase/sentence to repeat or have the student generate one.

Perceiving Phonemes

Students perceive phonemes in the following order:

First: initial sound (5 ½ years)

Second: final sound (late kindergarten/early first grade)

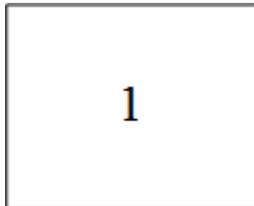
Third: medial sound (late kindergarten/early first grade)

Next: add consonant blends to beginning or end

1. Place numbered squares on the floor and have the student step on each square as they say each sound. Have them identify a specific sound (i.e.: beginning, middle, ending)



Example: /s/ and /z/



s

a

t

z

i

p

p

a

s(s)

Choose words with targeted sound(s) in position(s) being targeted.

SSD and Speech to Print: What They Have in Common

Give the student the word and have them step on the card to segment each sound, listening for correct production of all sounds.

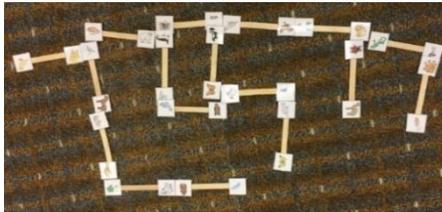
Have the student identify the targeted sound in the correct position.

When the student drops the card in the corresponding letter, have the student produce the sound and then produce the word with blending the sounds together.

This allows the student to produce the sound in isolation and at the word level.

If targeting phrases or sentences, the therapist can either give the student the phrase/sentence to repeat or have the student generate one.

Dominoes



All words chosen would include the targeted speech sound or phonological process.

Goals and Objectives for Development of PA

Goal

At the end of the second semester, student will increase phonological awareness skills in order to understand and express –(chose: phonemic awareness, rhyming, blending, segmenting, manipulation) in 8 out of 10 opportunities with minimal cueing in classroom activities as demonstrated through speaking, reading, and writing in the classroom.

Objectives

Phonemic Awareness

(Timeframe), _____ will perceive individual sounds as same or different in when presented in isolation in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

***** Can also use any goals for blending, segmenting, manipulation that is at the phoneme level.

RF.K.3

d. Orally distinguish between similarly spelled words by identifying the sounds of the letters that differ.

Rhyming

(Timeframe), _____ will identify rhyming words in when presented in a story by raising their hand when a rhyming word is presented in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

(Timeframe), _____ will identify a phonemic change in a rhyming word (i.e.: Brown Pear, Brown Pear -instead of Bear) when presented in a story by raising their hand when a rhyming word is presented in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

(Timeframe), _____ will determine which word does not rhyme words in when presented with three words in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

(Timeframe), _____ will produce a rhyming word in when word is presented in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

Segmenting

(Timeframe), _____ will identify (words in sentence, syllables in words, sounds in words) in when presented by clapping out the segments in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

Progression of segmentation of sounds:

2-3 phoneme words with no blends

3-4 including blends

Blending

(Timeframe), _____ will blend onset and rhyme verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

(Timeframe), _____ will blend onset and rhyme verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

(Timeframe), _____ will blend two or three phonemes in a word verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

(Timeframe), _____ will blend four to five phonemes including blends in a word verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

Manipulation

(Timeframe), _____ will isolate initial sound verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

(Timeframe), _____ will identify words with the same sound in the initial position of the word verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

(Timeframe), _____ will substitute a phoneme in a one syllable simple word to form a new word verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/). (Examples: "Say lip. Change the /l/ to /s/." "Say man. Change to /n/ to /p/." "Say man. Change the /a/ to /ee/.")

(Timeframe), _____ will substitute a phoneme in a one syllable simple word containing a blend to form a new word verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/). (Examples: "Say breed. Change the /r/ to /l/.")

(Timeframe), _____ will delete a part of a compound word verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

(Timeframe), _____ will delete a syllable in a two syllable word (progress to 3 and 4) verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

(Timeframe), _____ will substitute a phoneme in a one syllable simple word containing a blend to form a new word verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/). (Examples: "Say breed. Change the /r/ to /l/.")

(Timeframe), _____ will delete initial sound in a one syllable word without a blend verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/). (Example: "Say cat. Say it again without the /k/.")

(Timeframe), _____ will delete final sound in a one syllable word without a blend verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/). (Example: "Say wheel. Say it again without the /l/.")

(Timeframe), _____ will delete initial or final sound in a one syllable word with a blend verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/). (Example: "Say cats. Say it again without the /s/." "Say slip. Say it again without /s/.")

(Timeframe), _____ will add initial or final sound in a one syllable word with a blend verbally in 8/10 of the opportunities with (minimal / moderate / maximal cues/). (Example: "Say cat. Say it again and add /s/ at the end." "Say lip. Say it again and add /s/ to the beginning.")

Example of Kentucky Grade Level Standards for Phonological Awareness

RF.K.2

Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

- a. Recognize and orally produce rhyming words.
- b. Count, pronounce, blend and segment syllables in spoken words.
- c. Blend and segment onsets and rimes of single syllable spoken words.
- d. Isolate and pronounce the initial, medial vowel and final sounds (phonemes) in three-phoneme words.
- e. Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.

RF.1.2

Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

- a. Distinguish long from short vowel sounds in spoken single-syllable words.
- b. Orally produce single-syllable words by blending sounds (phonemes), including consonant blends.
- c. Construct and deconstruct spoken single syllable words into initial, medial vowel and final sounds (phonemes).

Reflection



What is your role in phonology for the students you serve? How can you collaborate with other educators regarding areas such as phonemic awareness, phonological memory, and retrieval?

How can you incorporate phonology strategies when you are targeting speech?

Conclusion

By targeting phonology, we can aid in reading fluency and accuracy for our students. The ability to discriminate sounds (phonemes) correctly leads to stronger overall phonological awareness skills and speech sound identification. Students must also be able to hold sounds/symbols into memory and then be able to retrieve them quickly. We play a vital role in acquiring these skills. By incorporating phonological awareness activities with speech sound therapy, it is a win win for the student!

Morphology

Using word parts and knowing some common prefixes and suffixes (affixes), base words, and root words can help students segment, blend, and manipulate words for phonology, learn the meanings of many new words, and support syntax. For example, if students learn just the four most common prefixes in English (un-, re-, in-, dis-), they will have important clues about the meaning of about two thirds of all English words that have prefixes.

Latin and Greek word roots are found commonly in content-area school subjects, especially in the subjects of science and social studies. As a result, Latin and Greek word parts form a large proportion of the new vocabulary that students encounter in their content area textbooks

About 60 % of the new words a reader will encounter are morphologically complex (Angelelli, Marinelli, & Burani, 2014).

Compound Words, Inflectional and Derivational Morphology

Morphological awareness can be divided into **compound words** (2 or more free morphemes), inflectional and derivational morphology. Young children begin to understand compound words at a very young age. They also begin to use **inflections**; it is the first glimpse that we have that children are understanding the smallest unit of meaning. While developing compound and inflectional morphology, **derivational** (affixes/roots) also begin to develop.

Morphology Evidence

The following research demonstrates the link between morphology and reading fluency and accuracy. It will also include the research that demonstrates the link from SSD and morphology.

1. **Morphological awareness** skills of typically developing elementary school children **contribute in unique ways to their reading and spelling abilities** ([Apel, Wilson-Fowler, Brimo, & Perrin, 2012](#); [Carlisle, 2000](#); [Nagy, Berninger, Abbott, Vaughan, & Vermeulen, 2003](#); [Roman, Kirby, Parrila, Wade-Woolley, & Deacon, 2009](#), [Carlisle, 1995/2000](#)).
2. Siegel (2008) found that the students with **dyslexia** performed **significantly lower** than their peers on the morphological awareness tasks.

3. Morphological awareness **instruction** has been found to **significantly improve language and literacy outcomes** and to be a valuable instructional tool for elementary children with language and literacy deficits (Bowers, Kirby, & Deacon, 2010; Carlisle, 2010; Goodwin, Lipsky, & Ahn, 2012; Reed, 2008).
4. Through collaboration with second grade classroom teachers and speech-language pathologist, 2 general education teachers implemented **morphological awareness lessons** in their classrooms over an **8-week period**. **Both inflectional and derivational morphology** were targeted. The students' morphological awareness skills increased significantly following morphological awareness lessons. The effects of these **gains were moderate to large** (Henbesta, Apel, Mitchell, 2019)
https://pubs.asha.org/doi/pdf/10.1044/2019_PERS-SIG1-2019-0003

Morphology and Speech Production

1. Preschool children who demonstrate deficits in morphology and speech demonstrated better **morphosyntactic competence when it was targeted before speech sound errors** (Tyler, Lewis, Haskill, 2002).
2. Children with SSD scored significantly lower than did their counterparts on the morphological awareness measures as well as on phonemic awareness, word-level reading, and spelling tasks (Apel and Lawrence, 2011).
3. **Morphological awareness was a unique predictor of spelling abilities of children with speech sound disorders (Apel and Lawrence, 2011).**
4. While children are developing lexical, phonemic, and morphologic representations, motor control for speech production is developing (Tyler, 2016).

Assessment

Informal (can be used for Dynamic Assessment)

Inflectional Morphology

- <file:///C:/Users/court/Downloads/FREEMorphologicalAwarenessAssessmentK1-1.pdf>

Derivational

- Supplemental Digital Content for Wolter, J.A. & Green, L (2013) Morphological Awareness in School-age Children with Language and Literacy Deficits. Topics in Language Disorders, 33(1). (copy on Margo's website)

Inflectional and Derivational

- Use activities listed below for dynamic assessment.

Formal

- TEEM: Test for Examining Expressive Morphology (Shipley, Stone, & Sue, 1983)
- (TOLD-P:5) Test of Language Development–Primary, Fifth Edition (Newcomer and Hammill, 2019) Morphological Completion subtest
- TACL-4: Test for Auditory Comprehension of Language-Fourth Edition (Carrow-Woolfolk, 2014) Grammatical Morphemes subtest
- (CASL-2) Comprehensive Assessment of Spoken Language, Second Edition Carrow-Woolfolk, 2017) Grammatical Morphemes subtest

Steps in Morphology Instruction

Step 1: Introduce the Concept of Morphology and Provide Many Relevant Examples

- a. **Discuss** importance of morphology (understanding the smallest unit of meaning)
- b. **Explain** of target patterns and examples.
 - Compound words – 2 whole words (free morphemes) that are joined together to make a new word.
 - Inflectional - number, tense, person, case, gender, and others, all of which usually produce different forms of the same word rather than different words (leaf/leaves, write/writes).
 - Plural -s, possessive -s, third-person singular verb (plays present tense, past tense -ed, present participle -ing, comparative degree -er, and superlative degree -est
 - Derivational- base (root) words to which affixes or word beginnings or endings, can be added to change meaning (leaflet, writer, rerun) and
 - There are base words to which affixes can be added to which change the meaning.

Step 2: Intervention Focuses on Identifying the Regularities or Patterns of Morphology

Therapy strategies are then used to focus on the inflections or derivations that are developmentally appropriate. Remember, that in English, young children develop inflectional morphology first.

Compound Morphology

When two words are used together to yield a new meaning, a compound is formed. Compound words can be written in three ways: as open compounds (spelled as two words, e.g., ice cream), closed compounds (joined to form a single word, e.g., doorknob), or hyphenated compounds (two words joined by a hyphen, e.g., long-term). Sometimes, more than two words can form a compound (e.g., mother-in-law).

Inflectional Morphology

Children develop inflectional morphology before they develop derivational morphology. There are eight inflectional morphological endings that include the following:

Brown's Mean Length of Utterance

Based on Brown (1973) the following is the order of acquisition of the first five inflectional morphemes. Brown states that all of these should develop by four years of age for listening and speaking. Academic standards for reading and writing for Grade 1.

Inflectional Morpheme	Age of Acquisition	Example	Academic Standards
Present progressive (-ing)	27-30 months	Baby crying .	1 st grade
Plural regular (-s)	27-30 months	I want cars.	Kindergarten
Possessive ('s)	31-34 months	Sam's ball.	1 st grade
Past regular (-ed)	35-40 months	She walked home.	Kindergarten-1 st
Third person regular (-s)	35-40 months	Malcolm plays.	1 st grade
Past participle (-en) (uncontractible and contractible aux. verbs)	41-46 months	She has spoken. It is written.	2 nd grade (irregular past tense)

Brown (1973) does not include comparative and superlative. The Common Core State Standards (2019) lists these inflectional morphemes in the following standards.

Inflectional Morpheme	Grade Level Standard
Comparative (-er) and Superlative (-est)	3 rd grade

Derivational Morphology

Derivational morphology involves the addition of a prefix, suffix, or both to a root word (Greek and Latin). Meyerson (1978) found that children as young as 8 years could apply suffix addition rules to aid in the oral generation and recall of nonsense words containing complex morphemes.

Strategies for Morphology Intervention

The following section will provide therapy strategies for compound words, inflectional and derivational morphology.

Strategies for Inflectional Morphology

Inflectional morphology includes:

Present participle -ing Plurals	Possessive 3 rd person singular	Past tense -ed Past Participle -en Comparative/Superlative
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Inflectional Morphology Link to SSD

s/z CV, VC, CVC		s/z CVCV VCVC		s blends	s/z syllables
CV zoos Zoe's	CV sews sewing sewed sees seeing sigh sighed sighing says saying said	seesaws cities tacos pillows commas pizzas busy busier busiest	amazes amazing sunny sunnier sunniest	fences lips spoken classes dresses scouting scales scaling skills skips skipped skulls sleeping sleeps	addresses surprises surprised surprising Tuesday's zip codes chosen frozen
CVC zap					

SSD and Speech to Print: What They Have in Common

CVC cont zone knees nose hose boys boy's bees bee's bows shoes keys	CVC sits sitting soups buses faces facing seals seal's sicker sickest sun's			sleepier sleepiest slips slipping slips slide slides sliding slaps slapping skinnier skinniest	
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Initial or Final Consonant Deletion		Fronting or Backing					Cluster Reduction
cabs gabbing gabbed labs tabs dams hams lamb's Sam's	fan fans fan's man man's pans rans vans van's	at cats cat's bats fatter fattest hat hats hat's mat matts gnats gnat's	pats rats rat's sat chats chatting brat flat beaten bitten eaten gotten hidden ridden	bags gags lags rags sags tags tagging tagged wagging wagged flags flag's	brags bragging bragged hacks lacking lacks pack packs packing pack's	sacks racks tacks slacks broken awoken forgotten	flags drags brags glad planning plans planned slabs crabs sledding blacker blackest blame blames blaming blamed

General Ideas

- Have the students perform movements as the educator gives a word. For example, the teacher says, "Jump!" While the students are jumping, the teacher says, "We are **jumping!**" Teacher then says, "Stop!" Then she states, "You **jumped!**"
- Play with objects to demonstrate singular and plural nouns (e.g., car/cars, box/boxes, block/blocks).
- Read books loaded with inflectional morphemes.

Use Common Objects or Pictures of High Interest

Use objects from the classroom or make cards to demonstrate subject, verb, and direct object to elicit early developing morphology.



Right now:

The dinosaur cooks the vegetables.

What is the dinosaur doing?

The dinosaur is cooking the vegetables.

What did the dinosaur do yesterday?

The dinosaur cooked the vegetables.

Whose vegetables are they?

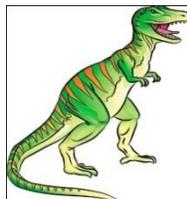
They are the dinosaur's vegetables.

Comparative and Superlative

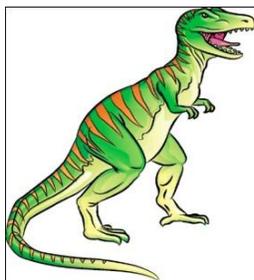
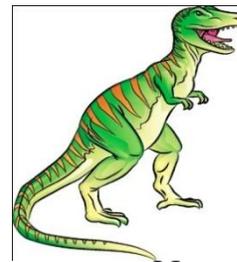
-er and -est



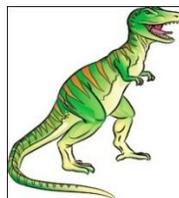
big



bigger



biggest



smaller



smallest

Cluster Reduction or /s/ Blends	/R/
skinny	angry
sleep	bitter
slim	brave
slow	brief
small	bright
smart	broad
smelly	dirty
smooth	dry

Inflectional Endings

(-ing, plural -s and -es, possessive -s, 3rd person singular -s, past tense -ed, -er, -est)

Scene It

Use scenes from a book in the classroom or make cards to demonstrate subject, verb, and direct object or prepositional phrase to elicit early developing morphology. If working with ELL students, it is important to understand which, if any, inflections are marked the same way in the first language. For example, in Spanish, the -ing and plural -s are marked similarly as they are in English; therefore, these are the inflections targeted first.



★ Four seasons pictures available at <https://courtercommunications.com/therapy-materials>

Possible Targets

Today: She is splashing in the puddle. (She is splashing in the puddle, and he is watching the bird. The raindrops are falling. They are wearing raincoats. Mom may be unhappy because they are wet. She would have gone outside, but it was raining.)

Today: She splashes in the puddle, and he watches the bird.

Yesterday: She splashed in the puddle. The flowers bloomed, and the boy smiled.

Tomorrow: She will be splashing in the puddle. They will be returning home after they play.

Possessive: It is the girl's umbrella.

-er and -est: The mommy bird is bigger than the baby birds.

(Discuss plants). The grass is bigger than the flowers. The tree is the biggest plant in the picture.

-en: One baby bird is hidden

It was a playful day dodging raindrops, playing in outside, and wearing our raincoats!

/s/ and /z/			Phonological process stopping	
birds	glasses	skips	(see /s/ and /z/ list	thick
grass	flies	skipped	four leaves (how many did	thin
boots	nest	sleeping	I color)	hot
coats	splashes	sleeps	five _____	hotter
rabbits	splashing	sleepier	flowers	hottest
girls	flowers	sleepiest	the bird's worm	the girl's chin
girl's	trees	slips	the bird's next	(cheek, chapped)
sing		slipping	the boy's boots	jump
singing		slips	the girls' coats	jumps
sways		slide	this flower	jumping
swaying		slides	them then	
leaves		sliding	then those	

Many of the strategies on the following pages are presented in a research project by Wolter, J. A., & Green, L. (2013). Morphological awareness intervention in school-age children with language and literacy deficits. *Topics in Language Disorders, 33* (1), 27-41. doi: 10.1097/tld.0b013e318280f5aa

★Supplement available @ <https://courtercommunications.com/therapy-materials>

Say (& Write) Sentences with Inflectional Endings

- Provide a word with a specific inflectional ending (-ing, plural -s, possessive -s, third person singular, past tense -ed, -er, -est).
- Ask the student to use it in a sentence, either verbally or written.

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-ing	Plural -s		
playing running walking seeing eating drinking jumping smiling crying	-s fruits cats ducks trucks books cliffs chefs	-z girls boys friends teachers balls crayons cars airplanes	-ez buses houses kisses watches noses dresses bridges

Possessive -s		-ed		
-s girl's boy's teacher's mother's mom's father's dad's dogs	-z cat's duck's truck's chef's elephant's rocket's	-d played smiled cried brushed combed allowed	-t jumped walked practiced baked blinked bounced	-ed added subtracted batted competed concentrated

3rd Person Singular Verbs		-er, -est
-s walks eats drinks jumps hikes kicks	-z plays runs sees smiles cries	bigger biggest larger largest smaller smallest little littlest happier happiest crazier craziest
Past Participle -en		
broken hidden ridden spoken written		forgotten chosen frozen awoken

Sort by Sound for Past Tense -ed

Instructions: All the words below are in the past tense. How do you know? Say each word and sort the words into 3 columns based on how the "ed" is pronounced. Even though it can sound different, how is the "ed" always spelled?

Rules:

- If the last sound in the infinitive verb is unvoiced, the past tense is unvoiced (i.e.: to kick, kicked)
- If the last sound in the infinitive verb is voiced, the past tense is voiced (i.e.: to tag, tagged)
- If the word ends in /t/ or /d/ it is spelled with –ed and produces an extra syllable.

acted tagged lasted played walked crawled
 jumped called fixed brushed combed washed
 passed landed canned surprised sifted bolted

/t/	/d/	/ed/

Sort by Sound for Plural –s

Instructions: All the words below are in the plural. How do you know? Say each word and sort the words into 3 columns based on how the “s” is pronounced.

Rules:

- If the last sound in the singular form of the word is unvoiced, the /s/ is unvoiced.
- If the last sound in the singular form of the word is voiced, the /s/ is pronounced /z/.
- If the word ends in /ch/, /sh/, /s/, /ss/, /x/, or /z/, it is spelled with –es and pronounced -ez

fruits cats teachers balls ducks books
 trucks cars kisses cliffs chiefs boys
 girls friends houses crayons buses airplanes

/s/	/z/	/ez/

Sort It Out for Present Progressive

Instructions: Sort the following pairs of words into two groups:

Tape/taping Hop/hopping Tap/tapping rid/ridding
 Hope/hoping Slop/slopping Slope/sloping ride/riding

Rules:

- If the word is a short vowel one syllable word, double the last letter before adding –ing to make a closed syllable.
- If the word is a long vowel word, drop the –e and add –ing to make an open syllable.

Group 1	Group 2

* What is the spelling rule for Group 1? What is the rule for Group 2?

Strategies for Compound Words

The first is *compounding*, which involves combining two or more root (free) morphemes to create a new word. For example, sunlight and moonlight both contain two morphemes – sun/moon and light – and the meaning of each compound word is a combination of the two morphemes. English-speaking children show an understanding of compound words in the preschool years, with age-related increases until approximately 5 years (Clark, Hecht, & Mulford, 1986).

Compound Word Link to SSD

Choose compound words that contain the speech sounds or phonological processes being targeted.

★Compound Creation

Instructions: Use the parts of the following compound words to create your own unique words (e.g., a “cowsuit” would allow you to dress up like a cow). Each word in the compound word can be written on cards. The student would draw two cards and either figure out the real word or make up a word using the two cards.

side	lawn	mower
fire	walk	fighter

Example: /l/

angel
ball
beach

fish
park
ball

Example: Fronting

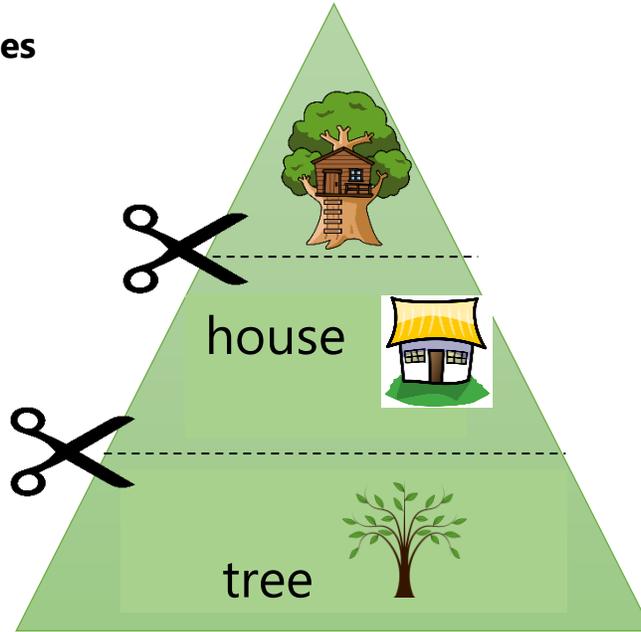
ball
cow
cow
cup
pan

park
boy
girl
cake
cake

Meet a Friend

Each student gets a word. They walk around the room trying to find someone with another word that would make a true compound word. This could be a lot of fun with discussing the meaning of the word when 2 novel words are put together (i.e.: hotbow, raindog).

Compound Word Puzzles



Created through SmartArt Microsoft Word

Resources

Books

- [Cloudy with a Chance of Meatballs by Judi Barrett](#)
- [If You Were a Compound Word by Trisha Speed Shaskan](#)
- [Thumbtacks, Earwax, Lipstick, Dipstick: What Is a Compound Word? By Brian P. Cleary](#)
- [Once There Was a Bull...Frog by Rick Walton](#)

YouTube videos

- Guess the Word Challenge: Brain Riddles for Kids with Answers <https://youtu.be/dt3iFjD-xfI>
- The Compound Word Game <https://youtu.be/N8uMGPAWIlw>

Strategies for Derivational Morphology

Once compound words and inflectional morphology are developing, our job is not done! We must move into derivational morphology to continue to support phonology, semantics, and syntax.

Derivational Morphology Link to SSD

Choose the prefixes and/or suffixes that have the speech sound or process that is being targeted. Build new words with the affix. Discuss the meaning of the affix and the new word that it makes.

Teach Most Common Prefixes and Suffixes First

Targeting the most common affixes can support the student in segmenting multisyllable words. It will also support a greater understanding of the meaning of the words by understanding the meaning of the affix or affixes.

Directions:

1. Teach the meaning of the most common prefixes and/or suffixes first
2. Once the student understands the meaning, apply to a known word (i.e.: fold, play, make)
3. Clap out syllables for the word to support phonology.
4. Discuss the meaning of the novel word.
5. Next, apply to other common base words
6. Discuss the meaning of the word.

Note: Once the student knows the meaning of each prefix and suffix, the student can make up nonsense words and state what the meaning would be if it were a real word.

Most Common Prefixes	Definition	Examples
re	again	redo, remake, refold, return, replay,
un	not	undo, unfold, unclear, unfinished, undecided
dis	not, opposite of	dislike, disobey, dishonest, disguise, disqualify
in, im, il, ir	not	impolite, immature, • illegal • impractical • inactive • irrelevant • inefficient •
de	down, away	decode, defrost, decrease, default, dehumidify
ante	before	anteroom, antechamber, antecedent
anti	against	antiseptic, antibodies, antidote, antipasto
co	with	cowritten, coauthor,

Most Common Suffixes	Definition	Examples
-er	one who does	teacher, driver, runner
-ful	full of	playful, helpful, thankful, cupful, wishful
-ly	characteristic of	happily, slowly, finally, boldly, clearly,
-y	characterized by	rainy, shiny, wavy, curly, cloudy, windy
-less	without	friendless, helpless, careless, fearless
-tion/-sion	expressing action or a state of	addition, subtraction, fiction, association, tension, impression, vision
-ive	tends toward an action	active, attentive, relative
-ish	having the quality of	selfish, foolish, yellowish, longish, shortish
-ment	condition of	contentment, achievement, excitement
-ness	state of being	happiness, silliness, haziness

Resource

<https://www.readingrockets.org/article/root-words-roots-and-affixes>

Examples for /r/

Re: redo, remake, restart, repeat, reuse, revise, refresh, return, revenge, recycle

Un: unclear, unfriendly, untruth, unoriginal, unwrap, unwrapping, unwrapped

Dis: disregard, distract, disrupt, disorder, disappear

-er: player, teacher, driver, skier, cleaner, worker, firefighter, police officer

-ful: careful, fearful, harmful, hurtful, restful, cheerful

-ment: arrangement, improvement, advertisement, replacement, encouragement

★ Be a Word Detective

Instructions: You are a word detective. See if you can figure out the following words' meanings by using the clues of the base words. Find the base word, prefix, and suffix in the following words. Arrange the words with a base (in black), prefix (in green) and/or suffix (in red). Then, read the word aloud and talk about what each part means and how you know. For example, the base word sing refers to the act of singing a song. It is combined with the word ending or suffix -er which means a person who does the base word. When put together, we get the word sing-er or someone who sings

Prefixes (in green), suffixes (in red), and roots (in black) can be printed on card stock on separate cards. These can then be combined for either nonsense or real words. The student would use the color coded cards to fabricate words. The student would then tell the meaning of the word whether a real or nonsense word.

pre	vent	able
con	cern	ing
de	test	ly
trans	flect	ion

Apply the Affixes to a Familiar Word

A great way to drive the meaning of affixes home is to apply them to a familiar word and then discuss the meaning of the words as they are applied to this familiar word. The following strategy demonstrates how to add the affixes to familiar words such as play, fold, use, or fill.



Greek and Latin Roots

Create flashcards with the root on the front and a sentence using a word with the root. On the back, have the student find a picture or draw a picture to assist with understanding and retrieval of the meaning of the root. Target the most common Greek and Latin Roots first.

Front:

auto

She wrote an autobiography
about herself

Back:



Self

Inflectional and Derivational

Highlighting Morphemes

Progression:

Step 1:

1. Therapist highlights the inflectional or derivational endings.
2. The therapist places his/her finger over each word while the student places his/her finger under each word.
3. The student reads.
4. The therapist keeps his/her finger above any highlighted words if the student does not include the inflection.

Step 2:

1. The therapist writes on the top of the paper what inflectional endings he/she wants the student to highlight.
2. The student highlights.
3. Repeat steps 2-4 above.

Step 3:

1. When the student is successful at highlighting and including the inflectional endings while reading, the student then reads without the highlighting.
2. If the student is not successful at including the inflections without highlighting, go back to Step 2.

Fix It and Fill It In

Instructions: Change the word to fill in the blank and make grammatically correct sentences.

The _____ was very talented. (paint)

He is _____ (paint)

That is the _____ orange. (juicy)

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He has a college _____ (educate)

The _____ sketched a picture. (art)

The teacher will give an _____ on Friday. (assess)

The _____ was stored in the garage. (equip)

It was a _____ day. (snow)

The girl had long _____ hair. (curl)

Morph It

Instructions: Given a base word, "morph" the word into as many word forms as possible using previously taught prefixes and suffixes. Label each word according to its part of speech.

Heat	Heater	Preheat	Reheat	Heated	Heatedly	Heating
Learn	Relearn	Learner	Unlearn	Learning	Learned	
Play	Played	Player	Playing	Replayed		
Fold	Folding	Refold	Unfold	Folded	Folder	

Speech Sounds/Phonological Processing Example

Affricate and/or /r/ Heat Heater Preheat Reheat Heated Heatedly Heating

Gliding or /l/ Learn relearn Learner Unlearn Learning Learned

Cluster Reduction or /l/ blends Play Played Player Playing Replayed

Stopping or /l/: Fold Folding Refold Unfold Folded Folder

Noun	Verb	Adjective	Adverb
------	------	-----------	--------

Apps

Mobile Education: Tense Builder

Greek and Latin Roots

My Playhome apps (home, school, hospital, and store)

Goals and Objectives Based on Kentucky Grade Level Standards

For Speech Sound Disorders

Write goals and objectives as one would for articulation goals with adding specific progression. The activities above would be the activities used to achieve these goals.

Example Goal

At the end of the second semester, student will perceive and use of initial /r/ and vocalic /r/ in words in structured activities in 8 out of 10 opportunities with minimal cueing as demonstrated through correct production.

Compound Creation

Example of phonological process of fronting

ball

pan

park

cup

cake

cake

Be a Word Detective

Example for /l/ blends or /r/

re	play	ing
	fold	ful
		ness
		s

Goal for Inflectional Morphology

(Timeframe), ____ will use inflections (state which ones in the order of acquisition) in (phrase/sentence/conversation) in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

Objectives for Inflections

At the 9 week grading period (or the specific date), ____ will use regular plural markers in phrases in 8/10 of the opportunities with moderate cues.

At the end of the second grading period (or a specific date), ____ will use regular plural markers in phrases and sentences in 8/10 of the opportunities with minimal cues.

At the end of the third grading period (or a specific date), ____ will use regular plural markers in oral and written sentences in 8/10 of the opportunities with moderate cues.

At the end of the academic year, ____ will use regular plural markers in phrases in 8/10 of the opportunities in conversation, reading, and writing with minimal cues.

Goal for Compound Morphology

Goal

At the end of the second semester, student will increase understanding of how two words come together to form a new word in order to understand and express compound words in 8 out of 10 opportunities with minimal cueing in conversation as demonstrated through speaking, reading, and writing in the classroom.

Objectives

At the 9 week grading period (or the specific date), ____ will use common compound words to determine the two words that are joined together in (single words, use in sentences, understand from a story) in 8/10 of the opportunities with (min, moderate or max) cues.

Goal for Derivational Morphology

Standards for derivational morphology will mostly be 3rd grade through high school.

Goal

At the end of the second semester, student will increase English prefixes and suffixes skills in order to understand and express -list derivations based on grade level standards or state most common prefixes and/or suffixes in 8 out of 10 opportunities with minimal cueing in conversation as demonstrated through speaking, reading, and writing in the classroom.

Objectives

Follow example from inflections. Change from inflections to the specific affixes or roots being targeted.

Examples from Kentucky Academic Standards

Compound Words

RF.1.3 e. With adult support, decode two-syllable words by breaking the words into syllables. (Can be used for goals for compound words).

Inflections

L.K.1 b. regular plural nouns by orally adding /s/ or /es/.

L.1.1 b. singular and plural nouns with matching verbs in basic sentences. c. personal, possessive, and indefinite pronouns in a sentence.

L.2.1 frequently occurring irregular nouns. past tense of frequently occurring irregular verbs

L.3.1 Form and use regular and irregular plural nouns.

Derivations

L.2.4 Determine the meaning of the new word formed when a known prefix is added to a known word.

Use a known root word as a clue to the meaning of an unknown word with the same root.

RF.3.3 Identify, decode, and know the meaning of words with the most common prefixes and derivational suffixes, including Latin suffixes.

L.4.4 & L.5.4 Use common affixes and roots as clues to the meaning of a word.

L.6.4, L.7.4 & L.8.4. Use Greek and Latin affixes and roots as clues to the meaning of a word.

L.9-10.4 Identify and correctly use patterns of word changes that indicate different meanings or parts of speech.

L.11-12.4 Identify and correctly use patterns of word changes that indicate different meanings or parts of speech.

Reflection

How would you systematically target morphology to support SSD, phonology, syntax, and semantics?

Review

We know that $\frac{1}{2}$ of English words are morphologically complex. How do you or how will you develop a systematic approach to targeting morphology?

Do you directly treat morphology? If yes, how can you use the Steps in Morphology Intervention to provide a more systematic approach? If you are not targeting morphology, what goals or strategies might you add to begin treating morphology? How can you incorporate morphology strategies when you are targeting speech?

Conclusion

By targeting morphology, you are providing the student with an advantage for phonological awareness skills, morphosyntax, and semantics which are all important for literacy and academic success. By using morphology strategies to target speech sounds, the student will gain both morphology skills and speech sound development at the same time.

Case Study

We will review the following case study:

Questions

1. What is this student's speech and language profile?
2. What goals and objectives would you set?
3. What therapy strategies would you use that could incorporate speech and language?
4. How will you connect the goals/objectives/strategies to the classroom/curriculum/areas of study?

Age: 6 years 9 months

Grade: Second $\frac{1}{2}$ of First

STRUCTURED PHOTO ARTICULATION TEST D 3 (SPAT D 3)

The SPAT D 3 provides a quantitative analysis of 65 singleton consonants and 17 consonant blends at the word level are elicited by 36 color photographs

Total Score	55
Standard Score	61
Percentile	3

Student demonstrated the following errors: /s/, /z/, voiced /th/, and unvoiced /th/ and inconsistent errors for /l/. For /s/, the sound is slightly distorted with lateralization in words with a /s/ and a /s/ blend. In the medial position (i.e.: pencil), the /s/ was produced as a /ch/. /z/ appears to be slightly easier to produce. Student demonstrated difficulty with medial /l/ (yewow for yellow). Student reduces syllables (i.e.: efant for elephant) and adds syllables (i.e.: filag for flag). A vowel error was noted with /i/ replacing /e/ in the word “pencil.” He was stimulable for all sounds and syllable production except for the /s/ at this time. Multisensory cues were used when assessing for stimulability.

Test of Auditory Comprehension of Language (TACL-4)

The TACL 4 measures a student’s ability to understand three forms of language. Vocabulary includes nouns, verbs, adjectives, and adverbs and words that represent basic concepts. Grammatical morphemes include the meaning of function words. Elaborated phrases/sentences measure syntactically based word relations and sentence construction.

	Raw Score	Percentile	Scaled Score	Description
Vocabulary	35	9	6	Below Average
Grammatical Morphemes	28	1	3	Impaired
Elaborated Phrases/Sentences	21	<1	2	Impaired

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Sum of Standard Scores	11
Receptive Language Index	61
Percentile	<1

Student demonstrated results that are similar to those of the Clinical Evaluation of Language Fundamentals 5 given by the psychologist. This test was chosen due to the impact of morphology (smallest unit of meaning) has on reading fluency, accuracy as well as comprehension, and syntax (sentence structure and grammar) has on reading comprehension. Specific results include:

- **Vocabulary:** This vocabulary measure assesses adverbs, adjectives, verbs (including irregular past tense) and basic concepts. Student demonstrated difficulty with the concepts of left/right, pair, and words with multiple meaning such as polish
- **Grammatical Morphemes:** This subtest measures both inflectional morphemes (plural –s, –ing, past tense, possessive nouns, and third person singular) as well as derivational morphology (prefixes, suffixes, root words). Student demonstrates mastery of contractions for “he is”. She used –ing consistently but not always for the answer. She demonstrated difficulty with the most common prefixes (un for untie)
- **Elaborated Phrases/Sentences:** This subtest measures increasingly complex sentences. Student understood negation and negation within a contraction (isn’t), a relative clause in the middle of a sentence (The boy who was laughing saw the girl.). She demonstrates mastery of sentences with 2 subjects and compound sentences. She demonstrated difficulty with sentences that included adjectives, and sentences with a direct and indirect object (She shows the boy the girl.).

Test of Expressive Language (TEXL)

The TEXL is conormed with the TACL 4 measuring the expressive ability of a student of the aforementioned language areas.

	Raw Score	Percentile	Scaled Score	Description
Vocabulary	19	5	5	Borderline

SSD and Speech to Print: What They Have in Common

Grammatical Morphemes	19	1	3	Impaired
Elaborated Phrases/Sentences	7	2	4	Borderline

Sum of Standard Scores	12
Expressive Language Index	65
Percentile	1

Again, these results are commensurate with the language scores obtained by the psychologist.

Specific results include:

- **Vocabulary:** This vocabulary measure assesses adverbs, adjectives, verbs (including irregular past tense) and basic concepts. Student demonstrated the correct use of plural –s, pronouns, and partial mastery of –ing. She demonstrated some difficulty with higher level spatial concepts (under, behind, next to), and irregular past tense verbs.
- **Grammatical Morphemes:** This subtest measures both inflectional morphemes (plural –s, -ing, past tense, possessive nouns, and third person singular) as well as derivational morphology (prefixes, suffixes, root words). Student demonstrates mastery of plural –s (boys), and -er (farmer). She demonstrates partial mastery of third person singular verbs (looks). She demonstrated greater difficulty with –ing for future tense (is going) and irregular past tense (drank).
- **Elaborated Phrases/Sentences:** This subtest measures increasingly complex sentences. Student expresses is + ing and a color + a noun. She appeared to have more difficulty in figuring out what the meaning of the sentence prompt in order to respond correctly.

Profile of Phonological Awareness Test

Student's phonological awareness skills were evaluated utilizing the Profile of Phonological Awareness (Pro-PA). The Pro-PA is an individually administered qualitative clinical tool for screening, identification, and follow-up evaluation of phonological awareness skills in English speaking individuals. The Pro-PA can be used with individuals

of all age groups; it provides qualitative information regarding a student's phonological awareness skills. The profile generated by the Pro-

PA indicates student's skill levels in the various areas of phonological awareness. It is important to take into consideration that the Pro-PA describes skill level independent of developmental norms; therefore, errors may be developmentally appropriate

The Pro-PA analyzes a student's responses and describes if a student has likely achieved the skill, if the skill is emerging, or if the student has likely not achieved the skill. Results obtained on this session are presented and explained below:

1. Rhyme:

Rhyming encompasses whether a student can recognize if three words rhyme and also produce two rhyming words for a given word. Interpret 'emerging' with caution: Random guessing or responding yes or no to all items would result in an 'emerging' score.

Rhyme identification 5/ 6 83% ACHIEVED (Skill expected by age 5)

Rhyme production 4/ 6 80% ACHIEVED (5 ½ year old skill)

During the rhyming identification, if words began with the same letter, he would initially remark that the words rhymed. He would then think about it and correct his response.

2. Blending:

Blending encompasses whether a student can blend syllables or sounds to guess the broken up word.

Syllables (ta-ble) 6 / 6 100% ACHIEVED

Sounds (p-o-t) 3 / 5 60% EMERGING (6 year old skill)

Student was able to blend syllables but demonstrated some difficulty with blending sounds with consonant blends (i.e.: bl, cl). These are kindergarten/grade one skills.

3. Isolating:

Isolating encompasses whether a student can identify the first, last, or middle sound in a word and separate it from any of the surrounding sounds.

Isolating Overall: EMERGING (40%)

First sound 3 / 6 50% ACHIEVED (5 ½ year old skill)

Last sound 3 / 6 50% EMERGING (6 year old skill)

Middle (vowel) sound 1 / 5 20% NOT ACHIEVED (6 year old skill)

Student was able to isolate the first sound in a word ("What is the first sound you hear in 'hot'"). During the subtest to identify the ending sound, he would often state the first

sound in the word. He demonstrated difficulty isolating the vowel sound in the middle of words. The ability to isolate final sounds is a kindergarten level skill. The ability to isolate sounds in the middle of words is a kindergarten/grade one skill.

4. Segmenting:

Segmenting encompasses whether a student can break up words in sentences, syllables in words, and sounds in words.

Segmenting Overall: EMERGING (57%)

Words 4 / 5 80% ACHIEVED

Syllables 5 / 6 83% ACHIEVED (6 year old skill)

Sounds 2 / 5 40% NOT ACHIEVED

Sounds with consonant 0 / 3 0% NOT ACHIEVED (6 ½ year old skill)

Student is able to state the number of words in a sentence and the number of syllables in a word. He demonstrated difficulty isolating sounds in words for words that had consonant-vowel-consonant and consonant blend-vowel-consonant. Segmenting sounds is a kindergarten/grade one skill.

5. Deletion:

Deleting encompasses whether a student can omit a syllable from a word or the first sound from a word.

Deletion Overall: EMERGING (33%)

Syllables 3 / 5 60% EMERGING (6 year old skill)

First sound 2 / 5 40% EMERGING (7 year old skill)

First sound with consonant 0 / 3 0% NOT ACHIEVED (8 year old skill)

Student demonstrates emerging abilities to manipulate words. He demonstrated his greatest difficulty being able to delete one consonant in a consonant blend. This is a grade one skill.

6. Substitution:

Substituting encompasses whether a student can isolate and then change the first or last sound in a word in order to change the word.

Substitution Overall: EMERGING (55%)

First sound 5 / 5 100% ACHIEVED

Last sound 0 / 4 0% NOT ACHIEVED (6 ½ year old skill)



Instructional Planning Report for [REDACTED]

Printed Friday, March 24, 2017 1:48:34 PM

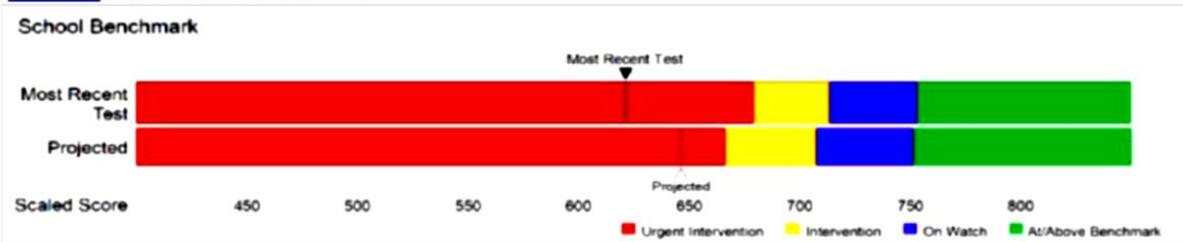
School: [REDACTED]
Class: Sr [REDACTED]

Teacher: [REDACTED]

Star Early Literacy Test Results

Current SS (Scaled Score) 621 Test Date: 04/25/2017
 Literacy Classification: Late Emergent Reader Est. ORF: 16
 Projected SS for 6/30/17: 646 Based on research, 50% of students at this student's level will achieve this much growth.

Current Performance



Suggested Skills

[REDACTED]'s Star Early Literacy scaled score(s) suggest these skills from Core Progress™ learning progressions would be challenging, but not too difficult for him. Combine this information with your own knowledge of the student and use your professional judgment when designing an instructional program. Use the Core Progress learning progressions to see how these skills fit within the larger context of the progression.

Reading: Foundational Skills	
GR	<p>Print Concepts This score suggests [REDACTED] should practice the following skills to improve understanding of print concepts.</p> <ul style="list-style-type: none"> K » Name, rapidly and automatically, the letters of the alphabet K Name all the letters of the alphabet and recognize their lower- and uppercase forms (e.g., pick another way to write the letter G from q, g, j) K Recognize the sounds of letters in lower- and uppercase form K Know the order of the alphabet (e.g., identify letters that come before or after another letter; sing the alphabet song) 1 » Locate the capital letter that begins a sentence, and the period, question mark, or exclamation point that ends it 1 » Distinguish kinds of sentences based on their end punctuation 1 » Identify the dialogue that quotation marks indicate
	<p>Phonological Awareness This score suggests [REDACTED] should practice the following phonological awareness skills, particularly those dealing with individual phonemes.</p> <ul style="list-style-type: none"> K » Isolate, say, and distinguish initial or final phonemes in spoken CVC words (e.g., say the initial sound in hat, the final sound in cup) K Recognize, identify, and produce groups of words that begin with the same initial sound (i.e., alliterative words) K Isolate, say, match, and distinguish medial short vowel sounds in spoken CVC words (e.g., say the middle vowel sound in bed) K » Isolate and distinguish short vowel sounds in single-syllable words in spoken language (e.g., from a verbal prompt, identify that hat has a different middle vowel sound than hit)

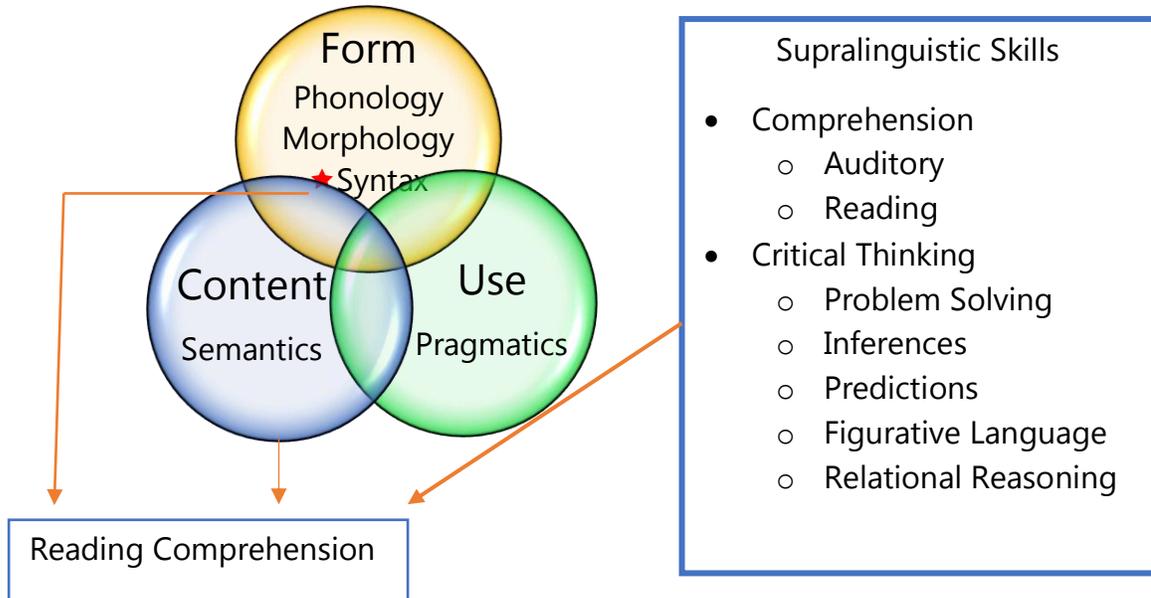
Review: Questions

1. What is this student's speech and language profile?	2. What goals and objectives would you set?
3. What therapy strategies would you use that could incorporate speech and language?	4. How will you connect the goals/objectives/strategies to the classroom/curriculum/areas of study?

Conclusion

By targeting morphology, we can aid in reading fluency and accuracy for our students. We should target inflectional morphology before we set specific goals for derivational morphology. There will be some overall (i.e.: replay, playful) of words that the students hear in their everyday environment.

Auditory & Reading Comprehension: Syntax, Semantics, Supralinguistic Skills, & Semantics



Importance of (Morpho)Syntax

1. Verb voice and clause structures—structures that contain a subject and a verb—affect comprehension and recall. Readers recall independent clauses (“He used the help system”) faster than dependent clauses—clauses containing a subordinating conjunction (“Before he used the system . . .”) (Townsend, Ottaviano, and Bever 1979, Craghead and Donnelly 1982).
2. Readers also make more comprehension errors with relative clauses—clauses that contain a relative pronoun such as who, that, or which—that are embedded in the middle of a sentence (“The report that John wrote won an award”) than with relative clauses that are at the end of a sentence (“The society gave an award to the report that John wrote”) (Craghead and Donnelly 1982).
3. In 2004-2005, only 51% of students taking the ACT scored at the benchmark (C equivalency) for understanding complex text needed for college readiness. 2011 and 2012, SAT showed 43% reached a proficiency level for reading comprehension. The clearest differentiator was students’ ability to answer questions associated with complex texts (complex syntactical structure) NOT critical thinking skills.

12 Verb Tenses

	Past	Present	Future
Simple	I walked to the store. I ate ice cream.	I walk to the store. I eat ice cream.	I will walk to the store. I will eat ice cream.
Continuous	I was walking to the store. I was eating ice cream.	I am walking to the store. I am eating ice cream.	I will be walking to the store. I will be eating ice cream.
Perfect	I had walked to the store. I had eaten ice cream.	I have walked to the store. I have eaten ice cream.	I will have walked to the store. I will have eaten ice cream.
Perfect Continuous	I had been walking to the store. I had been eating ice cream.	I have been walking to the store. I have been eating ice cream.	I will have been walking to the store. I will have been eating ice cream.

Increasing the Complexity: Past Modal Verbs

In addition to the complexity of verb voices in English, it also has hypothetical or conditional past modal verbs that further increases the complexity.

Could Have, Should Have, Would Have

These past modal verbs are all used hypothetically or conditionally to talk about things that did not really happen in the past.

Could have + past participle

Could have + past participle means that something was possible in the past, but that you didn't do it.

Should have + past participle

Should have + past participle can mean something that would have been a good idea, but that you didn't do it.

Would have + past participle

1: Part of the third conditional.

- If I had had enough time, I would have gone to the store.

2: Because 'would' (and will) can also be used to show if you want to do something or not (volition), we can also use would have + past participle to talk about something you wanted to do but didn't. This is very similar to the third conditional, but we don't need an 'if clause'.

Directions

1. Systematically move through each verb tense to make sure the student understands how the verb voice is used.
2. Once the student understands the verb voice, apply it to several sentences and discuss the meaning within the sentence.

Step1: Make Sure Students Know the Tenses

1. Systematically move through each verb tense to make sure the student understands how the verb voice is used. Based on Brown (1973) order of acquisition, begin with:
 - a. Simple Present
 - b. Continuous Present
 - c. Simple Past regular verbs
 - d. Continuous Past
 - e. Simple Future
 - f. Continuous Future
 - g. Simple Past Irregular
 - h. Continuous Past Irregular
2. Once the student understands the verb voice, apply it to several sentences and discuss the meaning within the sentence.
 - a. Begin with simple sentences
 - b. Move to a simple compound sentence with easy conjunction (Mary walks to the store, and John runs to the store.)
 - c. Move to other compound sentences with other conjunctions (FANBOYS: for, and, nor, but, or, yet, so)
 - d. Move to complex sentences with a prepositional phrase at the end.
 - e. Move to complex sentences with a preposition phrase at the beginning.
 - f. Move to compound/complex

Resources

<https://7esl.com/verb-tenses/>

https://english-the-easy-way.com/Verbs/12_Verb_Tenses.html

[https://www.lavc.edu/getattachment/writingcenter/Handouts/Verb-Tenses-Handout-NEW-MAY-2018-\(1\).pdf?lang=en-US](https://www.lavc.edu/getattachment/writingcenter/Handouts/Verb-Tenses-Handout-NEW-MAY-2018-(1).pdf?lang=en-US)

<https://www.weareteachers.com/verb-tenses/>

<https://www.teacherspayteachers.com/Browse/Search:verb%20tense%20games>

Would have, could have, should have

<https://www.perfect-english-grammar.com/could-have-should-have-would-have-exercise-1.html>

[https://www.perfect-english-grammar.com/support-files/could have should have would have exercise 1.pdf](https://www.perfect-english-grammar.com/support-files/could%20have%20should%20have%20would%20have%20exercise%201.pdf)

<https://www.tolearnenglish.com/exercises/exercise-english-2/exercise-english-115309.php>

Step 2: Expand Syntax with Clause Structure

A sentence must have a subject (noun), predicate (verb), and a complete thought to be a sentence.

Progress from a Simple Sentence to Compound/Complex

The following provides sentence structures.

Types of Clauses

Independent Clause

An independent clause is complete sentence including a subject and predicate and may include an object.

Dependent Clause

A dependent clause (also known as a subordinate clause) is not a complete sentence but supports the independent clause. The dependent clause can be in front of or after the independent clause.

Types of Sentence Structure

Simple Sentence

A simple sentence is one independent clause – a complete sentence

Compound Sentence

A compound sentence is two or more independent clauses. Compound sentences are sentences that are joined together using a coordinating conjunction. These include: for, and, nor, but, or, yet, so. These are referred to as FANBOYS.

Complex Sentence

A complex sentence has one independent clause and one or more dependent clauses.

Compound/Complex Sentence

A compound/complex sentence has 2 or more independent clauses and one or more dependent clauses.

Building Complexity of Sentence Structure and Verb Voice.

Directions

1. Have the students begin with a simple sentence.
 - a. Use a variety of verb voices
 - b. Discuss the subject and predicate.
 - c. Discuss the meaning of the sentence.
2. Have the student add direct and indirect objects, adjectives, and adverbs to sentence.
 - a. Use a variety of verb voices
 - b. Discuss the subject and predicate.
 - c. Discuss the meaning of the sentence.
3. Have the student use a coordinating conjunction to make a compound sentence.
 - a. Use a variety of verb voices
 - b. Discuss the subject and predicate of each independent clause.
 - c. Discuss the meaning of the sentences together.
4. Next, target a complex sentence.
 - a. Use a variety of verb voices
 - b. Discuss the subject and predicate of the independent clause.
 - c. Discuss the meaning of the sentence.
 - d. Discuss the meaning of the dependent clauses as it relates to the independent clauses.
5. Next, target a compound/complex sentence.
 - a. Use a variety of verb voices

- b. Discuss the subject and predicate of the independent clauses.
- c. Discuss the meaning of the complete sentence.
- d. Discuss the meaning of the dependent clauses as it relates to the independent clauses.

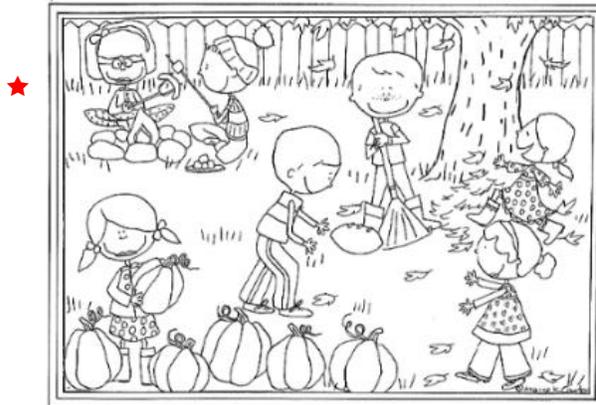
Building Up (Morpho)Syntax

The following strategies are provided to expand morphosyntax.

Pictures Depicting a Scene

Pictures depicting a scene (i.e.: Weber's Story Starters, Weber Photo Cards – Super Duper Inc. APPS: My Playhome, My Playhome School, My Playhome Store, My Playhome Hospital).

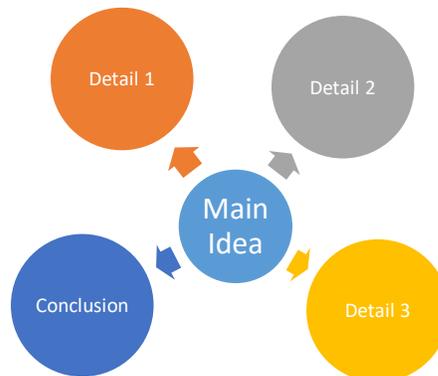
Use Step 1 and 2 for Verb Voice and Claus Structure while discussing the picture.



Write a Story about a Picture

- Use a web to assist students in writing grammatically correct sentences.
- Build on the sentence structure by adding adjectives, adverbs, phrases.

Use a Mind Map to Support Main Idea and Details



Expanding a Sentence through Questioning

“What” starts a complete sentence. The verb could be changed at this point.

For example:

The puppy slept.

The puppy will sleep.

The puppy will be sleeping.

The puppy could sleep.

The puppy would have been sleeping.

Who	The puppy (incomplete sentence but establishes the subject)	
What	The cute puppy sleeps (is sleeping, will sleep, slept, should have been sleeping etc.). (Complete independent clause) The cute puppy sleeps, and she snores. (2 independent clauses to form a compound sentence) (Complete sentence and establishes subject and predicate and adds an adjective)	
Where	The cute puppy sleeps, and she snores on her new bed. (Complex sentence with dependent clause at the end of the independent clause)	
When	At night, the cute puppy sleeps, and she snores on her bed. (Compound/Complex with dependent clauses before and after the independent clause)	
Why	At night, the cute puppy sleeps, and she snores on her bed because she is tired. (Compound/complex with 1 dependent clause before the independent clause and 2 after the independent clause)	

Link to SSD

The following activities can be used to generalize SSD. Thought and planning must be put into verb voice and clause structure as generalization is targeted.

Resource

Who, What, Where (free)

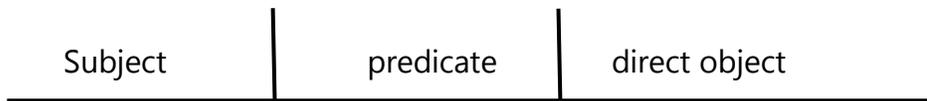
<https://www.teacherspayteachers.com/Product/WH-Questions-Speech-Therapy-Print-or-Digital-Photo-Scenes-FREE-4470712?fbclid=IwAR0hkiKv5Ln2dc494SJWY8EYPjBX59O46vxMbN8UntZyJXWfy5RTUcpxjYk>

Diagramming Sentences (Kelog and Reed System)

Diagramming sentences can support students with understanding parts of speech and the role that these words play in a sentence. This can support students in being able to identify parts of speech such as prepositions and prepositional phrases. These can then be taken off the main part of the sentence for comprehension. Then, they can be added back on for greater complexity.

Example

- Two main lines
 - Long horizontal line holds the subject, verb, certain objects, and complements (part of the predicate of a sentence and describes either the subject of the sentence or the direct object.)



Great Resources:

[Microsoft Sentence Diagrammer \(11.99 a year\)](#)

SenGram IPAD app

Jumbled Sentences

Write words on cards and have the students arrange them to form complete sentences. Instruct the student to identify the subject and predicate first. As with the modeling exercise, read the sentence and ask whether it makes sense. Students sometimes hear a syntax error that they do not see.

1. Tomorrow shopping. go I will
2. The sky. brightly sun the in shines
3. come to Do party? you want to my

<https://www.k5learning.com/free-grammar-worksheets/first-grade-1/sentences/jumbled>

<https://worksheetplace.com/index.php?function=DisplayCategory&showCategory=Y&links=3&id=468&link1=43&link2=466&link3=468>

Sentence Combination Tasks

1. Strong (1986) and Saddler (2012/2013) state that instruction should be interactive, explicit, and scaffolded. The instructor would demonstrate what the students need to do while discussing why and how to make various sentence combinations.

2. Research through meta-analyses (e.g., [Graham & Perin, 2007](#); [Graham et al., 2015](#); [Hillocks, 1986](#)) and a systematic review ([Andrews et al., 2006](#)) has established Sentence Combination as a credible, valid method of improving writing quality in comparison to traditional grammar instruction.

Sentence Combination Tasks

Websites

- <https://www.superteacherworksheets.com/sentences.html> (19.95/year subscription)
- <http://www.k12reader.com/worksheet/sentence-patterns-combining-sentences/>
- http://englishlinx.com/sentences/compound_sentences/
- http://www.softschools.com/language_arts/worksheets/combining_sentences_worksheets/

Elementary Examples from softschools.com:

Compound Subjects

1. Jessica rode the train. Mark rode the train.
2. Elizabeth likes to eat vegetables. Kevin likes to eat vegetables.
3. Mom wrapped the presents. Ian helped mom wrap the presents.

Middle School Examples from softschools.com

1. We are not allowed to play the game if it is lightning. We have seen three lightning strikes. We must call off the game.
2. Dolphins live in groups called pods. Dolphins are dedicated to the members of their pod. Dolphins will help each other if the pod is attacked or if one member is hurt.

Breaking Down Syntax

Activity: How would you breakdown the paragraph for comprehension based on understanding complex syntactical structure?

Example: Narrative Development and Syntax Together

Margo will use the fictional book, *Real Friends* by Shannon Hale (2017), to target syntax while using this book. ★It is also available on Margo's website along with a blank format.

Activity: Ask the student(s) for the subject and predicate of each sentence. You may need to discuss dependent clauses, preposition, and adverb phrases for the student to break these parts of the sentences off to get to what the sentence is about.

"I didn't understand what exactly Dallas Cowboy Cheerleaders were, but on a tv show, I'd seen all girls wanted to be one."	9
It means ... well, that Tammy's mother cannot take care of her right now, so the Anderson's took her in."	27
"When we do something bad, all he does is make us stand in the corner for five minutes."	31

Great Resources

- Sentence Building: An Early Literacy Resource (Key Education Publishing)
https://www.amazon.com/gp/product/1602680132/ref=as_li_tl?ie=UTF8&camp=1789&creative=9325&creativeASIN=1602680132&linkCode=as2&tag=mywebsit08ef9-20&linkId=5741a02fd60f1ef725710c190ffd6383
- Big Box of Sentence Building (Key Education Publishing)
https://www.amazon.com/gp/product/1602680639/ref=as_li_tl?ie=UTF8&camp=1789&creative=9325&creativeASIN=1602680639&linkCode=as2&tag=mywebsit08ef9-20&linkId=fb40592ce98cd84af9c68caabea7a503
 - Challenge the students to add additional adjectives, adverbs, conjunctions to their sentences
 - Once the students complete their sentence puzzle, have them use the pieces to write a jumble sentence for a friend to unscramble.

Ready Made Materials

- Reading List for Common Core ELA Standards
http://www.corestandards.org/assets/Appendix_B.pdf
- Apps
 - Mobile Education Apps
 - Rainbow Sentences
 - Story Builder
 - Expressive Builder
 - Sentence Builder
 - Sentence Builder Teen
 - Conversation Builder
 - Conversation Builder Teen
 - Preposition Builder

Goals and Objectives Based on Kentucky Standards

The following goals and objectives are based on Kentucky ELA Academic Standards.

Goals for SSD

Write goals for generalization whatever speech sounds or phonological process being targeted. In the activities used, make a conscientious effort to increase morphosyntax through the aforementioned strategies.

Goal for Syntax

(Timeframe), ____ will increase sentence length and verb tenses in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

Objectives for Syntax

At the 9 week grading period (or the specific date), ____ will use (simple, continuous, perfect, perfect continuous) past, present and future verb tense in simple sentences identifying the subject and predicate in 8/10 of the opportunities with moderate cues.

At the 9 week grading period (or the specific date), ____ will use past, present and future verb tenses in (compound, complex, compound/complex) sentences identifying the subject and predicate in 8/10 of the opportunities with moderate cues.

Kindergarten

RL.K.1 With prompting and support, ask and answer explicit questions about key ideas and details, and make logical inferences to construct meaning from the text.

RL.K.2 With prompting and support, orally recognize key details from a summary to demonstrate understanding of the lesson learned in the story.

RL.K.3 With prompting and support, identify characters, settings, and major events in a story in order to make meaning of the story development.

C.K.2 Compose informative and/or explanatory texts, using a combination of drawing, dictating, writing and digital resources, to establish a topic and supply information about the topic.

- a. With guidance and support from adults, strengthen writing through peer collaboration and adding details through writing and/or pictures as needed.
- d. Use grade-appropriate conjunctions to develop text structure within sentences.
- e. Use grade-appropriate transitions to develop text structure across paragraphs.

SSD and Speech to Print: What They Have in Common

L.K.1 When writing or speaking, demonstrate appropriate use of:

- c. interrogative sentences using who, what, where, when, why and how.
- d. sentences using common prepositions.
- e. complete sentences.

First Grade

RI.1.1 With prompting and support, ask and answer explicit questions about key concepts and details, and make and support logical inferences to construct meaning from the text.

L.1.1: When writing or speaking, demonstrate appropriate use of:

- a. common, proper, and possessive nouns in a sentence.
- b. singular and plural nouns with matching verbs in basic sentences.
- c. personal, possessive, and indefinite pronouns in a sentence.
- d. verbs to convey a sense of past, present and future in a sentence.
- e. frequently occurring adjectives in a sentence.
- f. frequently occurring conjunctions in a sentence.
- g. frequently occurring prepositions in a sentence.
- h. declarative, interrogative, imperative and exclamatory sentences in response to prompts.

3rd Grade

L.3.1 When writing or speaking, demonstrate command of the conventions of standard English grammar and usage.

- a. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in a grade-level text.
- b. Form and use regular and irregular plural nouns.
- c. Use abstract nouns.
- d. Form and use regular and irregular verbs.
- e. Use verb tenses.
- f. Ensure subject-verb and pronoun-antecedent agreement.
- g. and use comparative and superlative adjectives and adverbs and choose between them depending on what is to be modified.
- h. Use coordinating and subordinating conjunctions.
- i. Produce simple, compound, and complex sentences.

5th Grade

L.5.1

When writing or speaking, demonstrate command of the conventions of standard English grammar and usage.

- a. Explain the function of conjunctions, prepositions, and interjections in a grade-level text.
- b. Use the perfect verb tenses.
- c. Use verb tense to convey various times, sequences, states, and conditions.
- d. Produce complete sentences recognizing and correcting inappropriate shifts in verb tense.
- e. Use correlative conjunctions.

6th Grade

L.6.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.

- a. Vary sentence patterns for meaning, reader/listener interest and style.

9th/10th Grade

L.910.1 In both written and oral expression:

- a. Demonstrate appropriate use of parallel structure.
- b. Demonstrate appropriate use of various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent; noun, relative, adverbial) to convey specific meanings and add variety and interest to writing or presentations.

Reflection

1. How will you systematically increase verb voice and clause structure to increase auditory and reading comprehension?
2. How will you support students in breaking down complex morphosyntactical sentences to increase comprehension?

Conclusion

Morphosyntax is critical for auditory and reading comprehension. Verb voice and clause structure will significantly impact comprehension. For speech sound generalization, target morphosyntax systematically to support both auditory and reading comprehension.

Vocabulary/Semantics

Vocabulary refers to the words we must know to communicate effectively. In general, it can be described as oral vocabulary or reading vocabulary. **Oral vocabulary** refers to words that we use in speaking or recognize in listening. **Reading vocabulary** refers to words we recognize or use in print. Vocabulary from basic concepts through curriculum

based vocabulary is essential for the students to be able to fully participate in the classroom.

Vocabulary includes structure (morphology), use (grammar), meanings (semantics), and links to other words such as word/semantic relationships. Semantic relationships include categories, emotions, antonyms, synonyms, connotations (i.e.: unique/different), homophones (i.e.: suite/sweet), homographs (i.e.: read/read), and homonyms (i.e.: trunk/bat). All of these skills are necessary for speaking, listening, reading, and writing.

Vocabulary from basic concepts (Tier I) to high utility words that are used in mature language (Tier II) through curriculum based vocabulary (Tier III) is essential for students to be able to fully participate in the classroom, with friends, at home, and in their community. Beck, McKeown, and Kucan (2002) provides us a way to target vocabulary through these three tiers. They go onto state that students need to develop an interest in and awareness of words to adequately build their vocabulary. So, our ultimate goal is how we spark this interest.

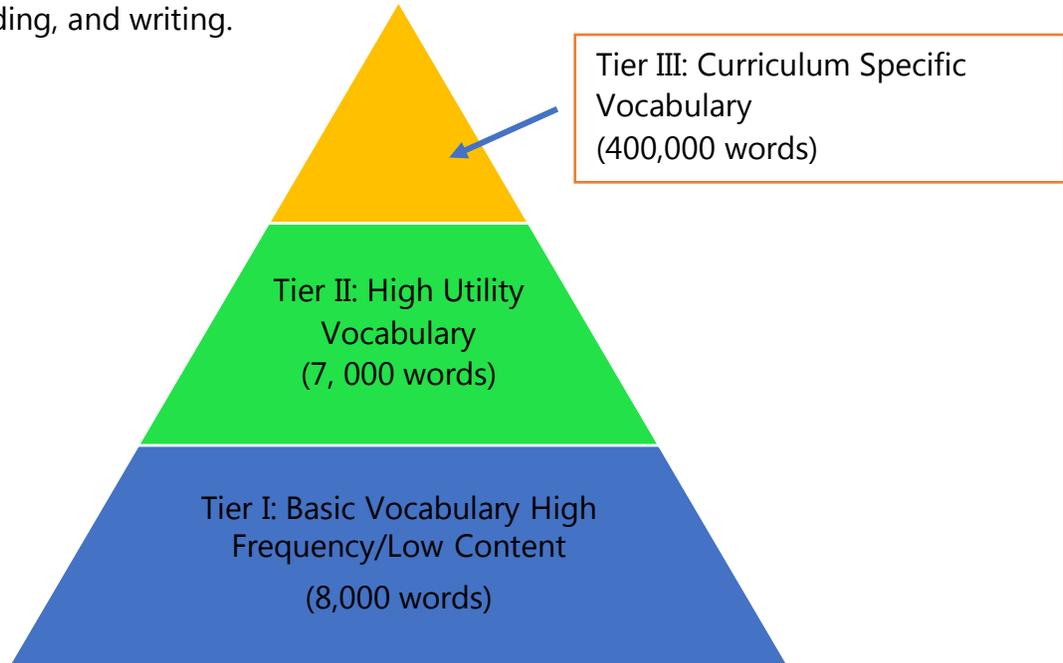
Words such as explain, describe, analyze, compare and contrast must be understood before the student can perform the function that the word describes. Beck, McKeown, and Kucan (2002) provides us a way to examine vocabulary for our students. Once the student acquires and stores vocabulary, they must be able to retrieve the words individually quickly and accurately and in discourse. This section will discuss storage and retrieval of semantics.

Link to SSD

Be conscientious when choosing the word list for targeting SSD. Choose words that will increase vocabulary at the same time as remediation of the SSD.

Three Tiers of Vocabulary

Beck, McKeown, & Omanson (1987) and Beck, McKeown, & Kucan (2002/2013) outlined a three tier model as a way to conceptualize vocabulary acquisition for speaking, listening, reading, and writing.



Vocabulary is a Building Block for Literacy

The building blocks for literacy include oral language, phonemic awareness, and phonics skills, reading fluency, VOCABULARY, and comprehension. Nagy & Anderson (1984) state that by 4th grade, the struggling reader is faced with increasing reading comprehension demands that includes exposure to thousands of unfamiliar words. For students with language disorders, vocabulary must be explicitly targeted in order to apply it to literacy development.

The Evidence

1. In a study of 8 year old children with poor reading comprehension, Nation et al (2004) found that when compared to children in the control group, those with poor reading comprehension demonstrated deficits in the language areas of **semantics and morphosyntax**.
2. According to Beck and McKeown (1991/2001), 5- to 6-year-old have a working vocabulary of 2,500 to 5,000 words.

3. Most children begin first grade with about 6,000 words of spoken vocabulary. They will learn 3,000 more words per year through third grade with only about 400 (8-10 words a week) of those words directly taught per year. They gain approximately 36,000 more by 12th grade. (Chall, 1987, Baumann & Kameenui, 1991; Beck & McKeown, 1991; Graves, 1986 Gunning, 2004/2013; Stahl & Stahl, 1999)
4. 80% of everyday speech consists of only 5,000- 7,000 words which are mostly Tier I words (Nagy & Anderson, 1984)

List of Words:

<https://gonaturalenglish.com/1000-most-common-words-in-the-english-language/>

http://infoenglish.info/3000_most_common_words.pdf

5. First grade vocabulary predicted students' reading achievement their junior year of high school (Cunningham & Stanovich, 1997).
6. Because children with weaker vocabularies are less likely to learn novel words from incidental exposure, students need more explicit vocabulary instruction. (Nicholson and Wyte, 1992; Robbins and Ehrin, 1994; Senechal, Thomas, and Monker, 1995).
7. Teaching vocabulary in rich contexts provided by authentic texts, rather than in isolated vocabulary drills, produces robust vocabulary learning (National Reading Panel, 2000).
8. Students with learning disabilities should be provided with (1) explicit vocabulary instruction, (2) repeated exposures to novel words, (3) sufficient opportunities to use words in activities, and (4) strategies to help determine word meanings independently (Farstrup & Samuels, 2008; O'Conner, 2007).

Great Resources for Lists of Words

★ All word lists and the TextTalk Lessons are hyperlinked on

www.courtercommunications.com/therapy

Great Schools Vocabulary Words 1st-12th Grade

This resource provides Tier II words to support academic content.

<https://www.greatschools.org/gk/articles/vocabulary-words-for-1st-through-12th-graders/>

Marzano's (2013) Tier I Vocabulary

Marzano provides categories of Tier I words and then superclusters that these words could be targeted through.

<http://soltreemrls3.s3-website-us-west-2.amazonaws.com/marzanoresearch.com/media/documents/List-of-Tier-1-Basic-Terms.pdf>

[This resource groups Tier I words into groups and then provides a super cluster to target each group.](#)

Marzano's Tier II Verbs

This resource provides the verbs that are used in the Common Core State Standards.

<https://soltreemrls3.s3-us-west-2.amazonaws.com/marzanoresources.com/media/documents/reproducibles/vocab-common-core/numberofcognitiveverbsineachtier2category-MR.pdf>

Marzano's Tier II Vocabulary by Subject Area

This resource targets all Tier II words by subject area from the Common Core State Standards.

<https://www.sealyisd.com/common/pages/DisplayFile.aspx?itemId=2339209>

Wagner (no date)

This resource provides an anchor word and then synonyms to that word throughout the Common Core State Standards.

https://www.wagnerhigh.net/pdf/Tier_2%20AND%20Tier%203_Common%20Core_Vocabulary_Terms.pdf

Utah's Reading First Text Talk Lessons (Tier II Vocabulary for 101 books) (2007)

This resource provides 101 read alouds to focus on vocabulary acquisition. Each read aloud provides possible Tier II vocabulary words to be targeted and then activities and assessments for each group of targeted words.

<http://vocabularyinstruction.weebly.com/uploads/3/1/3/2/31326431/texttalklessons.pdf>

Number of Exposures Needed to Learn a New Word

Gates (1931) and McCormick (1999) researched the number of exposures that a student requires to acquire new vocabulary based on IQ. These unchanged results can support our goals regarding the number of vocabulary words we expect a student to acquire based on how many exposures are needed based on IQ.

Level of Intelligence IQ Required Exposures

Significantly Above average	120-129	20
Above average	110-119	30
Average	90-109	35
Slow learner	80-89	40
Mild cognitive impairment	70-79	45
Moderate cog impairment	60-69	55

- We also know that students with language impairment require more exposures to learn a novel word than their typically developing peers (Gray, 2003).
- During interactive book reading, researchers found that children with language impairment required 36 exposures of a word to demonstrate robust word learning (Storkel Voelmle, Fierro, Flake, Fleming, Swinburne Romine, 2017).
- Even after extensive slow mapping (semantic representation of a novel word), verbal children with language impairment have poorer semantic representations that contribute to an increase in naming errors (e.g., McGregor, Newman, Reilly, & Capone, 2002).

Tier I Vocabulary

Because students entering first grade should have about 6,000 spoken words (Chall, 1987, Gunning, 2004; Stahl & Stahl, 1999), it is imperative to make sure that the youngest of students are developing the vocabulary they need for learning to read. The gap for our students will continue to widen without direct and systematic intervention.

Tier I vocabulary includes the basic concepts that we target in therapy. It also includes Dolch or Fry words that students learn to identify as they are learning to read.

- Approximately 8,000 words at this level
- Students learn to identify or decode with instruction.
- They learn to identify them in print because they are already in their speaking vocabulary.

Decreased Tier I Vocabulary Leads to A Lack of Prior Knowledge

Prior knowledge is sometimes called common sense knowledge or world knowledge. It consists of all those simple facts such as *grass is green, snakes are slimy, boats float, cars drive, red lights mean stop*. Young children may not know a concept (colors, simple nouns, and verbs) and therefore do not have the world knowledge to build basic

background knowledge. For older students, this world knowledge may interfere with revising background knowledge (flexibility in thinking). For example, *apples are red and sweet*. If a student has only been exposed to Granny Smith apples which are green and tart, this limited world knowledge may prevent them from adding to and revising what they know.

Tier I Vocabulary Basic Concepts

The following chart provides basic concept categories. The area that we start with should be based on what words are expected to be understood for participation in everyday environments including home and in the classroom. When applicable, the list is in the order of acquisition based on research.



Adjectives:						
Colors (in order)	Spatial Concepts (in order)	Quantity (in order)	Quality	Shape	Weight/ volume	Location
orange	on	one		square	big/little	top/bottom
green	in	two	open/closed	round	empty/full	outside/inside
yellow	on top	three	dirty/clean	oval	tall/short	in front/behind
blue	up	four	hard/soft	rectangle	fat/thin	heavy/light
black	off	five	old/new	octagon	large/small	up/down
white	front	zero/ nothing	wet/dry	hexagon	wide/ narrow	there/here
orange	back		used/new	heptagon	thick/thin	
pink	behind		rough/smooth		heavy/light	under/over
purple	beside		messy/neat			first/last
red	next to		noisy/quiet			above/below
	middle	all/none	weak/strong			through/around
	under	one/1 more	dark/light			left/right
brown	over	full/empty	straight/crooked			
grey	above	half/whole				
	below	less/more				
	around					
	through					

SSD and Speech to Print: What They Have in Common

Adjective: Emotion	Basic Nouns	Verbs (in order)	Pronouns (in order)	Time	Sight Words
good/bad	book	eat	I	finished/start	Dolch Words
happy/sad	boy	bite	me	night/day	Fry Words
mad	girl	kiss	you	first	
ugly/pretty	house	go	he	second	
love/hate	car	open	she	fast/slow	
weak/strong	mother	fall	his	young/old	
	father	hug	hers	near/far	
		stop	it	early/late	
		come	they		
		run	hers		
		walk	his		
		jump	theirs		
		play	my		
		stroll	mine		
		slide			



List of Dolch words: <http://www.dolchword.net/dolch-word-list-frequency-grade.html>

List of Fry words: <https://sightwords.com/sight-words/fry/>

Resources

Concept Development Milestones by Age

<https://www.naschools.net/site/handlers/filedownload.ashx?moduleinstanceid=393&dataid=2414&FileName=Concept-Development-Milestones.pdf>

Colors

Pitchford, N., & Mullen, K. (2002). Is the Basic Colour Terms in Young Children Constrained? *Perception, 31*, 1349–1370. <https://doi.org/10.1068/p3405>

<http://mvr.mcgill.ca/Kathy/PDF-00-04/Pitchford-Mullen-2002.pdf>

Parts of Speech

Owens, R., & Pavelko, S. (n.d.). *Sugar language interventions*. SUGAR Language.
Retrieved March 24, 2022, from <https://www.sugarlanguage.org/>

<https://www.sugarlanguage.org/downloads>

Prepositions

Spatial prepositions refer an object that is related to something else in terms of space or location/position. Temporal prepositions refer to how an object is related to something else in terms of time.

- Examples of spatial prepositions: above, across, against, along, among, around, at, between, behind, below, beneath, beside, by, in, inside, into, near, next to, off, on, onto, over, opposite, under, underneath, etc.
- Examples of temporal prepositions: after, around, as, before, between, by, during, for, past, since, until, with, etc.
- By 24-months, children can respond appropriately to a variety of vertical spatial terms (e.g., in, on, on top, up).
- By age 36-months, children can respond to horizontal spatial terms (e.g., front, back, behind).
- By 42 months, most can respond to horizontal, side-to-side spatial terms (e.g., beside, next to, middle) prior to utilizing these terms expressively (Chappell & Bronk, 2016; Owens, 2014).

Adjectives

1. According to Dr. Robert Owens (2010), adjectives develop in children's verbal language in the following order:
Size, color, shape, length, temperature, height, width, age, taste, odor, attractiveness, time, speed, texture, affect, and distance.
2. According to Ricks and Alt (2015), children first begin to use adjectives at about 2 years 4 months of age. This information tells us that adjectives can be taught and understood, preceding this point in a child's language development (Ricks & Alt, 2015).

Examples of Adjectives and How to Use Them

<https://examples.yourdictionary.com/examples-of-adjectives.html>

Pronouns

1. "I and me," should be targeted first followed by "you." These pronouns should be taught separately, to (a) avoid confusion, and (b) prevent frustration that may occur if the activity involves taking turns or sharing items (Owens, 2010)

Resource

Salttillo Chat Corner "All About Me and You" <https://salttillo.com/chatcorner>

2. One pronoun should be targeted at a time until the child demonstrates understanding and use of all three forms (Owens, 2010)

Numbers

Pixner, S., Dresen, V., & Moeller, K. (1AD, January 1). *Differential development of children's understanding of the cardinality of small numbers and Zero*. *Frontiers*. Retrieved March 24, 2022, from

<https://www.frontiersin.org/articles/10.3389/fpsyg.2018.01636/full>

<https://www.frontiersin.org/articles/10.3389/fpsyg.2018.01636/full>

- Children acquire the cardinal meaning of *one* while all other numbers are simply considered larger than *one* (e.g., [Sarnecka and Carey, 2008](#))
- After the *five*-knower level has been reached, most children show a change in their further development of understanding the cardinal meaning of number words. Suddenly, they seem to be able to generate the right cardinality for *five* and larger numbers. At this level, children are identified as "cardinality-knowers" ([Sarnecka and Carey, 2008](#)).
- At the age of around three-and-a-half years, children usually master the significance of cardinality by realizing that a set of five objects, labeled with the number word *five*, can also be counted *one, two, three, four, and five* ([Mix, 2009](#)).
- At the age of 5 to 6 years, at the end of preschool, however, most children understand that *zero* is a numerical concept and do correctly identify it as the smallest natural number ([Wellman and Miller, 1986](#)).

Emotions

<https://link.springer.com/article/10.1007/s42761-021-00040-2>

Grosse, G., Streubel, B., Gunzenhauser, C., & Saalbach, H. (2021). Let's Talk About Emotions: The Development of Children's Emotion Vocabulary from 4 to 11 Years of Age. *Affective Science*, 2, 150–162.

Empirical studies show that children use emotional terms from the age of two (Izard & Harris, [1995](#); Michalson & Lewis, [1985](#); Ridgeway, Waters, & Kuczaj., [1985](#)). Between 3 and 5 years, children start to name basic emotions (Denham, [1998](#); Harris, [1989](#)). Between 4 and 11 years, emotion vocabulary seems to double every second year, reaching a plateau between 12 and 16 years (Baron-Cohen et al., [2010](#); Nook et al., [2020](#)). Additionally, in a recent study, Nook, Sasse, Lambert, McLaughlin, & Sommerville. ([2020](#)) showed that the level of “abstractness” of definitions of emotion words continues to mature up until age 18.

Verbs

1. Most toddlers have 28 common verbs by 27 months (Hadley, Rispoli, & Hsu, 2016).
2. The most common verbs reported include eat, go, bite, kiss, open, hug, fall, walk, help, and sleep” Hadley, Rispoli, & Hsu, 2016 ().
3. Verbs and verb voice are necessary for producing clause constructions (Hadley, Rispoli, & Hsu, 2016; Savaldi, Harussi, Lustigman, & Soto, 2017).
4. In typically developing verbal toddlers, “children’s spontaneous production of lexical verbs at 24 months was the best lexical predictor of grammatical complexity 6 months later” (Hadley, Rispoli, M., & Hsu, 2016, p., 54).
5. Lexical verb diversity, measured during spontaneous language sampling, was a better predictor of later grammatical outcomes than noun diversity (Hadley et al., 2016).

Ways to Increase Vocabulary in Tier I

Story-based vocabulary instruction is the only proven method of increasing vocabulary in primary grades. This involves reading books aloud two or more times and explaining some word meanings on each reading. Children can acquire 8–12-word meanings per week at school-enough to maintain average vocabulary gains during the primary years. No other methods of building vocabulary in the primary years have been empirically demonstrated/evaluated (Biemiller & Boote, 2006).

Biemiller and Boote (2006) also found that repeated reading of a storybook resulted in greater average gains in word knowledge by young children. The researchers found that students made an average gain of 12% compared with the control group (children who only heard the story once). An additional 10% gain occurred when word explanations were taught directly during the reading of the storybook.

Research has shown that children who read at least 20 minutes a day outside of school experience substantially higher rates of vocabulary growth between second and fifth grade than children who do little or no reading (Anderson & Nagy, 1992).

The following section provides some ideas on how to select vocabulary from the context of a story and strategies to target the vocabulary chosen.

Overall Strategies

Frequent reading of books in class & home

- Books in the primary language
- ***When reading a book to a student for the first time, read the story from the beginning to the end without stopping. This provides the student the opportunity to hear the characters from the beginning to the end, plot, setting, conflict, conflict resolution and conclusion of the story which are needed for narrative development.***
- Rereading of books appropriate to the developmental level of the child at home and school
- Ask clarifying questions: "Why was Sally looking for Spot?" to assess acquisition of vocabulary
- Review possible new vocabulary words ***after*** reading the story (Beck, McKeown, and Kucan, 2013). Words needed for comprehension can be explained while reading and not deter from the story. Secondly, the words chosen for vocabulary will be unfamiliar and the context of the story can add to meaning.
- Build in Tier II words that may not be included in the story. For example: The kind man fed the kitten. Other words for kind from Tier II: affectionate, compassionate, considerate, courteous
- Books coordinated with ongoing classroom activities (to include specific vocabulary) (Coyne, MD, 2004)

Look For Words from Each Tier

Choose words from each Tier of vocabulary. Examples will be given for *Frog and Toad All Year* by Lobel, (1976/1996/2008/2019).

Tier I

Target words that children will hear in everyday speech. These would be common nouns, verbs, adjectives, prepositions, or concepts.

SSD and Speech to Print: What They Have in Common

Possible Targets: knock(ed), cry (cried), I, will, not, come, out, warm

Tier II

Choose words that children will overhear in a variety of environments.

Possible Targets: frog, toad, beautiful, snow pants, sled, hill, trees, rocks, awful

Other words that could be added: gorgeous (beautiful), disgusting/horrible (awful)

Tier III

Tier III words will be limited in young children's fiction but there may be words that could be targeted to build background knowledge such as season words.

Possible Targets: winter, spring, world

Possible New Tier II Words Based on Tier I Words in the Story

Knock – bang, rap

Cry - weep, whimper, sob

Warm – summery

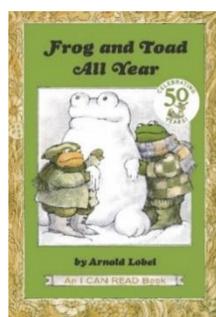
Choose The First 3-5 Words to Be Targeted

Begin with words that may be repetitive throughout the story. This will provide the multiple exposures to these words that a child needs to truly learn the words.

Vocabulary/Story Boards

Make vocabulary/story boards to go with the story: Pick out vocabulary words that you are unsure if the student knows. Put these in order so that the student can then use the pictures and vocabulary to retell the story.

As you will see from the example, some simple Tier II words are typically added as well.



Resources

Custom boards by SmartyEars app

Core First Books and Lessons

<https://www.tobiidynavox.com/products/core-first-lessons?tab=0>

Saltillo Chat Corner/Word Power Supports (53 books and stories)

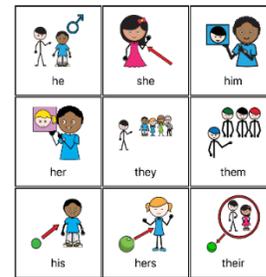
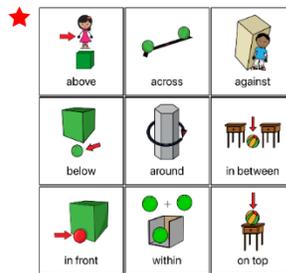
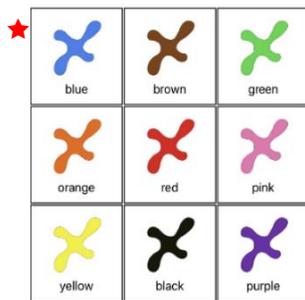
<https://saltillo.com/chatcorner>

Write a Story/Draw a Picture

After story time, ask children to draw pictures to go along with the book. Discuss the picture including any targeted vocabulary.

Target Dolch and Fry Words

There are categories of words scattered throughout the Dolch and Fry lists. Put together boards of Dolch or Fry words that are in the same category (i.e.: colors, prepositions, pronouns, verbs)



Resources

Custom boards by SmartyEars app

<https://sightwords.com/sight-words/dolch/>

<https://sightwords.com/sight-words/fry/>

Build High Frequency/Low Content Words around the High Content Words for Reading

I am crying because she will not knock.
I knocked on the green door, so she would let me in.

Tier I Summary

For students without language disorders, Tier I words are typically learned incidentally and do not need direct instruction. For students who require additional support, these words may need to be directly targeted to build world knowledge to then add to background knowledge. Since students with speech sound disorders are often in PreK-2nd grade, use Tier I words to target the speech sound errors and build vocabulary at the same time as remediating speech sounds.

Bridge Tier I to Tier II and III

Multiple Meaning Word Lists in Developmental Order

As we are teaching semantics, these multiple meaning words will support understanding of semantic ambiguity <https://www.spellingcity.com/multiple-meaning-words.html>

Functional – bat, bowl, can, cold, face, fall, fit, foot, hand, hit, light, mean, park, pet, pitcher, play, punch, ring, rock, roll, run, saw, star, stick, top, trip

Early Elementary – back, bank, bark, bend, block, board, bomb, border, box, bright, brush, cap, capital, change, character, check, checker, clear, count, cover, cycle, degree, direction, draw, drill, even, fall, fire, freeze, force, head, inch, iron, key, kind, letter, lie, line, match, mind, model, motion, mouse, odd, order, past, period, place, point, pole, power, present, property, right, rose, ruler, safe, scale, seal, season, second, shake, ship, side, solid, solution, space, spring, stamp, staple, state, story, stuff, table, tense, track, turn, watch, wave, work

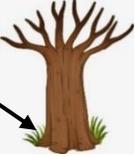
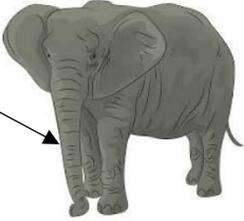
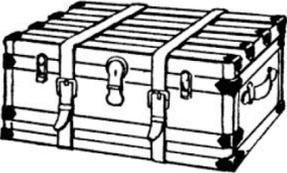
Late Elementary – act, angle, atmosphere, bitter, cast, charge, country, court, credit, current, depression, draft, due, edge, film, flood, friction, front, fuse, gum, interest, judge, negative, lean, matter, motion, organ, party, plane, plot, produce, product, raise, rate, reason, report, school, screen, sense, settle, shock, spell, source, staff, stand, staple, state, tip, wage, volume

Secondary – base, bass, chance, channel, coast, constitution, content, crop, division, formula, gravity, interest, issue, lounge, market, tissue, operation, pitch, process, program, view, value, volume, waste

Strategies for Multiple Meaning Words

Pair Word with Pictures to Represent all Meanings

 bat	 bat
---	--

 <p>trunk</p>	 <p>trunk</p>
 <p>trunk</p>	 <p>trunk</p>

Multiple Meaning Words Word Search

Directions: Find the words for each description below. Each word will occur twice.

<p>Something you do with a car when you are done driving it. A place where people play. A part of a branch or tree. What you do with glue and tape. A visit or a vacation. Another word for fall over something. The front of your head. When you turn to look at something</p>	<p>A dish that holds cereal. What is done with a ball down a lane toward pins. A metal container that holds food. Being able to do something. Another word for trip over something. The season that comes after summer. A rodent chased by cats. A computer part that controls the cursor.</p>
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Free Word Search Makers

<https://worksheets.theteacherscorner.net/make-your-own/word-search/>

<https://puzzlemaker.discoveryeducation.com/word-search>

https://www.freeeducationalresources.com/word-search-puzzles/word_search_maker.htm

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c a n p a r k b m z
q m f a c e h o o s
o a r j z s w u t
p u l k b r t l s i
t s l b t r i p e c
r e i o z a c a n k
i g u w w v k x w m
p f a l l z f a c e

Look, Match, and Say

This strategy is adapted from the Down's Education Curriculum See and Learn Language and Reading (https://www.seeandlearn.org/en-us/language-and-reading?_ga=2.206481370.894025080.1648732024-187900243.1648732024)

Words that are of high interest to the student are targeted. Then, Dolch and Fry words are paired with these high content words in phrases and sentences to give the high frequency/low content words meaning.

Goals

- Provide a visual representation to aid in retrieval
- Concentrate on high content words
- Build low content, high frequency words (Dolch and Fry words) that students have difficulty retrieving around the high content words

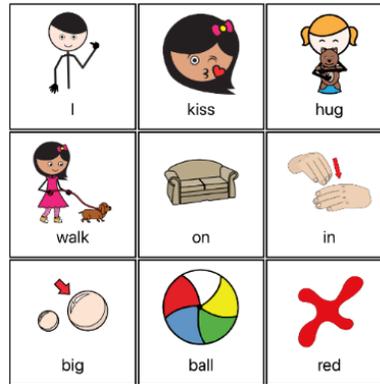
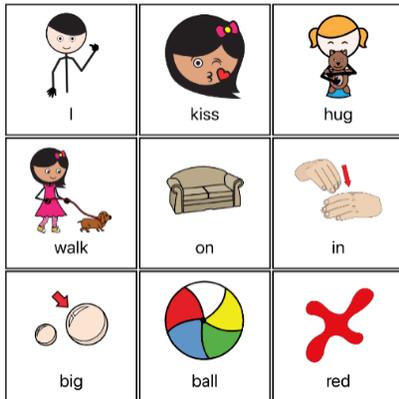
Step 1: Match Picture to Picture

1. Create a board of a category that includes high content words for the student. The example below is from a neighborhood walk.
2. Print two copies
3. Use one copy as a board
4. Take the second copy and cut out the pictures

SSD and Speech to Print: What They Have in Common

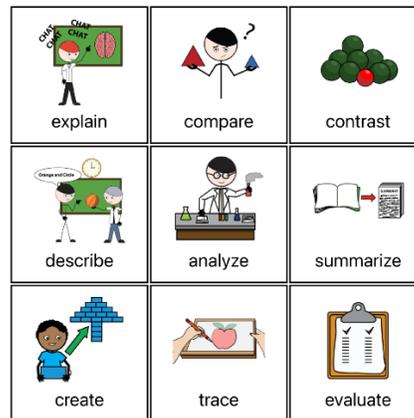
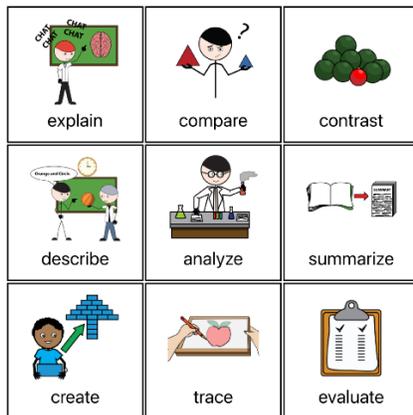
5. Have the student match picture to picture while saying the word
 - a. **Look** at the picture
 - b. **Match** the picture to the board
 - c. **Say** the word

Tier I Example

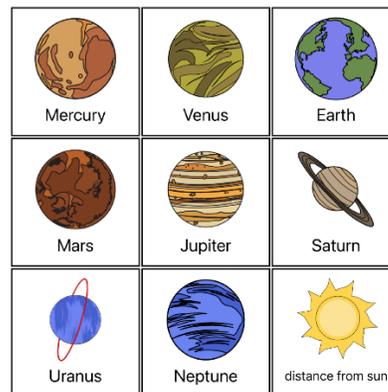
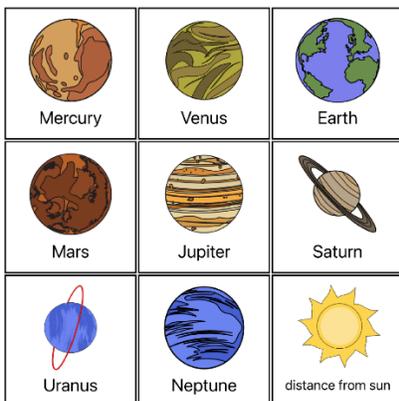


Custom boards by SmartyEars app

Tier II Example

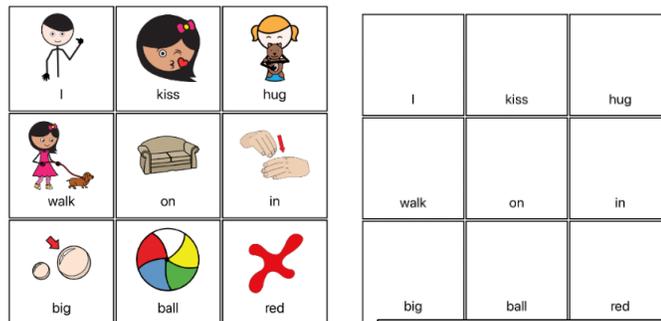


Tier III Example



Step 2: Match Word to Picture

1. Keep the picture board together
2. Make a second board which only includes the words.
3. Cut out the words and have the student match the word with the picture (Look and Match)
4. Keep the picture hidden and ask the student what the word is (Say)
5. If the student has difficulty, reveal the picture
6. Repeat going through the words (and showing picture if needed) until the student can quickly recall each word
7. Don't move onto Step 3 until the student can recall the word without looking at the picture.

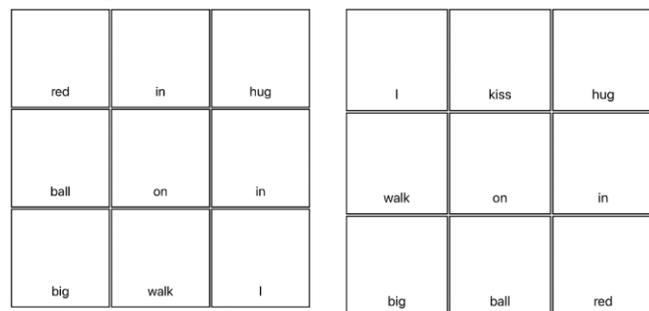


Custom boards by SmartyEars app

Step 3: Match Word to Word

1. Keep 1 word board together. Notice that the words are now in different locations on the board.
2. Cut out the words from the other board and have the student match the word with the word.
3. If the student has difficulty retrieving the word, show them the picture from a previous board.
4. Repeat going through the words (and showing picture if needed) until the student can quickly recall each word.

Step 3 Example



Step 4: Use the Word Cards as Flashcards.

Custom boards by SmartyEars app

1. Show the student the card.
2. The student should say the word.
 - a. If the student cannot retrieve the word, go back to Step 3

Step 5: Build High Frequency/Low Content Words around the High Content Words

1. Use the words from Step 1-4 to put into sentences.
2. Add Dolch or Fry words.

Examples

The dog is by the mailbox.

The dog is in the wagon.

Bridging Tier I to Tier II Summary

Students without language/learning differences often develop Tier I vocabulary through incidental exposure. The students with language/learning differences often need these words explicitly taught. Students are being exposed to Tier II and possible Tier III words while they are still learning Tier I, so always bridge the gap and introduce Tier II as well. For speech sound skills, use multimeaning words that contain the speech sounds targeted to boost vocabulary at the same time as speech sound acquisition.

Tier II and Tier III

What is included in Tier II and Tier III will be included in the chart below. The same strategies that we can use to increase Tier II can also be used for Tier III.

Tier II High Frequency Words	Tier III Low Frequency Content Specific
<ul style="list-style-type: none">• Approximately 7,000 words that occur in mature language situations and literature• High utility words (practical in use)• Important for auditory and reading comprehension• Used across a variety of environments• Characteristics of mature language users• Descriptive words• Most important to teach because they are assumed that the students know them• Affixes and root words should be taught for Tier II as well	<ul style="list-style-type: none">• Approximately 400,000 words• Academic subjects• Hobbies• Occupations• Geographic regions• Technology• Weather

Determining a Tier II Word

Beck, McKeown, & Kucan (2013) provides a way to determine if a Tier II word is useful to a student to have a more precise and mature way to refer to ideas they already know about.

These include:

1. What is the importance and utility for the student? Are they frequently used across a variety of domains?
2. Does the word have instructional potential? The word offers a variety of contexts and uses to explore. This would be words with multiple meanings. For example: Draft
 - a. A noun refers to a current of air into an enclosed space.
 - b. A noun that refers to a version of a document, plan, or drawing. (A rough draft of a paper)
 - c. A noun that refers to a military draft. (It can also be a verb: To be drafted).
 - d. A noun referring to a sports draft. (To allocate players to a team)
3. Does the student already have a way to express the concepts (conceptual understanding) represented by the word?
4. Would students be able to explain the word using words they already know?

For example: The student knows the word "build." By teaching create, compose, construct, the student can express the same idea but with words that better represent the action. These synonyms are also used in the classroom which would lead to a deeper understanding when listening and completing activities and projects.

Targeting Tier III Words

Targeting Tier III may focus on content knowledge rather than vocabulary instruction and building due to the small utility and context that the words are used. Simply stated, the Tier III words may need to be discussed to understand the concepts but do not need to be targeted for robust instruction.

Tier II and Tier III Vocabulary Instruction

In the review of literature by Marzano, Pickering, and Pollack (2001), the following summary is provided.

1. Students must encounter words in multiple contexts to truly learn and apply a novel word.

2. Direct and explicit instruction in novel words enhances learning those words in context.
3. Dictionary definition does not typically support learning novel words for students with language impairments. They will often copy words that they do not know within the definition. There are dictionaries that provide user friendly definitions including www.onelook.com and <https://www.collinsdictionary.com/us/>
4. One of the best ways to learn a novel word is to associate an image with it (nonlinguistic representation).
5. Direct instruction on words that are critical to new content produces the most powerful learning.

Strategies

Beck, McKeown, & Kucan (1987/2002/2013) state that words that students overhear and see in a variety of contexts should be words that are targeted for vocabulary development. Therefore, this would mostly be Tier II words or Tier III words that would have utility both as a Tier II and a Tier III word (example: factor). As stated previously, Tier III may need to be discussed so that the student understood the concept or examples representing the topic but would not require explicit robust vocabulary instruction.

Explicit Instruction

Explicit instruction is important to make sure that students receive enough exposures to a word to truly make it their own. The following section will outline that explicit instruction.

Reminder: Morphology and Vocabulary

If a student knows the meanings of affixes and roots, they can figure out novel words that includes these affixes and/or roots.

Evidence

1. Morphology is powerful, for those who know morphemes, understand that the meanings of words are predictable from the meanings of their parts (Nagy & Anderson, 1984).
2. Kirby and Bowers (2012) emphasize that “morphology works” as it helps increase vocabulary knowledge and understanding and it predicts reading development and achievement.

Please refer to the section on morphology in this module. As you target morphology, also apply the meaning of the words to increase vocabulary acquisition.

Steps to Teaching Vocabulary through Morphology

1. Teach most common prefixes and suffixes first.
2. Check curriculum material for any affixes or Greek/Latin roots being targeted either directly or through materials used in the class.
3. Teach the meaning of the affix first
4. Apply it to a familiar word.
5. Apply to novel words/roots
6. Provide enough exposures to cement the meaning

Six Step Explicit Approach to Teach New Vocabulary

Marzano (2004) provides a six-step approach to teaching new vocabulary (The first three steps introduce and develop initial understanding, while the last three steps shape and sharpen understanding.) The ultimate goal is to make students' curious about words and recognizing when a novel word is encountered and be intrigued by figuring out the meaning. This is the hallmark of to develop a large vocabulary (Beck, McKeown, and Kucan, 2013).

*****Students keep a vocabulary notebook

Step 1

Provide a description, explanation, or example of the new term.

Example

Loneliness - unhappiness that is felt by someone because they do not have any friends or do not have anyone to talk to (Collins COBUILD Dictionary online)

Resources

The following online vocabulary sites provide a user friendly definition.

One Look Dictionary

www.onelook.com

Provides resources for user friendly definitions.

Collins COBUILD

Designed for English Learners and provides ten languages. Provides a user friendly definition that can be used for Step 1

<https://www.collinsdictionary.com/us/>

Longman Dictionary

<https://www.ldoceonline.com/>

Step 2

Ask students to restate the description, explanation, or example in their own words (linguistic).

Example

My loneliness is due to moving to a new school and not knowing anyone.

Step 3

Ask students to construct a picture, symbol, or graphic representing the term (nonlinguistic).

- a) Nonlinguistic representations include graphic organizers, physical models, mental images, pictures and pictographs, and kinesthetic activity.

Example



Step 4

Engage students periodically in activities that help them add to their knowledge of terms in their notebooks.

Example/Nonexample (Beck, McKeown, and Kucan, 2013)

Ask the student if an example illustrates the targeted word. Then ask why or why not.

Directions:

If I say something that shows loneliness, say loneliness. If it does not, do not say anything. Then answer why it is an example.

Loneliness

She does not have many friends (not having friends would make you unhappy).

The man lived by himself.

The group invited me to go to the ballgame with them.

Step 5

Periodically ask students to discuss the terms with one another.

Inside/Outside Circle

To learn new vocabulary, students are given a word that they must describe to their circle partners. Using the descriptions, the partner must guess the word that is being described.

Step 6

Involve students periodically in games that allow them to play with terms. (Marzano & Pickering 2005, pp. 14-15)

Trashketball

Directions:

1. First, divide a piece of paper into halves or fourths.
2. On each fourth write a user friendly definition, synonym, antonym, or sentence for all of the vocabulary words and place them in a stack upside down.
3. The first player from a team gets a paper and reads what it says aloud. The player and everyone else in the class writes down the vocabulary word on a dry erase board or piece of paper.
4. If the player's answer is correct their team gets one point. Then they crumble up the paper and get to throw it in the trash can for an extra point.
5. Play continues to the next team. At the end of the game, the team with the most points wins!

<https://iheartteachingelementary.com/classroom-vocabulary-games/#:~:text=Trashketball%20Vocabulary&text=First%2C%20divide%20a%20piece%20of,I%20usually%20do%2C%20make%20duplicates.>

How to Choose Tier II Words

The following criteria presented by Beck, McKeown, and Kucan (2013) is provided to identify Tier II Words

- *Importance and utility:* Words that are characteristic of mature language users, appear frequently across a variety of domains, and have a practical use for the student.
- *Instructional potential:* Words that can be worked with in a variety of ways so that students can build rich representations of them and of their connections to other words and concepts.
- *Conceptual understanding:* Words for which students understand the general concept but provide precision and specificity in describing the concept.

How to Choose Tier III Words

The following criteria presented by Beck, McKeown, and Kucan (2013) is provided to identify Tier III Words. Again, remember that unless the student has a high interest in a specific topic, Tier III may only be explained for content and not targeted for vocabulary acquisition.

- Choose words specific to the area of study such as social studies or science unit.
- Choose words from specific areas of study that can build background knowledge to be built upon from year to year or subject to subject.
- Choose words that may have a different meaning as a Tier II Word. Target both the Tier II and Tier III meaning together.

Specific Strategies

The following strategies provide an explicit way to target vocabulary.

Larry Bell's 12 Powerful Words

Larry Bell (2005) in his book, 12 Powerful Words that Increase Test Scores and Help Close the Achievement Gap provides 12 Tier II words he feels every student should know starting in kindergarten. These same words trip up students on standardized tests and other tests in school. Teachers often use these words in class as well.

12 Power Words Flash Mob

<https://youtu.be/4-yERHSS2t4>

12 Powerful Words

WORD	STUDENT FRIENDLY PHRASE
1. Trace	List in steps
2. Analyze	Break apart
3. Infer	Read between the lines
4. Evaluate	Judge
5. Formulate	Create
6. Describe	Tell all about,
7. Support	Back up with details
8. Explain	Tell how
9. Summarize	Give me the short version
10. Compare	All the ways they are alike
11. Contrast	All the ways they are different
12. Predict	What will happen next

★ Knowledge Rating Scale

The following rating scale by Blachowicz & Fisher (2004) is a useful tool to determine which words a student knows and which they do not. This can then be used to determine which words should be targeted. This scale is based on the research by Dale (1965) and Beck and colleagues (1987) suggested a continuum of learning new vocabulary.

Stage 1: Never saw or heard it before. The student has no knowledge of the word.

Stage 2: Heard it but doesn't know the meaning but may have a general sense of the meaning. For example: liberty is good (from the Pledge of Allegiance)

Stage 3: Know the word within the context that in which it is used and needs the context to try to explain. (The cacophony of the multiple alarms was deafening.)

Stage 4: Knows it well. Knows the word in a variety of contexts, how it relates to other words that it might be used with and can use it metaphorically.

Word	Know It Well (4)	Seen or Heard It (2)	Have No Clue (1)	Recognize it in context as having something to do with (3)	What It Means

Vocabulary Analysis: ★ Frayer Model

The Frayer Model (Frayer, Frederick, & Klausmeier, 1969) includes the linguistic and nonlinguistic representation required for students to make words their own.

Vocabulary Worksheet

Name: _____ Class: _____ Score: ____ / ____

Definition Facts/characteristics	Picture
Synonym	Antonym



Use in a Sentence:

Step 1

The educator provides a user friendly definition including synonyms and antonyms if appropriate.

Step 2

The student restates in his/her own words before drawing a picture to make sure the student truly understands the definition. (i.e., "If you were to draw a picture, what would it be?")

Step 3

If the student's definition matches the meaning of the word, the student then draws a picture.

Step 4

The student then tells the educator what the sentence will be before he/she writes the sentence.

Highly Occurring Words from State Academic Standards

For students to participate fully in the classroom, one must understand the vocabulary that the teachers are using as well as those that they will see on assignments. Please refer to the resources on page 3 of this handout for resources.

Wagner (nd) provides an anchor word with synonyms from the Common Core State Standards. Words such as add to, arrange, collaborate, compare/contrast, create, decide, define, elaborate, evaluate, execute, explain, etc. could be targeted for vocabulary and then used for the synonyms that go with each word.

https://www.wagnerhigh.net/pdf/Tier_2%20AND%20Tier%203_Common%20Core_Vocabulary_Terms.pdf

Applying the Frayer Model to the Curriculum

The following example from the Kentucky State Standards demonstrates how targeting specific vocabulary will support the students learning when a specific word or a targeted synonym is used for an assignment. The following example takes the word "create" from Wagner's list and demonstrates the synonyms that are in the Academic Standards.

Kentucky State Standards with Synonyms of Compare/Contrast: ELA

RL.4.6 Compare/contrast the point of view of first and third person narrators and the effect they have on the reader.

RL.4.9 Compare/contrast themes, topics, and patterns of events in stories, myths, and traditional literature from different cultures.

RL.5.3 Compare/contrast characters, settings, or events in a story or drama, using specific details to analyze their interaction over the course of the text.

RI.5.5 Compare/contrast the overall structure of events, ideas, concepts, or information in two or more texts.

RL.6.7 Compare/contrast reading a print text and viewing its visual/oral presentation.

RL.7.7 Compare/contrast reading a print text and viewing its visual/oral presentation, analyzing the effects of techniques unique to each medium.

Kentucky State Standards with Synonyms of Compare/Contrast: Science

Waves: Waves and Information Crosscutting Concepts

Patterns: Similarities and differences in patterns can be used to sort and classify natural phenomena. (4PS4-1) Similarities and differences in patterns can be used to sort and classify designed products. (4-PS43)

Space Systems: Stars and the Solar System Crosscutting Concepts

Patterns: Similarities and differences in patterns can be used to sort, classify, communicate, and analyze simple rates of change for natural phenomena. (5-ESS1-2)

MS. Interdependent Relationships in Ecosystems

LS2.A: Interdependent Relationships in Ecosystems Similarly, predatory interactions may reduce the number of organisms or eliminate whole populations of organisms. Mutually beneficial interactions, in contrast, may become so interdependent that each organism requires the other for survival. (06LS2-2)

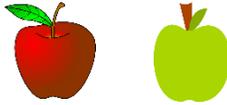
Using the Frayer Model to Target an Anchor Word and Synonyms

The following demonstrates how to apply the Frayer Model to build synonyms for Tier II vocabulary. This example is for the word link as the anchor word. Then this word is applied to compare which can then be applied to contrast.

<p>Definition Facts/Characteristics</p> <p>something that goes together</p>	<p style="text-align: right;">Picture</p> <div style="text-align: center;">  </div>
<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <p>link</p> </div>	
<p>Synonym</p> <p>compare, connect, match, similar, associate, classify</p>	<p style="text-align: right;">Antonym</p> <p style="text-align: center;">different, go against</p>

Sentence: _____

An apple and a banana are linked together because they are both fruits. _____

<p>Definition Facts/Characteristics</p> <p>How something is the same or almost the same</p>	<p style="text-align: right;">Picture</p> <div style="text-align: center;">  </div>
<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <p>compare</p> </div>	
<p>Synonym</p> <p>connect, link, match, similar, associate, classify</p>	<p style="text-align: right;">Antonym</p> <p style="text-align: center;">differ, go against</p>

Sentence: _____

I compared a green apple to a red apple. They are the same because they are both fruits and apples. _____

Using Sentence Frames for Vocabulary

Sentence frames are invaluable to build both Tier II vocabulary as well as background knowledge.

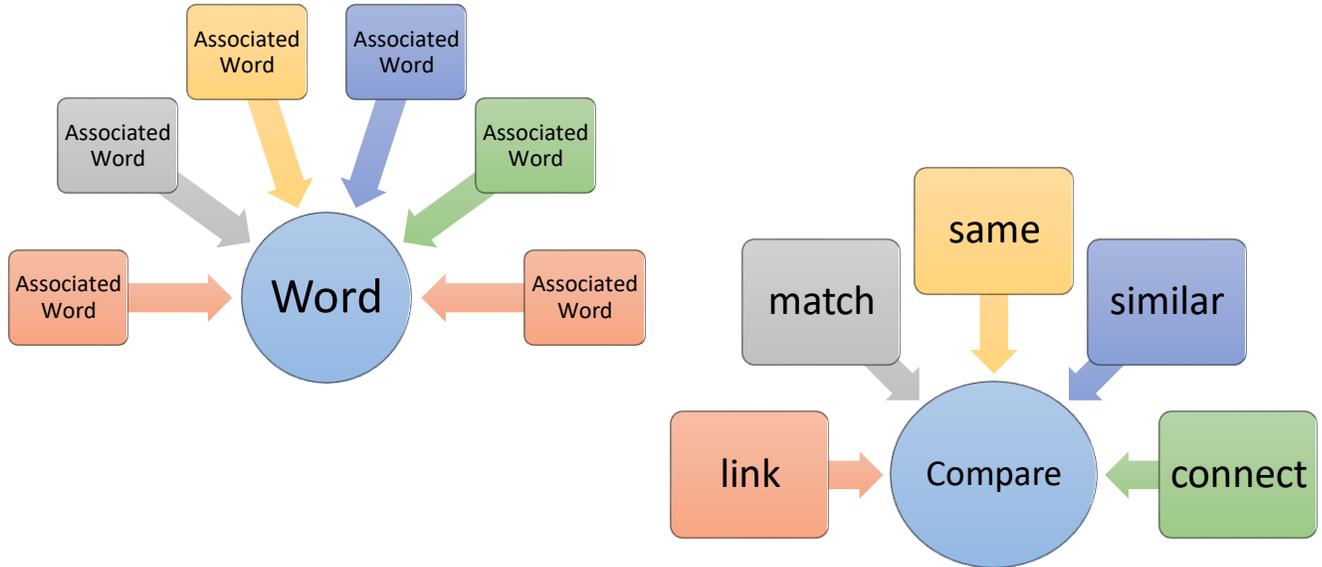
Word	Meaning	Examples
	Definition: Related Facts More in-depth information	
<p>Question: A question for deeper thinking.</p> <p>Sentence Frame:</p> <p>They are the same because _____.</p>		
<p>Picture</p>		

Example

Word	Meaning	Examples (provides different contexts)
Compare	A verb that means that something is similar or the same. Connect, link, match, similar	I compared Shannon and Adrienne in Real Friends.
<p>Question: How would you create a colonial village in Minecraft</p> <p>Sentence Frame:</p> <p>They are the same because they are both in the 3rd grade. They like to play make believe. They are different because Adrienne is easy going, very smart and popular.</p>		
<p>Picture</p> <div style="text-align: center;">  </div>		

Related Words - Making Connections within the Content

Ask student to write down all the other terms or words they know that can be associated with a particular term/word/phrase.



Use Word Clouds

<https://wordart.com/create> provides a way to make a word cloud as a fun way to view synonyms of words. Once you create your word list, click on "visualize." From there, you can print to a pdf.



Tier II to Tier III Connection: Curriculum Based Meaning - Common Language Usage

The following visual graphic strategy is beneficial as a student is determining a multimeaning of a word that is used at a Tier II and Tier III word.

Term/Phrase/Word	
Common Use of the Word	Curriculum Based Usage
Sentence Using Terms	
General Use:	Curriculum Use:
Meaning	
<input type="checkbox"/> Same <input type="checkbox"/> Different	
Picture	Picture

Identifying Unknown Vocabulary from Listening and Reading

Research has shown that children who read at least 20 minutes a day outside of school or a specific time at school that the students can read whatever they choose (sustained silent reading) experience substantially higher rates of vocabulary growth between second and fifth grade than children who do little or no reading (Anderson & Nagy, 1992).

- It calls on students to make choices, according to their own interests, which will have them reading, writing, drawing, reflecting, and discussing what they have learned with other students. In this twice-a-week or more 20- to 30-minute session, students read books of appropriate difficulty, write about their thoughts, and participate in structured dialogue with classmates.
- Students who participate for more than a year, score in the 81st percentile in vocabulary achievement, compared to the 50th percentile for students who do not take part (Marzano, 2004).

Conditions for Students to Learn Through Context

Beck, McKeown, & Kucan (2013) identify two conditions that must be met for students to learn through context.

1. Student must read widely enough to encounter a substantial number of unfamiliar words.
2. Students must have the skills to infer word meaning information from the text they read.
3. They also identify other issues of learning vocabulary from context. These include:
 - Many contexts are not informative for deriving words from the context due to the author's purpose of telling a story not to convey meaning of new words.
 - Text can be separated into four categories
 - a. Misdirective Context – may direct student to the incorrect meaning of the word.
 - b. Nondirective Contexts – offers no assistance in directing the reader toward a meaning.
 - c. General Contexts – provides enough information to place a word in a general category.
 - d. Directive Contexts – leads the student to the correct meaning of a novel word.

For students with more limited vocabulary, direct instruction for new vocabulary that cannot easily be determined through independent reading will still need to be discussed and possibly targeted for acquisition.

Strategies for Vocabulary Instruction in Context

The following strategies provide ways to support students in learning how to identify unknown words in context and then to try to obtain meaning.

Understand the part of speech of the unknown word

Support the student in understand basic parts of speech and how to identify which part of speech the word is in the sentence.

Identify its relationship with other words in a sentence

A basic sentence in English is subject, predicate, and direct object. If it is a verb, support the student in figuring out if it is the main verb in the sentence (predicate) and who does the action (subject)? Is there a direct object? For adjectives that describe a noun, who are they describing and what does the student know about this person or character?

Find morphemes

Support the student through understanding inflectional and derivational morphemes. About 60 % of the novel words a reader will encounter are morphologically

complex (Angelelli, Marinelli, & Burani, 2014). By targeting morphology directly, the student will have strategies to attempt to figure out the meaning of words. Begin with the most common prefixes and suffixes as these will be the most prevalent in words the student hears and reads.

Directions

1. Find the morphed words in the paragraph.
2. Talk about what they mean and how the student figured that out using morphemes and other information in the passage.

The following passage was presented in Supplemental Digital Content from Wolter & Green (2013).

Dinosaurs

The name dinosaur means “very terrible lizard.” Even though no human being has ever seen a real live dinosaur, we know a lot about them. Many dinosaur bones, teeth or fossils have been found all over the world. Fossils are impressions or marks made in rocks by bodies of animals or plants that died long ago. From the evidence of these fossils, scientists have figured out how dinosaurs looked, how they moved and what they ate. There were many different kinds of dinosaurs. Some were enormous. Some were very small. Some ate plants so they were herbivorous. Others were ferocious meat eaters that were carnivorous.

Example: What helps you understand the meaning of “herbivorous?”

1. The –ous ending makes in an adjective.
2. The base word “herb” may mean a plant or something you eat, like herbs from a garden.
3. The sentence says that they ate plants SO they were herbivorous, so it must have to do with eating plants.

Resources

Scholastic

http://teacher.scholastic.com/reading/bestpractices/vocabulary/pdf/prefixes_suffixes.pdf

Using English for Academic Performance (divides affixes into nouns, verbs, and adjectives)

<http://www.uefap.com/vocab/build/building.htm>

Reading Rockets

<https://www.readingrockets.org/article/root-words-roots-and-affixes>

How Would You Choose the Words to Target?

Excerpt from Pope Osborne, Homer, & Howell (2002) *One Eyed Giant* (Book One of Tales from the Odyssey). From Chapter Five: "The One-Eyed Giant"

Activity

Choose 3 words from the paragraph below that you believe should be targeted for vocabulary instruction. Justify why you choose those words.

Considerations:

1. Does the student have any familiarity with the concept or the word?
2. Does the word need to be targeted as vocabulary or just for comprehension of the paragraph?
3. Is it high utility?

The One Eyed Giant (Pope Osborne, Homer, & Howell, 2002)

A hideous giant lumbered into the clearing. He carried nearly half a forest's worth of wood on his back. His monstrous head jutted from his body like a shaggy mountain peak. A single eye bulged in the center of his forehead. The monster was Polyphemus. He was the most savage of all the Cyclopes, a race of fierce one-eyed giants who lived without laws or leader. The Cyclopes were ruthless creatures who were known to capture and devour any sailors who happened near their shores.

Target and Provide Enough Exposures

In Marzano's 6 Step Approach to Vocabulary Acquisition, steps 1-3 provide the linguistic and nonlinguistic representation for the word. Steps 4 -6 are to provide enough exposure to the targeted words that that the student truly learns the word in a variety of contexts. The following activities can provide the exposures that a student needs to truly learn a novel word. Many of these activities are suggested by Beck, McKeown, & Kucan (2013).

Step 1

Provide a description, explanation, or example of the new term.

Example from www.onelook.com

Hideous - really ugly might make you feel afraid

Lumbered - walked slowly because he was big and heavy

Monstrous - very large and often ugly or frightening

Step 2

Ask students to restate the description, explanation, or example in their own words (linguistic).

Example

The hideous monster with one eye, long ratty fur, and long claws roamed the streets of the town.

Step 3

Ask students to construct a picture, symbol, or graphic representing the term (nonlinguistic).

- b) Nonlinguistic representations include graphic organizers, physical models, mental images, pictures and pictographs, and kinesthetic activity.

Example



Step 4

Engage students periodically in activities that help them add to their knowledge of terms in their notebooks.

Example/Nonexample (Beck, McKeown, and Kucan, 2013)

Ask the student if an example illustrates the targeted word. Then ask why or why not.

Directions:

The pretty picture is hideous.

The hideous monster rose from the lake.

Her sister wore a beautiful satin suit which was hideous.

Step 5

Periodically ask students to discuss the terms with one another.

Inside/Outside Circle

To learn new vocabulary, students are given a word that they must describe to their circle partners. Using the descriptions, the partner must guess the word that is being described.

Word Associations

Students are asked to associate a novel word with a familiar word.

Word List

Novel Words	Meaning	Synonyms
Hideous Lumbered Monstrous	really ugly might make you feel afraid walked slowly because he was big and heavy very large and often ugly or frightening	Unsightly, gruesome, monstrous Shuffle, waddle, plod, thump Grotesque, hideous, ghastly

Which word goes with afraid (hideous)

Which word goes with walking slowly (lumber)

Which word goes with very large or frightening? (monstrous)

Step 6

Involve students periodically in games that allow them to play with terms. (Marzano & Pickering 2005, pp. 14-15)

Have You Ever...

Have you ever seen anything that is hideous?

Have you ever seen someone lumber?

Which Would You Rather...

Would you rather see something hideous or someone lumber?

Conversation Competition

Materials needed: • Unit's word list for each student (can also use index of book)

The Rules:

- Assign each student a partner.

SSD and Speech to Print: What They Have in Common

- When the teacher says go, the students stand up and have a specific amount of time to talk with their partners on any appropriate subject.
- They must use at least 10 of the unit's words in their conversation and check them off as they use them.
- When they have used all 10, they sit down.
- The first students to finish win a prize, but only if they share their conversation with the class and used the words correctly.

Word List

Early Elementary	Elementary Students	Middle/High Students
clearing carried forest monster forehead capture	lumber worth monstrous juttred bulged fierce	hideous savage ruthless devour

Activity: Produce a Tier II/III sentence for each Tier I sentence.

Everyone in town was sick. (include the word: sickness)

The man was lonely. (include the word: loneliness)

The red hat fits on her head.

The boy is silly.

Overall Resources

The following resources are provided for targeting vocabulary.

Utah's Reading First: Text Talk Lessons

Provides Tier II words from 101 stories and potential Tier II words from each story.

Activities to target these words are provided.

<http://vocabularyinstruction.weebly.com/uploads/3/1/3/2/31326431/texttalklessons.pdf>

Bringing Words to Life

This second edition from Beck, McKeown, and Kucan provides an explicit manner to target the tiers of vocabulary

Beck, I. L., McKeown, M. G., & Kucan, L. (2013). *Bringing words to life, second edition: Robust Vocabulary Instruction*. Guilford Publications, Incorporated.

Choosing Words to Teach

This resource from Beck, McKeown, and Kucan provides an excerpt from *Bringing Words to Life*

<https://www.readingrockets.org/article/choosing-words-teach>

One Look Dictionary

www.onelook.com

Provides resources for user friendly definitions.

Collins COBUILD

Designed for English Learners and provides ten languages. Provides a user friendly definition that can be used for Step 1

<https://www.collinsdictionary.com/us/>

Longman Dictionary

<https://www.ldoceonline.com/>

Goals and Objectives Based on Kentucky Standards

Goals for SSD

Write goals for word level, phrase level, sentence level, etc. to increase generalization whatever speech sounds or phonological process being targeted. In the activities used, make a conscientious effort to increase Tier I, Tier II, and Tier III vocabulary through the aforementioned strategies.

Scenario

Student has an IQ of 85 so will require about 40 exposures to a word to truly learn it. You estimate that the student will get 10 exposures in the classroom from the word being used in context (book, read aloud, teacher using the word) and should get 10 exposures in a set period of time outside of the classroom (parents using the word at home, hearing on the playground, from older siblings, etc.). So, you need to provide 20 exposures in therapy. It will take you 2 sessions to provide enough exposures to 3 words for the student to learn the word. (In a 9 week period or a quarter, you should be able to add 13-14 words. In a school year, you should be able to add 108 new vocabulary words.)

Vocabulary Annual Goal (Tier I)

By the end of the IEP cycle, NAME will independently use basic concepts, common verbs, adjectives, pronouns, and nouns to express wants and needs and participate in classroom activities to represent the meaning of 110 new (Tier I) vocabulary words with 80% accuracy as measured by data collection.

Objectives

- In the first quarter, NAME will understand and use simple and continuous 10 verbs with tenses for past, present, and future given no adult support with 80% accuracy.
- In _____ quarter, NAME will apply meaning of prefixes -re, pre- and suffixes un-, -ful, and -less to known words to understand the new words given no adult support with 80% accuracy.
- In _____ quarter, NAME will apply understand and use vertical spatial concepts (to include: under, above, below) horizontal spatial terms (to include: front, back, behind) and horizontal side-to-side spatial terms (to include: beside, next to, middle and between) given no adult support with 80% accuracy.
- In _____ quarter, NAME will understand and use multiple meaning of 10 Tier I words (duck, trunk, bat, bark, foot, hard, box, clip, fly) given no adult support with 80% accuracy.

Anchor Standard (from Kentucky State Standards)

L.K.1 When writing or speaking, demonstrate appropriate use of common nouns and verbs.

L.K.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on kindergarten reading and content. a. Identify homophones. b. Identify common affixes and how they change the meaning of a word. c. Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.

L.K.5 With guidance and support from adults, explore word relationships and nuances in word meanings. a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent. b. Demonstrate an understanding of verbs and adjectives and their antonyms. c. Demonstrate an understanding of verbs and adjectives and their synonyms.

L.2.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 2 reading and content, choosing flexibly from an array of strategies. a. Use sentence-level context as a clue to the meaning of a word or phrase. b. Determine the meaning of the new word formed when a known prefix is added to a known word. c. Use a known root word as a clue to the meaning of an unknown word with the same root. d. Use knowledge of the meaning of individual words to predict the meaning of compound words.

Vocabulary Annual Goal (Tier II and Tier III)

By the end of the IEP cycle, NAME will independently use high utility (practical) vocabulary words by understanding the affixes, use of the word, description of the word, use a word in a sentence, or drawing a picture to represent the meaning to access the curriculum to include 110 new vocabulary words with 80% accuracy as measures by data collection.

Objectives

- In the first quarter, NAME will apply meaning of 7 most common prefixes and 7 most common suffixes to Tier I words to determine the meaning of new Tier II words given no adult support with 80% accuracy.
- Each quarter, NAME will state the meaning, apply meaning of affixes, give a description, use in a sentence, or draw a picture of 15 vocabulary words given no adult support with 80% accuracy.
- Each quarter, NAME will state the meaning, apply meaning of 15 high content words, give a description, use in a sentence, or draw a picture given no adult support with 80% accuracy.

Anchor Standard (from Kentucky State Standards)

L.4.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from an array of strategies.

- a. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.
- b. Use common affixes and roots as clues to the meaning of a word.
- c. Consult print and digital reference materials to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

d. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions and that are basic to a particular topic.

L.4.5 Demonstrate understanding of figurative language, word relationships and nuances in word meanings.

a. Explain the meaning of simple similes and metaphors in context.

b. Recognize and explain the meaning of common idioms, adages, and proverbs.

c. Demonstrate understanding of words by relating them to their synonyms and antonyms.

RL.7.5 Analyze how the form or structure of a drama, poem or prose text contributes to its meaning.

RL.7.4 Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds on a passage.

RL.9-10.4 RL.11-12.4 Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone.

Tier II and Tier III Summary

There is significant importance in targeting Tier II words for auditory and reading comprehension as these are the words of high utility used in mature language. Unless Tier III words are high utility for a student based on interests, Tier III will often be targeted for understanding content but not necessarily for explicit vocabulary instruction. For speech sound disorders, build vocabulary at the same time! Use high utility words that include the student's speech sounds that are being targeted. It is a win for the student!

Supralinguistic Skills

Skillful readers pay no conscious attention to the way words are written - they do not sound out each word or dissect the composition of a paragraph. (Wallach, 2008) Rather, they are interested only in gaining an understanding of the writer's message.

Supralinguistic skills can be defined as the ability to reason through and understand complex language in which meaning is not directly available from lexical or grammatical information.

Monitoring comprehension

Students who are good at monitoring their comprehension know when they understand what they read and when they do not. They have strategies to fix up problems in their understanding as the problems arise. Research shows that instruction, even in the early grades, can help students become better at monitoring their comprehension.

Metacognition

“Thinking about thinking” that enables one to reflect on and consciously ponder information both oral and written language. Good readers use metacognitive strategies to think about and have control over their reading.

- **Before reading**, they might clarify their purpose for reading and preview the text.
- **During reading**, they might monitor their understanding, adjusting their reading speed to fit the difficulty of the text, and “fixing up” any comprehension problems they have.
- **After reading**, they check their understanding of what they read.

Comprehension monitoring, a critical part of metacognition, has received a great deal of attention in the reading research.

For students who struggle, explicit instruction is needed. In explicit instruction, teachers tell readers why and when they should use strategies, what strategies to use, and how to apply them. The steps of explicit instruction typically include direct explanation, teacher modeling (“thinking aloud”), guided practice, and application. This begins by building background knowledge.

Link to SSD

In order to get speech sounds to remediate, the student has to “think” about their sound(s) until it begins automatic, supralinguistic skills provides that “think.” While targeting generalization of speech sounds or processes, target supralinguistic skills as appropriate to the developmental age of the student.

Building Background Knowledge

Marzano (2004) in *Building Background Knowledge* discusses the importance of building background knowledge. He then goes on to discuss how building this background knowledge will lead to building background academic knowledge. We know from the research on syntax as well that students demonstrate improved reading comprehension when they are familiar with the topic.

- Always base new information on what the student should already know.
- Preteach/prelearn information. This will increase overall comprehension when the information is presented in class.

Direct Approaches to Enhancing Academic Background Knowledge

Provide academically enriching out of class experiences, particularly for students whose home environments do not do so naturally.

- Field trips to museums, art galleries, outdoor labs, etc.
- Petting zoo into the school
- Plays/performances
- Establish mentoring relationships with members of the community. A mentoring relationship is a one-to one relationship between a caring adult and a youth who can benefit from support. A student is matched with a mentor in a structured format (Brewster & Fager, 1998).

Indirect Approaches Enhancing Academic Background Knowledge

1. Design field trip/outdoor activities within the school
 - a. Turn the gym into a camping experience.
 - b. Turn the hall into an ice skating/winter experience.
 - c. Farm: plant "crops," take care of "animals," milk a cow
2. Implement a program of direct vocabulary instruction that focuses on the terms and phrases that students will encounter in their academic subjects. This includes a linguistic and nonlinguistic representation of the word.
3. Implement elementary, middle, and high school Sustained Silent Reading that focuses on nonfiction and fiction materials in a variety of forms, information from the Internet.
 1. 20- to 30-minute session,
 2. Students read books of appropriate difficulty,
 3. Write about their thoughts.
 4. Participate in structured dialogue with classmates.

Students who participate in sustained silent reading programs for more than a year, score in the 81st percentile in vocabulary achievement, compared to the 50th percentile for students who do not take part (Marzano, 2004).

Relational Reasoning

As students are building background knowledge, they must be able to revise their knowledge and misconceptions as new information is presented. In other words, use

new information in working memory to revise what has been stored in long term memory. Relational reasoning is the ability to perceive similarities and dissimilarities in information encountered and to extract meaningful patterns consequently (Alexander, 2016). It is a metalinguistic skill that is necessary for processing auditory and reading comprehension, thus, learning.

Four Relational Reasoning Constructs in Knowledge Revision

Dumas, Alexander, and Grossnickle (2013) and Kendeou, Butterfuss, Boekel, and O'Briend, (2016) identify four constructs necessary for relational reasoning. They include **analogical reasoning** (similarities), **antithetical reasoning** (differences), **anomalous reasoning** (unexpected or abnormal), and **antinomous reasoning** (what it is not).

Analogical Reasoning

Students must identify similarities in information, ideas, concepts, or events.

Examples:

There are many connections between checkers and chess (take one's knowledge of checkers to learn to play chess)

Playing American football is like playing soccer.

Therapy Strategies

- Target similes and metaphors
 - Find similes and/or metaphors that compare something the student knows to something the student may not know,
 - Use literature, song lyrics, and slogans
 - Chevrolet: Built Like A Rock
 - Doritos: Tastes Like Awesome Feels
 - State Farm: Like A Good Neighbor
 - Honda: The Honda's ride is as smooth as a gazelle in the Sahara. Its comfort is like a hug from Nana.
- Use familiar topics to build new information.
 - Student use Mine Craft to learn about sustainable energy.
 - Student uses Mine Craft to build a colonial village.

<https://education.minecraft.net/class-resources/lessons>

Antithetical Reasoning

In antithetical reasoning, the student must identify and analyze contrasting positions. “Myside” bias often comes into play during this type of reasoning task (Stanovich & West, 2007, and Wolfe and Britt, 2008).

Therapy Strategies

- Justifying A Position

This also corresponds to Bloom’s Taxonomy Evaluation which is the highest level of critical thinking. From a language processing perspective, this would require a significant ability to think through information both supporting and denying a position, process it, and be able to formulate a response. Topics that are designed to persuade another person are ideal.

- <https://www.myspeechclass.com/persuasivetopics2.html>
- <https://www.thoughtco.com/list-of-persuasive-speech-topics-for-students-1857600>

Therapy strategies for analogical and antithetical reasoning

- Target analogies that compare and contrast like items
 - http://www.teach-nology.com/worksheets/language_arts/analogies/
 - <https://www.teacherspayteachers.com/Browse/Search:analogies%20free>

Compare and Contrast

The strategy presented here from ReadWriteThink provides an alternative for a Venn Diagram. It also provides more useable space for students with fine motor difficulties. This can be used to compare two items, two ideas, or comparing and contrasting two works of literature.

Compare and Contrast Chart

Item #1 _____ Item #2 _____

How are they alike?

How are they different?

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www.ReadWriteThink.org

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- Print Out

<http://www.readwritethink.org/classroom-resources/printouts/compare-contrast-chart-30198.html>

- Online Interactive
<http://www.readwritethink.org/classroom-resources/student-interactives/comparison-contrast-guide-30033.html>

Anomalous Reasoning

Anomalous reasoning requires the student to identify an unexpected or abnormal occurrence that departs from an established pattern (Schulz, Goodman, Tenenbaum, and Jenkins, 2008). In other words, the student must take what he/she knows and figure out how the new information deviates from this. With the internet, one may want to take information at face value. "It was on the internet, so it must be true."

Research shows that middle school, high school, and college students' have difficulty judging the credibility of online information (Wineburg, McGrew, Breakstone, & Ortega, 2016). For example, more than 80% of middle school students believed an advertisement denoted by the label of "sponsored content," but posing as news, was a real article. Only 9% of high school students taking AP History were able to tell that minimumwage.com was a front for a Washington lobbyist. Nearly 40% of high school students said an image on photo-sharing site Imgur provided compelling evidence although the image contained no information about the person who posted it nor provided any proof that the photo was taken where it claimed to be taken.

Therapy Strategies

The following strategies support students in using problem solving skills to determine the truthfulness in what they hear and read.

Identifying information meant to mislead

Subcategories of False Information Include (Iowa Reading Research Center)

Fake news:

False information that is presented as newscast or an article based on journalistic reporting of facts or as news commentary.

Paid/sponsored content:

False information that appears as though it were an objective news article or headline but is actually a form of paid advertising. The content usually contains a disclosure that the content is paid for, but the disclosure may not be readily apparent.

Parody/satire:

False information that is presented as fact with the intent to entertain. Sometimes the author intends for the reader to be in on the joke, but other times, the entertainment is provided for those aware that some readers are being misled.

Identifying False Information

Activities can be set up to assist students in how to identify false information. The following suggestions are based on a blog by Amy Johnson n.d.

<https://www.lifehack.org/articles/productivity/5-tips-identify-false-information-and-websites-online.html>

Check if the person or article is biased

The best way you can work out if a person or the article is biased is to look at the author or company promoting the information; are they linked to the issue?

Check the author of the page

If the information is via the internet, there should be a link to the author who wrote the piece. If there is not a link, this normally means that the information on the website could be inaccurate. If this information is presented verbally and credited to a specific person, is that person a credible resource?

Applying the CRAAP test

The CRAAP was developed by Blakeslee (n.d.) and is an acronym that stands for Currency, Relevance, Authority, Accuracy, Purpose.

Currency

The timeliness of the information. • When was the information published or posted? • Has the information been revised or updated? • Does your topic require current information, or will older sources work as well? Are the links functional?

Relevance:

The importance of the information for your needs. • Does the information relate to your topic or answer your question? • Who is the intended audience? • Have you looked at a variety of sources before determining this is one you will use? • Would you be comfortable citing this source in your research paper?

Authority

The source of the information. • Who is the author/publisher/source/sponsor? • What are the author's credentials or organizational affiliations? • Is the author qualified to write on the topic? • Is there contact information, such as a publisher or email address? Does the URL reveal anything about the author or source? examples: .com .edu .gov .org .net

Accuracy

The reliability, truthfulness, and correctness of the content. • Where does the information come from? • Is the information supported by evidence? • Has the information been reviewed or refereed? • Can you verify any of the information in another source or from personal knowledge? • Does the language or tone seem unbiased and free of emotion? • Are there spelling, grammar, or typographical errors?

Purpose

The reason the information exists. • What is the purpose of the information? Is it to inform, teach, sell, entertain, or persuade? • Do the authors/sponsors make their intentions or purpose clear? • Is the information fact, opinion, or propaganda? • Does the point of view appear objective and impartial? • Are there political, ideological, cultural, religious, institutional, or personal biases?

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<https://library.csuchico.edu/sites/default/files/craap-test.pdf>

CRAAP Evaluation Sheet

<file:///C:/Users/court/OneDrive/Language%20Processing/CRAAP%20Test%20for%20Relational%20Reasoning.pdf>

Antinomous Reasoning

Antinomous reasoning requires the student to identify what something is by identifying what it is not. It relies on identify something that is seemingly absurd necessitating acceptance of two or more ideas that appear contradictory or incompatible. A student must identify a situation in which two conditions cannot both be true

Therapy Strategies

Antinomous reasoning plays into opposite concepts and may be a beneficial way to target this area of relational reasoning.

Topics could include:

- Basic concepts (hot/cold, wet/dry, old/new, tall/short- for younger students)
- Living vs nonliving
- Animal or plant
- Herbivores vs carnivores
- Wild vs domestic animals
- Humid vs dry climates

Knowledge Revision During Reading

There are three conditions necessary for knowledge revision: coactivation, integration, and coherence (Dumas, Alexander, and Grossnickle, 2013).

Coactivation

Enables the reader to detect the difference between what they know (background knowledge) and the new information coming in.

Integration

Integration of information requires the student to determine what the relational relationship is. These include analogous (similarities), antithetical (opposition to what the student knows), anomalous (departs from a specific pattern), or antinomous (specific distinctions). At this condition, the student processes similarities, differences, and/or compares/contrasts the new information to what the student knows (van den Broek and Kendeou, 2008).

Coherence

The ability to find similarities, differences or to compare and contrast information is the process of coherence, which is a clear, logical connection.

Overall Strategies for Activating Relational Reasoning

Making Inferences

The student must be able to read between the lines to determine implied information. This requires the student to have background knowledge and either add to it or change it based on the new information that he is inferring.

How to Teach Inferencing

<https://the-teacher-next-door.com/8-activities-to-build-inference-skills/>

Inferencing Activities

- <https://www.education.com/download/worksheet/170472/reading-between-the-lines.pdf>
- https://www.google.com/search?q=new+york+times+what%27s+going+on+in+this+picture&rlz=1C1ASVC_enUS917US917&source=lnms&tbn=isch&sa=X&ved=2ahUKEwjF0uK96uvtAhVBrIkKHbE_CjEQ_AUoAnoECBMQBA&biw=1630&bih=905 (New York Times Images: What's Going on in This Picture)

Making Predictions

The student must be able to formulate thoughts regarding the information presented to predict what might happen next based on what they know about the topic. This would include from a social/pragmatic perspective in predicting one's response to a conversation.

<https://www.k5learning.com/reading-comprehension-worksheets/topics/prediction>

<https://www.easyteacherworksheets.com/langarts/1/makingpredictions.html>

Games for Reasoning Skills

Online

- <https://www.emergingedtech.com/2016/06/10-technology-tools-resources-teach-critical-thinking-skills/>

Board Games

- <https://www.understood.org/en/school-learning/learning-at-home/games-skillbuilders/6-great-board-games-to-boost-critical-thinking-in-teens-and-tweens>

Solving Math Story Problems

Students must determine the relationship between the words in the math problem to then determine what they are solving for. There may also be additional information that the student does not need to solve. The student must figure out the relationship between the sentences/details and determine what information is needed to solve the problem.





Solving Math Story Problems

Read and highlight the most important words in each sentence

Link words with numbers

	=	
	=	
	=	
	=	
	=	
	=	

What are you solving for? _____

Strategies for Solving

<input type="checkbox"/> Act it out <input type="checkbox"/> Find a pattern <input type="checkbox"/> Draw a picture/diagram <input type="checkbox"/> Work backward <input type="checkbox"/> Make a list, table, or chart	<input type="checkbox"/> Logical reasoning <input type="checkbox"/> Choose the correct operation <input type="checkbox"/> Guess and check <input type="checkbox"/> Write an equation using variables <input type="checkbox"/> Solve a simpler problem
--	---

Solve

Check your answer

Goals and Objectives Based on Kentucky Standards

Goals for SSD

Write goals for generalization whatever speech sounds or phonological process being targeted. In the activities used, make a conscientious effort to increase supralinguistic skills through the aforementioned strategies.

Goal for Supralinguistic Skills

(Timeframe), _____ will increase the ability to (see below) in 8/10 of the opportunities with (minimal / moderate / maximal cues/).

<ul style="list-style-type: none"> Predict Make inferences Understand and use figurative language 	<ul style="list-style-type: none"> Understand main idea Understand supporting details Justify a position 	<ul style="list-style-type: none"> Analyze Problem Solve Compare/Contrast
--	---	--

Link to Kentucky State Standards

Any standard that indicates: predict, formulate, compare/contrast, evaluate, analyze, judge, justify, support, etc.

Examples

RL.7.5 Analyze how the form or structure of a drama, poem or prose text contributes to its meaning.

RL.7.7 Compare/contrast reading a print text and viewing its visual/oral presentation, analyzing the effects of techniques unique to each medium

RL.7.6 Analyze how an author develops and contrasts the perspective of different characters or narrators in a text. Integration of Knowledge and Ideas

Reflection

How do you incorporate in reasoning skills to your speech therapy?

How do you incorporate in reasoning skills to your language therapy?

Do you know in what specific supralinguistic areas the students are struggling?

Conclusion

Developing supralinguistic skills leads to better problem solving skills that are needed for auditory and reading comprehension. For students who have difficulty revising background knowledge, it is critical to understand which relational construct they are having difficulty with and target it explicitly.

For speech sound remediation, it is also important for the student to understand why it matters. Supralinguistic skills lets this happen!

Takeaways

1. Speech to print relies on oral language which developments before print.
2. Students must be able to perceive the difference between phonemes before they can remediate a speech sound disorder and before they can represent it correctly in writing.
3. There is a direct link between speech sound disorders and phonology/morphology.
4. Literacy develop depends on phonemic and phonological awareness skills.
5. Morphology instruction provides a direct link to improvement in phonology, semantics, and morphosyntax.
6. Kirby and Bowers (2012) emphasize that morphology improves vocabulary knowledge and understanding, and it predicts reading development and achievement.

7. In order to improve overall comprehension – both auditory and reading – morphosyntax and vocabulary needs to be targeted.
8. Vocabulary includes structure (morphology), use (grammar), meanings (semantics), and links to other words (word/semantic relationships).
9. In order to make predictions and inferences, understand main ideas and supporting details, figurative language, comparing/contrasting, analyzing information, and justifying one's position, supralinguistic skills are essential.
10. Speech-language Pathologists are a vital part of the literacy team!

Presentation Conclusion

Our Role as Speech-Language Pathologists

So, what is our role in literacy development and other language based learning disabilities? Wow! We have so much knowledge in the areas of language that will directly impact literacy and learning. Our role in speaking and listening skills will directly impact reading and writing. You must decide what your exact role is based on the team you work with and who has expertise in what areas. You may choose to stay in the areas of speaking and listening. You may choose to cross into reading and writing because you can easily take what you are targeting in speaking and listening and readily apply it to reading and writing. The goal of this workshop was to provide you with some new tools for speaking, listening, reading, and writing. We can have a profound positive impact for students with dyslexia and other language based learning disabilities.

Thanks for Joining Me!