

A Language Processing Disorder: What It Is and How to Treat It

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



1

A Few Notes

- Excited for the day!
- Masks: what you and your table mates are comfortable with or required by the county/state
- Questions: Speak loudly or use note paper from back of book
- Talking with the presenters (Please do :)
- Have fun!!!



2

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Digital Handbook Access

A digital copy of this handbook is available here:
(open the camera app on your phone or use the link below)



<https://bit.ly/3m97000>

3

SCHOOL-BASED SLPs LANGUAGE PROCESSING DISORDER: WHAT IT IS AND HOW TO TREAT IT

Table of Contents

Introduction	13
Activity: Your Definition	13
It's More Than the 5 Domains of Language	14
Language Processing from a Psychologist Point of View	14
Definition of Language Processing	16
Signs and Symptoms	16
Central Auditory Processing and Language Processing	17
Ways to Describe Language Processing	19
Broca's Tactility	19
The Perceptual Linguistic Cognitive Characteristics of LP	22
Language Processing Area 1: Perceptual Skills (Phonemic Awareness)	23
Phonemic Processing: The link between auditory and language processing	23
Definition of Phonemic Awareness	23
The Research	24
Assessments for Phonemic Awareness	26
Therapy Strategies for Phonemic Awareness	27
Language Processing Area 2: Cognitive Skills	32
Cognitive Component Area 1: Logical Processing/Auditory Information	33
Assessment for Language Processing Speed	33
Cognitive Component Area 2: Executive Function	34
Assessment for Executive Function	35
Crosswalk: Executive Function & Language Processing	36
Strategies to Support Language Processing and Executive Function Skills	37
Working Memory	42
Characteristics of Working Memory Deficits	42
Language Processing Area 2: Linguistics	44
Linguistic Component Area 1: Morphosyntax	44
Assessment for Morphosyntax	46
Morphosyntax Strategies	46

15

4

Agenda for Today



Morning Break: 10:00 (10 minute break after announcements)

Lunch: ~11:45 – 1:00

Wrap Up: ~3:00

Logistics/Technical Questions: to the Program Manager.

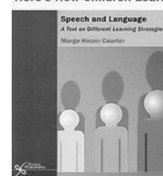
5

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

About Me

- 30+ years experience PreK-12th
- Board Certified Specialist - Child Language and Language Disorders
- Speciality Areas: speech and language disorders that impact learning
- Author of :

Here's How Children Learn



6

What I Hope to Bring to You Today

"Margo shared practical, ready-to-use strategies to implement right away. Her style of presentation kept my interest!"

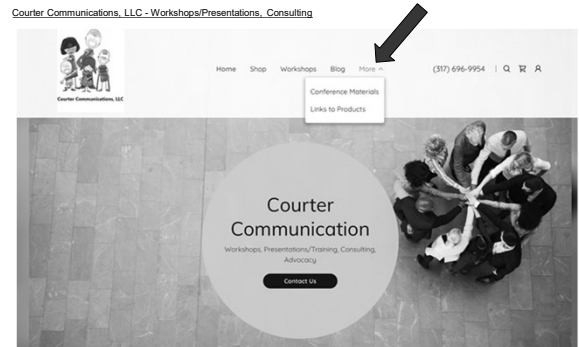
"I gained multiple strategies in a short time that I will be implementing tomorrow."

"Margo provided a step by step way to identify and treat language processing issues."

"Margo has true passion for the field."

7

Margo's Website



8

Learning Outcomes

At the end of this presentation, our goal is that you will be able to:

1. Explain what language processing is
2. Learn the differences between CAPD and LPD
3. Describe specific areas of language processing disorders
4. Discuss the application of strategies for academic success



9

Your Definition

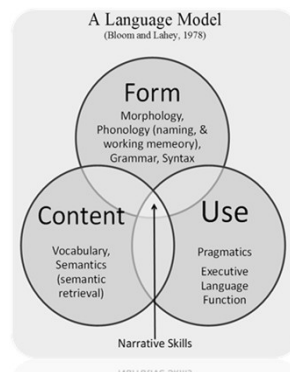
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- Take a minute with a colleague or by yourself and write down your definition of language processing.

10

It's More Than the 5 Domains

14



11

LP: a Psychologist Point of View

- "I use this terms not as a diagnosis because as you know, there is no official diagnosis but as a way to explain the concerns I'm seeing. "
- receptive and expressive language are much weaker than IQ would predict, and particularly higher-order, abstract oral comprehension seems to be a problem.
- Oral reading speed usually is problematic
- they seem to have to almost stare at the word before they can say it--not really a phonics issue but a retrieval issue.

12

The Wechsler Intelligence Scale for Children – V (WISC-V) 15

- A measure of intellectual abilities, produces an overall full scale IQ score and five cognitive domain scores. The full scale IQ (FSIQ) reflects general intellectual functioning. (☆ does not require as much language processing)
 - ☆The Visual Spatial Index (VSI) taps the ability to evaluate visual details and understand visual spatial relationships, and it involves visual spatial reasoning
 - ☆The Fluid Reasoning Index (FRI) assesses visual conceptual reasoning and involves both inductive reasoning and simultaneous processing.
 - ☆The Processing Speed Index (PSI) assesses visual identification and decision making speed, and it involves visual discrimination and temporary storage.



13

WISC IV: Task that Require More Language

- The Verbal Comprehension Index (VCI) assesses acquired word knowledge and involves verbal concept formation, verbal reasoning, and verbal expression.
- The Working Memory Index (WMI) taps holding and manipulating visual and auditory information in mind, and it involves concentration and memory.



14

Further Information From Dr. Horn

Subtests Comparisons:

Picture Concepts and Similarities:

1. both measure abstract reasoning,
2. but the former (Picture Concepts) has little language processing and the latter (Similarities) has a lot of language processing.

15

Further Information From Dr. Horn

Subtests Comparisons:

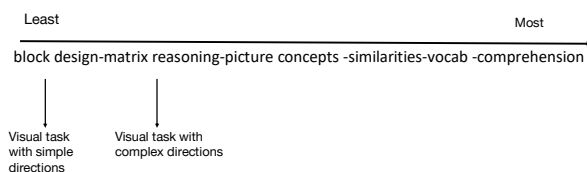
Vocabulary and Comprehension require more language processing than Similarities.

Third, Matrix Reasoning takes some language processing to understand what to do, so I look at whether they had trouble grasping what to do in the practice items; whereas,

Block Design requires almost no language processing to grasp.

16

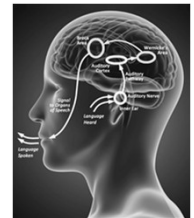
Least to Most Language Processing



17

Definition 16

Language processing refers to the linguistic, cognitive, and speech perception abilities needed for understanding and production of language. Thus, it is how the brain creates and understands language



18

Signs and Symptoms

17

- Age commensurate IQ and vocabulary skills with academic deficits
- Often receive a diagnosis of learning disability or specific learning disability



*** Definition of SLD/SLI

The term 'specific learning disability' means a disorder in 1 or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations."

19

Signs and Symptoms

Receptive

- Difficulty gaining meaning from spoken language
 - ? Phonemic awareness
 - ? Complex syntax
 - ? Metalinguistic skills
- Difficulty with higher order language skills.
 - May have difficulty planning and organizing thoughts, working memory, and sustained attention (executive function)



20

Signs and symptoms

17

Expressive

- Poor written output (written language expression)
- Difficulty expressing thoughts verbally (? retrieval)
- Naming a general category instead of specific word
- Quick to say "I don't know"



21

Signs and symptoms

17

Receptive/Expressive

- Difficulty with social pragmatic language (perspective taking, main idea, details, reasoning, figurative language, working memory, processing time)
- Taking a long time to respond
 - ? Retrieval
 - ? Lag in language processing speed
 - ? Memory
 - ? Attention
- Difficulty following long or complicated directions
- Feeling lost listening to stories with many events or characters



22

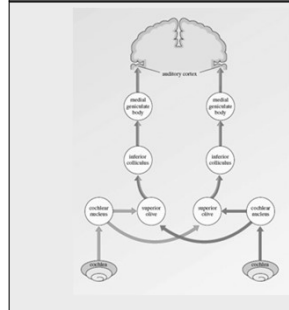
CAPD & LP: Looking at the 2 Terms

Central Auditory Processing	Language Processing
Deficits in the neural processing of auditory information in the central nervous system (nerve tissue that controls the body - brain and spinal column) and is not due to higher language or cognition	Meaning is attached to the auditory signal (begins at Herschl's gyrus, to Wernicke's, angular gyrus then to the prefrontal and frontal lobe for planning, organizing and sequencing)
May lead to or be associated with difficulties in higher order language, learning, and communication functions	Processing information at a rapid pace to develop appropriate listening and language skills, higher order cognitive language and related areas

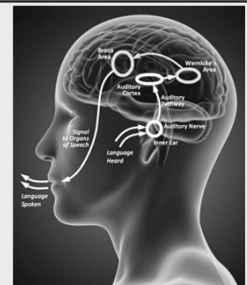
This slide and next one are available on Margo's website under Therapy Materials

23

Central Auditory Processing

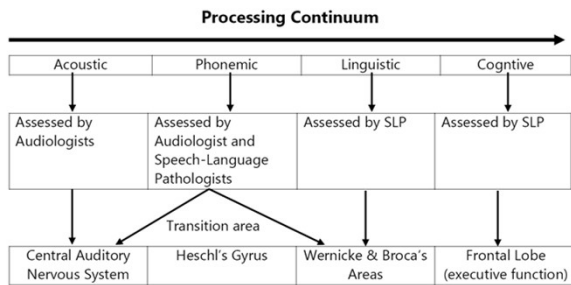


Language Processing



24

Another Way to Look at APD and LPD



Adapted from: Richard, G. J. (2017). *The Source Processing Disorders*. Austin, TX: PRO-ED.

25

Ways to Describe LPD

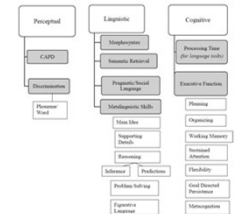
19

- Prescriptively- Bloom's Taxonomy
- Linguistically, cognitively, perceptually

CRITICAL THINKING SKILLS

Level	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1	Identify and recall of information					
2	Interpret and understand information					
3	Use information in new situations					
4	Explain ideas or concepts					
5	Justify a stand or decision					
6	Produce new or original work					

The Linguistic, Cognitive, and Perceptual Characteristics of Language Processing



26

Bloom's Taxonomy



- **Remember:** Describe where Goldilocks lived.
- **Understand:** Summarize what the Goldilocks story was about.
- **Apply:** Construct a theory as to why Goldilocks went into the house.
- **Analyze:** Differentiate between how Goldilocks reacted and how you would react in each story event.
- **Evaluate:** Assess whether or not you think this really happened to Goldilocks.
- **Create:** Compose a song, skit, poem, or rap to convey the Goldilocks story in a new form.

<https://granite.pressbooks.pub/teachingdiverselearners/chapter/blooms-taxonomy-2/>

27

Resources Linking Bloom's with CCSS

19

<https://reachcommonground.wordpress.com/the-common-core-and-blooms-taxonomy/>

<https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>

<https://academicmentoring.com/wp-content/uploads/2017/01/6.-Blooms-Taxonomy-Standards.pdf>

CRITICAL THINKING SKILLS

Level	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
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28

CRITICAL THINKING SKILLS

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21

Image attribution flickr
enokson: 25 Question
Stems Framed Around
Bloom's Taxonomy

29

Areas of Bloom's Taxonomy

<http://www.teachthought.com/critical-thinking/blooms-taxonomy/25-question-stems-framed-around-blooms-taxonomy/>

KNOWLEDGE

Identification and recall of information

Who _____ ?
What _____ ?
Where _____ ?
When _____ ?
How _____ ?
Describe _____ ?
What is _____ ?

Image attribution flickr
enokson: 25 Question
Stems Framed Around Bloom's Taxonomy

30

COMPREHENSION

Organization and selection of facts and ideas

Re-tell _____ in your own words.

What is the main idea of _____?

What differences exist between _____?

Can you write a brief outline?

Image attribution Ricki [goodson](#) 25 Question
Stems Framed Around Bloom's Taxonomy

31

APPLICATION

Use of facts, rules, principles

How is _____ an example of _____?

How is _____ related to _____?

Why is _____ significant?

Do you know of another instance where _____?

Could this have happened in _____?

Image attribution Ricki [goodson](#) 25 Question
Stems Framed Around Bloom's Taxonomy

32

ANALYSIS

Separating a whole into component parts

What are the parts or features of _____?

Classify _____ according to _____.

Outline / diagram / web / map _____.

How does _____ compare / contrast with _____?

What evidence can you present for _____?

Image attribution Ricki [goodson](#) 25 Question
Stems Framed Around Bloom's Taxonomy

33

EVALUATION

Developing opinions, judgements, or decisions

Do you agree that _____? Explain.

What do you think about _____?

What is most important?

Prioritize _____ according to _____?

How would you decide about _____?

What criteria would you use to assess _____?

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Stems Framed Around Bloom's Taxonomy

34

CREATE

Produce new or original work

Compose a song, skit, poem, or rap

Expand your findings

Prepare a flow chart

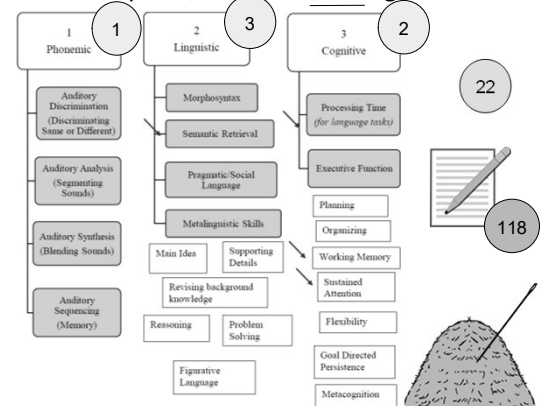
Design a model

Tie your learning to _____

What questions need to be assessed:

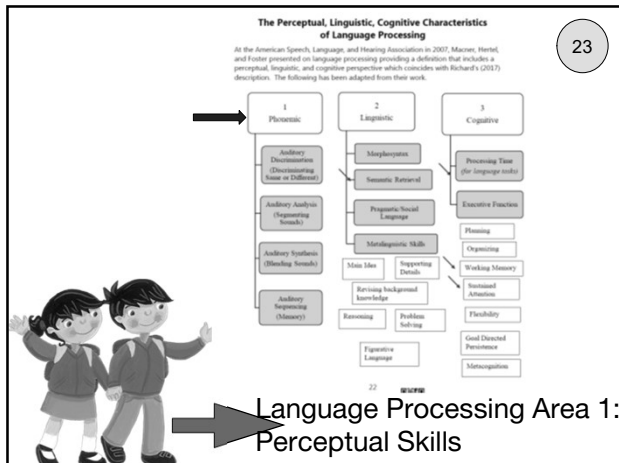
Formulate your thoughts on _____

The Perceptual, Linguistic, & Cognitive



36

35

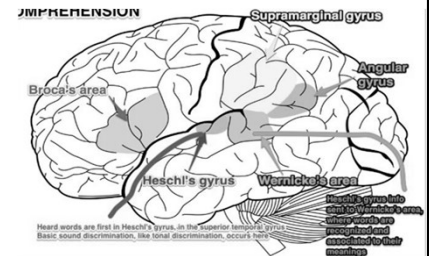


37

Perceptual Skills: Continuum

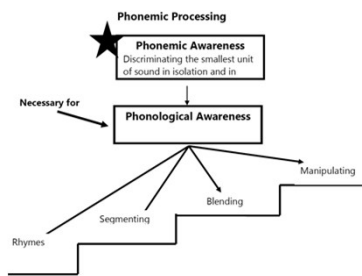
Phonemic Processing

- Meaning is attached to the signal from Heschl's gyrus and ultimately to the prefrontal lobe



38

Phonemic Awareness/Discrimination Speech Perception



39

Definition:

The ability to recognize differences in phonemes (the smallest unit of sound in a language), including the ability to identify words and sounds that are similar and those that are different.

40

The Research

Vowel studies have reported adequate perception of long vowels (i.e. 250 ms) and poor perception of shorter vowels (Frumkin & Rapin, 1980; Tallal & Piercy, 1975; Tallal & Stark, 1981). Although the identification of short vowels (i.e. 40–100 ms) has yielded some variable results, two event-related potential and behavioral studies comparing vowels with durations of 50 and 250 ms (Shafer, Morr, Datta, Kurtzberg, & Schwartz, 2005), confirmed poor identification of phonetically similar vowels regardless of duration, but better discrimination of long vowels.

41

The Research

For both vowel durations, there was evidence of a late negativity for the children with SLI, indicating discrimination of the speech sounds, but this discrimination occurred in a later time frame than for the children with typical language development (TLD). Similar to Bradlow et al. (1999), only 250 ms vowels yielded robust mismatch negativities in children with SLI (Datta, Shafer, Morr, Kurtzberg, & Schwartz, 2010) demonstrating more typical perception of longer vowels.

42

The Research

SLI lies in the integration of information at the interface of language components (Jakubowicz, 2003). Support for this notion comes from a finding that children at risk for SLI exhibit early auditory perceptual deficits with a specific effect on prosody. Later in development, these deficits can no longer be readily detected, but what remains are the varied deficits characteristic of SLI.

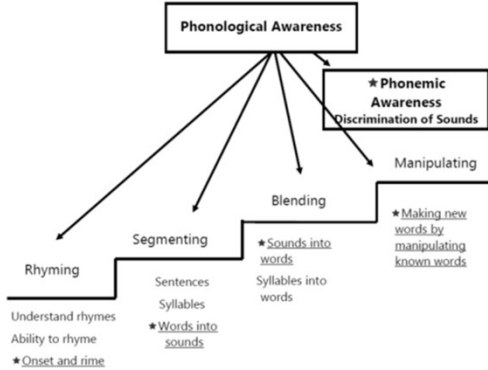
43

★ 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)

44

Phonological Awareness Skills



45

Impact on Early Years (PreK-2nd Grade)



- Following auditory direction in the classroom
- Rhyming, blending, segmenting, manipulating
- Difficulty with spelling novel words
- Difficulty sounding out novel words

Impact on Later Years (3rd grade and on)

- Following classroom instructions
- Understanding classroom discussions
- Understanding teacher's lectures
- Lasting impact on spelling
- Lasting impact on reading

25

46

Page 88

- List of each area of language processing and potential assessment tools

47

Assessments for Phonemic Awareness

26

- Lindamood Auditory Conceptualization Test 3rd Ed Lindamood and Lindamood, ProEd: 2004
- Phonological Awareness Test 2 Robertson and Salter 2018 ProEd
- Phonological Awareness Skills Test (PAST) Kilpatrick 2018 <https://www.thepasttest.com/>
- Phonological Awareness Skills Screener (PASS) Mather, Podhajski, Rhein, and Babur, 2001). <https://www.seniainternational.org/wp-content/uploads/2011/02/PASS-directions.pdf>
- Profile of Phonological Awareness (PROPA) (app by Smarty Ears)
- Test of Integrated Language and Literacy Skills (TILLS) Phonemic Awareness subtest Nelson, Plante, Helm-Estabrooks, Hotz, Brooke's Publishing, 2016
- TAPS 4 (word discrimination, phoneme deletion and phoneme blending) Martin, Brownell, Hamaguchi, 2018
- Differential Screening Test for Processing Richard & Ferre, 2006 Ages 6;0-12;11 Level One - Acoustic Subtests, Level Two - Acoustic-Linguistic Subtests, Level Three - Linguistic Subtests

48

Assessments

☆☆ Must know history or ongoing chronic otitis media.

- The frequency and characteristics of early vocalizations can be affected by perceptual factors impacted by chronic otitis media (Petinou, et al 1999. Rvachew, et al 1999)
- Look for specific subtests that measure specific phonemic awareness areas
- Most tasks for phonemic discrimination also rely on cognitive tasks (ie: manipulation)

49

Therapy Strategies

27



50

Cat
Kite
Chat
Boot
Shoot
Hotdog
Railroad

51

Visual Phonics program

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

– See It and Say It Visual Phonics
(www.courtercommunications.com)



https://drive.google.com/file/d/1OLQw2HX9XHAAnWni6u8M6soYNhIQhn_qv/view?usp=sharing

Other Cues

- Pam Marshalla's consonant and vowel program (available on YouTube) <https://youtu.be/4te9DY1jTc8> (vowels)
<https://youtu.be/lBclowP9uds> (consonant cues)

52

Word Lists for Minimal Pairs

28

Back sounds to front sounds (/k, g/ and /t, d/)

- car/tar
- Kim/Tim
- key/tea
- come/tum
- cap/tab
- coffee/toffee

/s, z, f/ and /t, d, p/ (Stopping)

- four/paw
- fan/pan
- cuff/cup
- half/harp
- sea/tea
- sail/tail

'f, s, sh' and 'b, d,' (Stopping and voicing fricatives)

- fatman/batman
- phone/bone
- fox/box
- funny/bunny

Final sounds

- car/cart
- tar/tart
- bee/bean
- no/nose
- moo/move/moon/moose

53

Simplifying blends

- pay/play
- goo/glue
- fat/flat
- go/grow
- door/drawer

Context sensitive voicing

- pea/bee
- pear/bear
- tear/deer
- curl/girl
- fan/van

/w, r/ and /l, y/

- rich/wich
- ring/wing
- yapping/lapping
- fight/white
- tire/wire

/t/ final versus vowel

- cart/car
- note/no
- fort/four
- shoot/shoe
- start/star

54

☆Margo's Word List for Similar Sounding Words

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
keel	kill			call	kale			coil	
	kin								
meal	milk				mail	mile	mule		
kneel				null	nail				
peal	pill		pal		pail	pile			
real					rail	rile		roil	
seal	sill	sell		Sal	sail			soil	
steel	still			stall	stale				

55

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		

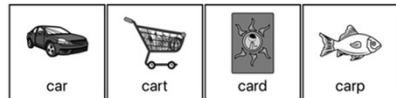
56

Examples of Boards

vowels



final sound



initial sound



57

Classroom Strategies

31

- Flexible Preferential Seating:
 - preferred ear (if identified by the audiologist) close to the primary sound source.
 - away from noises such as children who like to talk, open windows, blowing fans, etc.
- FM system
 - Room system to benefit all students



58

Instruction

- Reduce distractions (i.e.; Rule that when someone is talking, others are listening)
- Alert student before giving instructions
 - Stand close to the student
 - Tap student on the shoulder or other established cue
- Before giving the instruction, provide purpose



59

Instruction

- Repeat the instruction and give ample response time
- Provide examples both visually and in writing (use smart boards, white boards, document camera in order to provide additional information to support the speaking)
- Encourage student to ask for clarifications.
- Check instruction comprehension



60

- Classwork and Testing
 - Quiet area for tests and studying
 - Ear plugs for seat work
 - Provided extended test taking time with an adult close by



61

- Class time preparation
 - Anytime the student can preview
 - Use videos or websites to preteach information
 - Send home google slides, powerpoints, etc
 - Provide written homework instructions for the week.
 - Any information that could build background knowledge

62

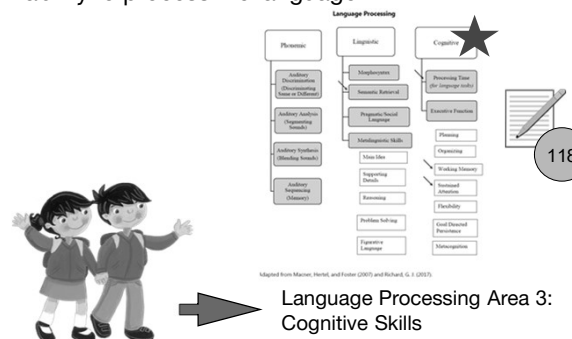
Apps



63

The ability to think about language as a whole instead of its parts will impact the ability to process the language.

32



118

64

Cognitive Component Area 1: Lag in Processing Auditory Information

Information processing involves multiple cognitive tasks and students may take additional time to process through what was said

65

Cognitive Component Area 1: Lag in Processing Auditory Information

- The child's understanding will likely be better in everyday situations than in situations where there are few or no extra clues to meaning. In such situations, the child may fail to respond, may repeatedly say "Huh?", may simply guess what has been asked, or may even repeat some or all of what was said.
- Taking a long time to respond to a question

66



Assessment

I don't know of any measure that assesses language processing speed.

What you will see:

- Student may respond to a prompt with a response that is close and then will continue to talk and finally state the correct response
- Will ask you to slow down while you are talking
- May not answer the prompt when asked but when you move on to the next prompt, the student responds appropriately to the previous prompt
- ? Could try an immediate recall and a delayed recall (after short term memory has been assessed)

67

Ways to Support Language Processing Time

33

- Build background knowledge
- Present information in several modalities. Concrete materials, manipulatives, and visual aids will help the student make meaningful connections between concepts and language.
- Divide the instruction into smaller, more manageable chunks.
- Help the child make connections between different concepts by regularly referencing his/her background knowledge.

68

- Create Wait Time (introduced by Mary Budd Rowe, 1972).

—A period of silence that follows a teacher's question and the student's response. When these periods are at least 3-5 seconds, she found

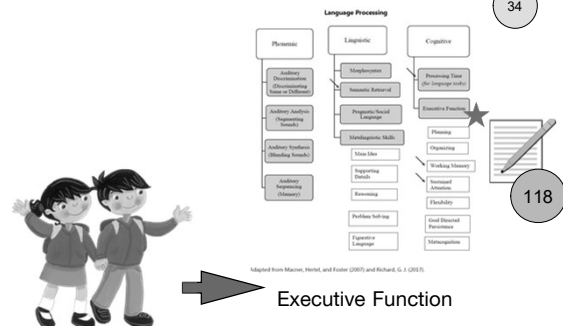
- Decrease of response of "I don't know"
- More volunteered appropriate responses



69

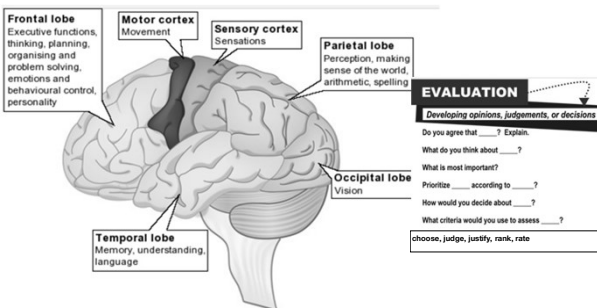
Difficulty processing auditory information in a timely manner can cause a student difficulty in a fast paced classroom that is mostly auditory.

34



118

70



71

Cognitive Component Area 2: Executive Function

High level cognitive functions. Allows us to organize our behavior over time and override immediate demands in favor of longer term goals. Enables us to manage our emotions and monitor our thoughts in order to work efficiently and effectively. Young children require external control for executive function. The goal is for, as the student gets older, the student to be able to internalize what is required to inhibit responses, control impulses, plan, and organize.

72

The Research

1. Supporting a student develop executive function skills can help children pause and think through the credibility of the information and inhibit the impulse to trust what they are told right away (Landry, S. H., Miller-Loncar, C. L., Smith, K. E., & Swank, P. R., 2002).
2. There is growing evidence that other cognitive functions also are affected in students with specific language impairments (SLI), including executive function skills (Im-Bolter, Johnson, & Pascual-Leone, 2006).

73

3. Results showed that parent and self-ratings of EF problems in everyday life were significantly higher for adolescents with SLI than for peers matched for age, sex, and race. Hughes, Turkstra, and Wulfeck (2008)

4. A diversity of disorders in communication ability can be observed in cases of frontal lobe pathology including metalinguistic skill abnormalities, and verbal reasoning impairments. Complex and conceptual verbal abilities may be significantly impaired (Novoa& Ardila, 1987).

74

5. Contemporary neuroimaging studies have significantly advanced the understanding of the role of the frontal lobe in language. It has become evident that the prefrontal cortex has a monitoring role in language (Ardillo, 2013).

75

Assessment Tools

- Executive Functions Test Elementary (memory, attention, flexible thinking, shifting) Ages: 7-12
- Behavior Rating Inventory of Executive Function (BRIEF) By Gerard A. Gioia, PhD, Peter K. Isquith, PhD, et al
- Executive Skills Questionnaire for Students and Executive Skills Questionnaire for Parents (in the book, *Executive Skills in Children and Adolescents*, Dawson and Guare, 2018)
- TAPS 4 (Word and Sentence Memory)
- Michigan Memory Test for Unrelated Sentences

76

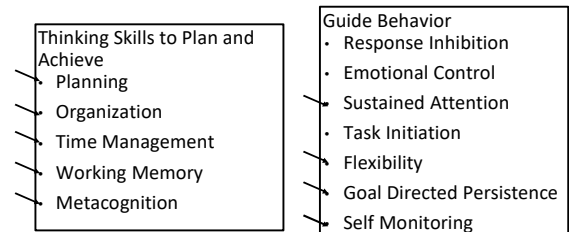
EF from a LP Perspective

Dawson and Guare (2004/2010/2018) provide the following list of executive function skills. These are divided into skills needing for planning and achieving goals and skills needed for guiding behaviors. Many of these skills in both areas are vital for successful language processing. ¶ in this section indicate executive function skills as part of language processing.

77

What are Executive Functions?

36



78

Crosswalk EF & LP

Executive Function Area	Language Processing
Planning	Goes hand in hand with organizing thoughts. The ability to gather thoughts into cohesive chunks in order to determine the most important information and respond in an organized manner.
Organizing	Putting thoughts together in a logical sequential manner
Time Management	Determining duration for planning and organizing ideas and duration for speaking

79

Working Memory	Holding language into memory in order to manipulate information and respond
Metacognition	"The Big Picture" The ability to use background knowledge to apply to a new situation. Being able to then use relational reasoning to modify and enhance background knowledge. The ability to analyze a situation and determine what worked and didn't work. The ability to make modification in the future.

80

Sustained Attention	Staying tuned into the listening situation even in overload situations.
Flexibility	Ability to determine that there is more than one way to think about the information, processing multiple solutions before responding. Flexibility leads to great supralinguistic abilities (inferencing, predicting, problem solving)
Goal Directed Persistence	Staying on task even when the language coming in is overwhelming.
Self Monitoring	stay on track when expressing oneself and make communication repairs if they realizes that they are not communicating effectively

81

Strategies to Support LP and EF

82

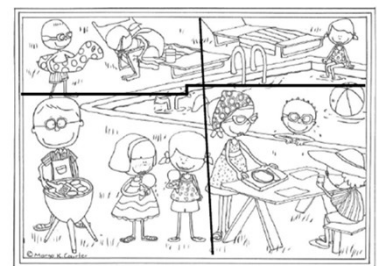
Ways to Assist with Increasing Executive Function: Pre K-mid 2nd

Use picture system for transitions between activities and rooms in the building or schedule changes



83

Discussing Pictures in Quadrants



84

Follow Directions



Use a quadrant picture to have the student follow auditory directions after discussing the picture in quadrants.

Examples using the above picture

1. Find the boy with the floaty. Color his floaty green and read. Color the boy's hair blue. (More complex: Find the boy with the floaty. After you color the floaty green and read, color his hair yellow.)
2. Find the empty lounge chair. Draw a boy sitting on the chair with his legs hanging over the side of the chair.

85

Answering Questions

Use the quadrant picture to process questions.

Example using the above picture

1. Why can we see the boy's feet in the pool?
2. Why are the girls eating ice cream before the adults finish getting lunch ready?
3. How come only one child has a floaty?

86

Retell a Story

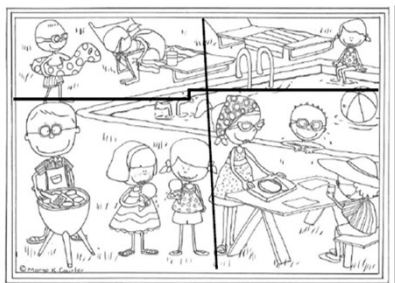
A student must be able to sustain attention to a story, have the working memory to hold onto information about the story, process through the story elements, and then plan and organize thoughts to retell the story.

87

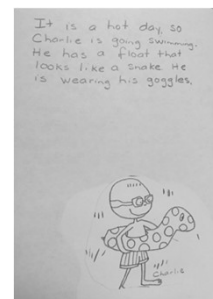
Steps

1. Begin with a simple book that the student should have some background knowledge about the topic or plot.
2. Preview the story.
3. Ask the student for any background knowledge they have on the topic.
4. Read the story to the student.
5. Have the student use the pictures to go back and resequence/retell the story.
6. Increase the complexity of the story.

88



89



90



91

Mid 2nd Grade through High School

Students make a significant cognitive leap around the mid to end of second grade. This is where students should move from learning to read to reading to learn. Language processing skills should be developing to the point that students can begin thinking critically about information presented and formulating responses that are novel.

92

Overall Strategies

1. Visual graphic strategies to support planning, organizing, sequencing, working memory, flexibility in thinking, sustained attention, and metacognition skills will be vital for language processing skills.
2. Closed ended tasks (choose between 2 projects)
3. Web or EET to organize writing or thoughts

93

4. Checklists
5. Take into account strengths and weaknesses of EF when forming classroom groups
6. Copy teacher's notes/visual presentations
7. Teach organizational skills
 - a. binders
 - b. math word problems

94

Math Story Problems

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.

☐ Talk words with numbers.

☐ What are you asking for?

☐ Solve.

☐ Check your answer.

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95

Metacognition

1. Reteaching
2. Extended teaching
3. Modeling
4. Multimodality
5. Peer tutoring
6. Use of manipulatives
7. Organizers
8. Study guides

96

Working Memory

Working Memory - hold information in mind while performing complex task. Ability to draw on past learning or experiences to apply to a situation at hand or to project into the future

97

- Working memory relates to an individual's ability to attend to verbally- or visually presented information, to process information in memory, and then to formulate a response. Difficulties with working memory may make the processing of complex information more time-consuming, draining a student's mental energies more quickly and perhaps result in more frequent errors on a variety of tasks.
- Memory impairments in childhood can have negative consequences for the development of language, literacy, social skills, personal relationships, and a sense of personal history (Rankin and Hood 2005).

98

Characteristics

- Remembering instructions
- Conversations and class lecture/discussions
- Understand multistep directions but forgets first part
- Reading comprehension
- Basic word reading
- Math: orally presented steps
- Written expression
- Oral language
- Oral expression

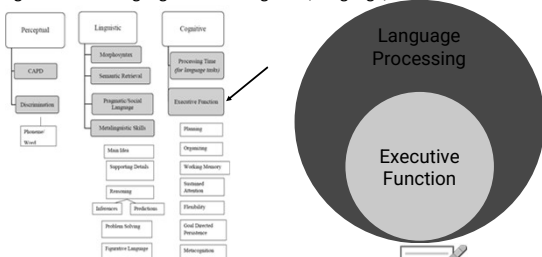
99

Strategies

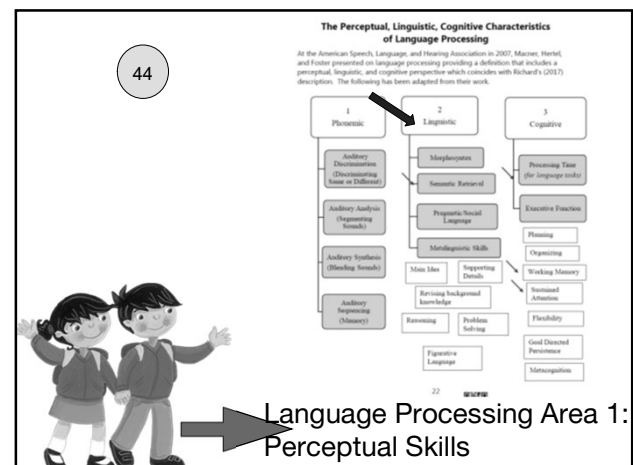
- Reading instruction
- Build background knowledge
- Underline, highlight or write down key words
- Lindamood Visualizing/Verbalizing
- Directions in multiple formats
- Overlearn material
- Teacher prepared handouts prior to class lecture
- Post it notes to write down key information
- Cues for recall (ie: HOMES for the great lakes)
- Prime the memory (preview/review)

100

Language processing refers to the integration of perceptual, linguistic and cognitive information at a rapid pace to develop appropriate listening and language skills including higher-order cognitive, language, or related areas.



101



102

Linguistic Component Area 1: MorphoSyntax 44

- Understands single words and has an excellent vocabulary, but has difficulty with the meaning of phrases and sentences
- Lengthy, complex, and abstract sentences are difficult if presented at a normal or fast rate.
- Difficulty with long complex directions
- Difficulty with listening to stories with many events and/or characters

103

Evidence 45

#1 Verb voice and clause structure (dependent and relative- who, that, or which) and clause structure can affect reader performance

- He would have gone had he not had a cold.
- The report that John wrote won an award. (Relative clause)
- If you would have completed your homework, we could have gone outside.
- Before we go outside, we need to finish our assignment.

104

#3: Sentence complexity can create comprehension problems for struggling readers.

- comprehension strategies will not work if the student doesn't understand the complexity of the syntax



105

Syntax: ACT & SAT Reports

#4 In 2004-2005, only 51% of students taking the ACT scored at the benchmark (C equivalency) for understanding complex text needed for college readiness. (The clearest differentiator was questions associated with complex text - not critical thinking skills.)

SAT - 2011-2012: 43% reached benchmark

106

Assessment 46

Language Sample



Language Sample: doe.virginia

107

Standardized Tests Apps and Software



Squirrel Story

by Judith Carney
Illustrated by Mike Phillips

Play



Peter and the Cat

Play

108

Available Assessments

SP&LT-3


CEL F[®]
PRESCHOOL 2

 Clinical Evaluation of Language Fundamentals
 Preschool – SECOND EDITION


109

MorphoSyntax

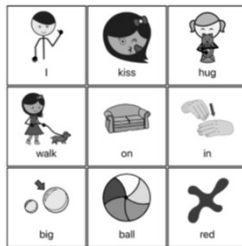
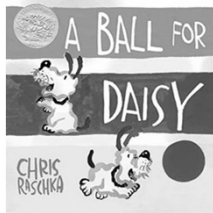
* Sequencing pictures



* Pictures depicting a scene



110



Create boards

Then use for sentence building through story retell

111

Sentence Story Recall

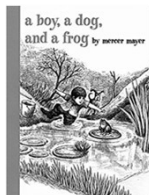
• Use vocabulary boards



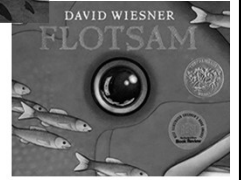
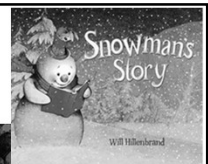
112

Wordless Books
(list on website)
<https://courtercommunications.com/links-to-products>

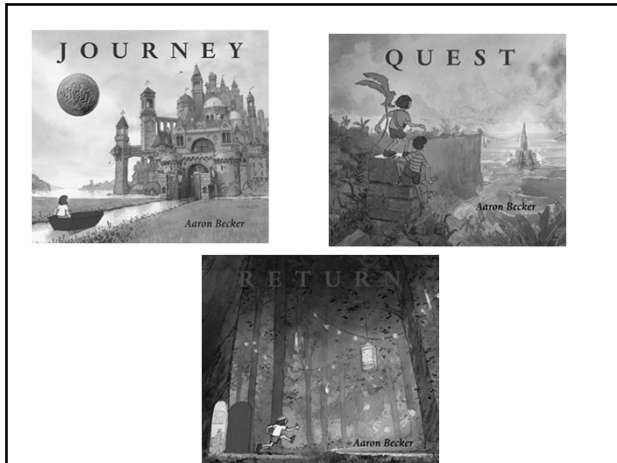
47



113







114



115





Expanding a Sentence through Questioning

Who	The cute puppy	
What (4 words and complete sentence)	The cute puppy sleeps.	
Where (8 words, prep at the end)	The cute puppy sleeps on her new bed.	
When (10 words, prep at beginning)	At night, the cute puppy sleeps on her new bed.	
Why (14 words, subordinating conj)	At night, the cute puppy sleeps on her new bed because she is tired.	

KNOWLEDGE
 Identification and recall of information
 Who _____?
 What _____?
 Where _____?
 When _____?
 How _____?
 Describe _____?
 What is _____?

116





Breaking Down a Sentence through Questioning

Who		
What (4 words and complete sentence)		
Where (8 words, prep at the end)		
When (10 words, prep at beginning)		
Why (14 words, subordinating conj)	At night, the cute puppy sleeps on her new bed because she is tired.	

KNOWLEDGE
 Identification and recall of information
 Who _____?
 What _____?
 Where _____?
 When _____?
 How _____?
 Describe _____?
 What is _____?

117





Expanding a Sentence through Questioning

Who		
What (4 words and complete sentence)		
Where (8 words, prep at the end)		
When (10 words, prep at beginning)	At night, the cute puppy sleeps on her new bed.	
Why (14 words, subordinating conj)	At night, the cute puppy sleeps on her new bed because she is tired.	

KNOWLEDGE
 Identification and recall of information
 Who _____?
 What _____?
 Where _____?
 When _____?
 How _____?
 Describe _____?
 What is _____?

118





Expanding a Sentence through Questioning

Who		
What (4 words and complete sentence)		
Where (8 words, prep at the end)	The cute puppy sleeps on her new bed.	
When (10 words, prep at beginning)	At night, the cute puppy sleeps on her new bed.	
Why (14 words, subordinating conj)	At night, the cute puppy sleeps on her new bed because she is tired.	

KNOWLEDGE
 Identification and recall of information
 Who _____?
 What _____?
 Where _____?
 When _____?
 How _____?
 Describe _____?
 What is _____?

119





Expanding a Sentence through Questioning

Who		
What (4 words and complete sentence)	The cute puppy sleeps.	
Where (8 words, prep at the end)	The cute puppy sleeps on her new bed.	
When (10 words, prep at beginning)	At night, the cute puppy sleeps on her new bed.	
Why (14 words, subordinating conj)	At night, the cute puppy sleeps on her new bed because she is tired.	

KNOWLEDGE
 Identification and recall of information
 Who _____?
 What _____?
 Where _____?
 When _____?
 How _____?
 Describe _____?
 What is _____?

120

Expanding a Sentence through Questioning

Who	The cute puppy	
What (4 words and complete sentence)	The cute puppy <u>sleeps</u> .	
Where (8 words, prep at the end)	The cute puppy sleeps <u>on her new bed</u> .	
When (10 words, prep at beginning)	<u>At night</u> , the cute puppy sleeps on her new bed.	
Why (14 words, subordinating conj)	At night, the cute puppy sleeps on her new bed <u>because she is tired</u> .	

KNOWLEDGE

Identification and recall of information

Who _____ ?
 What _____ ?
 Where _____ ?
 When _____ ?
 How _____ ?
 Describe _____ ?
 What is _____ ?

121

Reducing Syntax: Highlighting for Skimming and Scanning

48

- Highlighting (highlighter tape)
 - Key words in directions
 - Supporting detail for paragraphs and chapters

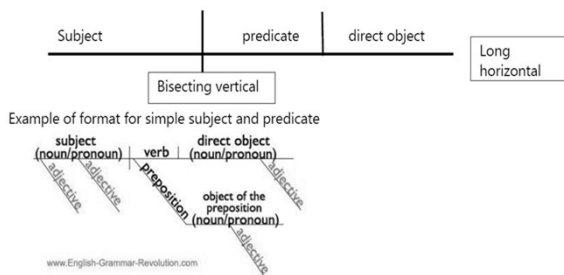
Example

Read each sentence below. Circle the subject and underline the verb. Then write a prepositional phrase on the line to complete the sentence.

122

Diagramming Sentences

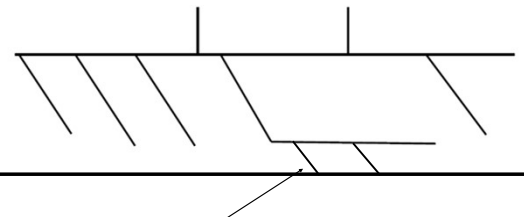
49



123

Activity: Diagram the Following Sentence

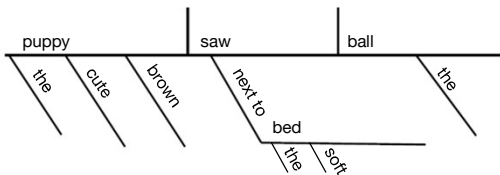
The cute brown puppy saw the ball next to the soft bed.



124

Activity: Diagram the Following Sentence

The cute brown puppy saw the ball next to the soft bed.



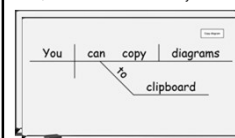
125

Websites & Apps

<https://www.english-grammar-revolution.com/>

http://grammar.ccc.commnet.edu/grammar/diagrams2/one_page1.htm

Microsoft Sentence Diagrammer
\$1.99 a month or 11.99 a year



126

Sentence Combination

- 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/

127

Activity: Elementary Examples from soft school.com

50

- Compound Subjects
Jessica rode the train. Mark rode the train.
- Compound Verbs
Jeff went to the carnival. Jeff rode the roller coaster.

128

Sentence Combination

We are not allowed to play the game if it is lightning. We have seen three lightning strikes. We have to call off the game.

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.

I am involved in several activities after school. I need to be able to get in touch with my parents after school. I need a cell phone.

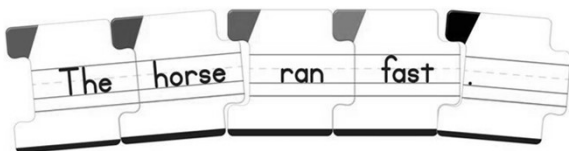
129

The diagram shows three sentences being combined into one using a tree structure. The sentences are: "We are not allowed to play the game if it is lightning.", "We have seen three lightning strikes.", and "We have to call off the game." The tree structure shows the first sentence being combined with the second, and then the result being combined with the third. The final sentence is: "We are not allowed to play the game if it is lightning, and we have seen three lightning strikes, so we have to call off the game."

130

Jumbled Sentences Websites

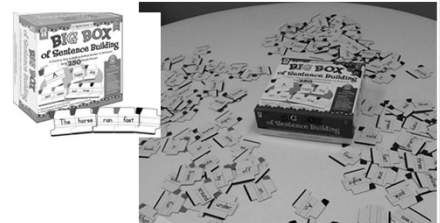
- <http://k8schoollessons.com/jumbled-sentences-exercise-1/>
- <https://www.turtlediary.com/worksheet/jumbled-words-to-form-a-sentence.html>
- <http://www.alaskasmallbusiness.com/2ndgrade/sentence.html>



131

Jumbled Sentence Task

- have a dog large brown we
- if is it we are lightening not play allowed to game the



132

Syntax Resources

COMMON CORE STATE STANDARDS FOR
English Language Arts
&
Literacy in
History/Social Studies,
Science, and Technical Subjects

Appendix B: Text Exemplars and
Sample Performance Tasks

http://www.corestandards.org/assets/Appendix_B.pdf

apps on pg 51

133

Verb tense and sentence structure will impact the ability to process syntax

Language Processing

Phonemic: Auditory (Acoustic) (Hearing), Auditory (Phonological) (Understanding), Auditory (Morphological) (Understanding), Auditory (Syntactic) (Understanding), Auditory (Semantic) (Understanding)

Lexical: Morphemes, Semantic (Meaning), Morphological Skills, Word Use, Spelling, Reading, Pronunciation, Grammar, Vocabulary, Fluency, Comprehension

Cognitive: Processing Time, Executive Function, Planning, Working Memory, Attention, Inhibition, Self-Regulation, Metacognition

118

Semantic Retrieval

134

Activity

Discuss your favorite vacation without using any words that contain /r/

135

Linguistic Component Area 2: Semantic Retrieval

52

Tier III: Curriculum Based Vocab (400,000 words)

Tier II: High Frequency Vocabulary (7,000 words)

Tier I: Basic Vocabulary (8,000 words)

Great Resource for word lists for Tier I, II, and III: www.marzanoresearch.com

136

Number of Exposures Needed to Learn a New Word

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

(Gates, 1931; McCormick, 1999)

53

137

Once vocabulary is stored, the student must be able to quickly and accurately retrieve the words.

What's the word???

NOT IT

NOT IT

NOT IT

NOT IT

NOT IT

NOT IT

NOT IT

RIGHT WORD!

138

53

Semantic retrieval is an expressive language disorder that impacts the retrieval of words in the presence of good comprehension of the words that they are unable to find. The words are stored in long term memory but cannot be quickly retrieved. They appear not to know answers when in reality they know, but are unable to express their knowledge. These students may exhibit problems retrieving specific words in single word retrieval contexts and in discourse - Diane German, Ph.D. www.wordfinding.com

139

Semantic Retrieval Error Patterns

54

- Pattern 1 ("Slip of the Tongue" error): Semantic Error
- Pattern 2 ("Tip of the Tongue" error): Form Related Block Error. No response
- Pattern 3 ("Twist of the Tongue" error): Form & Segment Phonological Error (Diane German PhD)



140

Preschool: Error Patterns

- Phonological (e.g., *chicken* for *kitchen*) or
- Semantic (e.g., *key* for *door*, *car* for *truck*), although indeterminate (e.g., *thing*),
- Visual misperception (e.g., *lollipop* for *balloon*)
- Perseverative responses (i.e., the same word used to label two different objects within a defined time interval)

(Capone and McGregor, 2005)

141

How to Assess

54

Test of Word Finding 3 (PRO-ED) (\$471.00) 4;6-12;11

- Picture Naming-Nouns
- Sentence Completion Naming
- Picture Naming-Verbs
- Picture Naming-Categories
- 5 Informal assessments (phonemic cueing, imitation, substitution, delayed response, secondary characteristics)

On line version also available (\$471.00 for 30 administrations)

142

Vocabulary Measures



143

Vocabulary Measures

- Use the same series of receptive and expressive vocabulary measure (i.e.: EOWPVT and ROWPVT)
- Expressive: score first response
 - Document any revisions
 - Record if longer than 4 seconds
 - Document self corrected or cued
 - Assess for comprehension

144

Vocabulary Measures cont.

Word	Response
X compass	compascope (phonological error)
X fireplace	chimney (semantic error)
X tire	Response > 4 seconds (block)

145

Standard Score Comparison

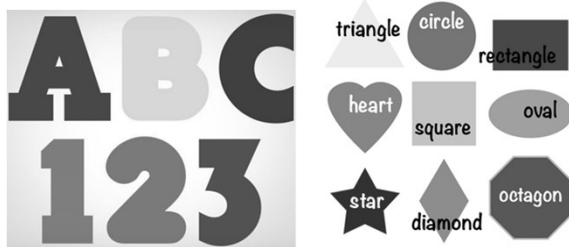
Receptive Standard Score	94
Expressive Standard Score	43
Difference	51
Statistical Significance	9
Significant	yes
Percent of Sample with this Difference	<1%

"FROM THE EOWPVT 4 MANUAL: "lower performance on the EOWPVT as compared to the ROWPVT 4 could mean that the individual has word retrieval difficulties that affect the extent of his or her speaking vocabulary relative to the extent of the individual's hearing vocabulary."

146

Informal Assessment for Young Children

- Turn expressive task into a receptive task



147

Characteristics of Semantic Retrieval

55

- Understands the word but may have difficulty quickly retrieving in single word responses and in conversations
- Uses generic language instead of a specific word (e.g. saying "the thing" instead of "the notebook")

148

Characteristics of Semantic Retrieval

- Taking a long time to respond to a question (?retrieval or processing time)
- May name a general category instead of a specific word (e.g. saying "food" instead of "cake")
- May use descriptions instead of the intended word (e.g. saying "the yellow thing for writing" instead of "pencil")

149

Characteristics of Semantic Retrieval

- Being quick to say "I don't know" in response to a question
- Retrieval
 - Has difficulty labeling objects
 - Feels that words are "right on the tip of my tongue" (retrieval)
 - Can describe an object and draw it, but can't think of the word for it (retrieval)

150

Preschool Strategies for Retrieval: Colors

- Nursery rhymes, songs, or stories that link colors to meaning and provide picture representation
 - I.e.: Baa Baa Black Sheep
 - Brown Bear Brown Bear by Bill Martin Jr.
 - My Many Colored Days by Dr. Seuss
 - Music and Rhyme Station www.preschoolexpress.com
 - Ten Preschool Songs about Colors www.teachingmama.org



157

Preschool Strategies for Retrieval: Shapes

- Link shapes to objects in the environment and link with a picture representation
 - Sun = circle
 - Window = square or rectangle
- Books about shapes
 - Books of Shapes by Jenny Loveless
 - Shapes, Shapes, Shapes by Tana Hoben



158

Preschool Strategies for Retrieval: Familiar Words

- Link a visual representation with the words
 - Make a book organized by category, function, or location
- Review/Learn Vocabulary through Categories and Subcategories



159

Category, Function, Location



57

Strategies for Word Retrieval

①Category:	classification
①Function:	what it does or what is done with it
①Location/origin:	where the item is found, stored or used
②Composition:	what the item is made out of
②Components:	attached parts
②Accessory/Necessity:	associated objects or items that go with it
③Size/shape:	size, length, width, height, shape or analogies made to size/shape
③Color:	the basic colors that it has
③Gestures:	movement of hands or body to describe

(① provides the most information to assist a child with word finding)

Margo Kinzer Courter, MA, CCC-SLP
www.courtercommunications.com
 317 696 9954

160

Retrieving Spelling and Vocabulary

- Make sure the student knows the meaning of spelling and vocabulary words
- Use graphic organizers containing linguistic and nonlinguistic information

Steps:

1. Adult provides a user friendly definition
2. Student puts it in own words
3. Make sure the definition match's
4. Student creates nonlinguistic

161

Graphic Organizers continued

Nonlinguistic strategies - a representation of new information that does not rely on language.

(Average gain of 17 percentile points when using a nonlinguistic representation (Haystead & Marzano, 2009).

162

Vocabulary Worksheet Frayer Model

Name: _____ Class: _____ Score: ____/____

Definition Facts/Characteristics	Picture
Synonym	Antonym

COMPREHENSION

Organization and selection of facts and ideas

describe, explain

Re-tell _____ in your own words.

What is the main idea of _____?

What differences exist between _____?

Can you write a brief outline?

Use in a sentence _____

163

Vocabulary Worksheet Frayer Model

Name: _____ Class: _____ Score: ____/____

Definition Facts/Characteristics <i>very beautiful</i>	Picture
Synonym <i>beautiful</i>	Antonym <i>ugly</i>

Part of speech: *adj*

Sentence: *The mountains were so very majestic.*

164

Retrieval Strategies based on Error Pattern

Error Pattern 1: Semantic Retrieval

59

- Dual Focus: Storage and Retrieval
- Reflect before speaking
- Jot down key words
- Describe using category, function, location

165

• Error Pattern 2: Tip of My Tongue

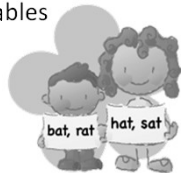
- Same sound cue
- Multiple choice
- Prime with a question
- Extended time
- Closed options for testing
 - True/False
 - MC
 - Work bank
 - 3 choices for spelling



166

Error Pattern 3: Phonological Errors

- Multiple choice
- Rhythm and dividing syllables
- Tactile or visual cue



167

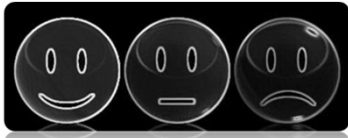
Classroom Suggestions:

59

- Error Pattern 1: Semantic Error
 - Ask students to: Reflect and Rehearse the answer before raising their hands
 - Have student write down a cue word
 - Ask teacher to call on the student as soon as hand is raised



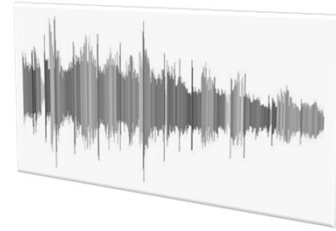
168



- Error Pattern 2: Form Related Block Error
 - Provide the student with a phonemic cue
 - Use a multiple choice
 - Prime the student with question
 - Give the student extended time
 - Closed options for tests (T/F, multiple choice, word bank - 3 choices for correct spelling)

169

- Error Pattern 3: Phonological Error
 - Give the student multiple choice
 - Change prosody to stress correct pattern
 - Tactile or visual cue



170

Additional Strategies: Games

60

- Anomia for Kids
- Take turns describing something in the environment by using category, function, location first. Once the student is proficient in providing these cues, then begin to add level 2 and 3 cues
- Zingo (Thinkfun) describe the tile instead of saying the name
- Word on the Street (FFS LLC)
- Educational Insights Blurt (The Jungle Store)
- Hedbanz for Kids (Spin Masters Games)
- Charades for Kids
- Junior Pictionary (Mattel)



171

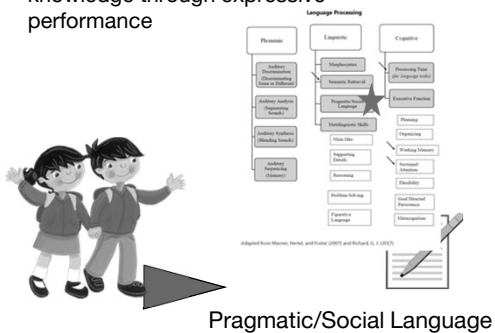
Additional Strategies: APP

Word Retrieval APP by Virtual Speech



172

Retrieval can cause significant difficulty for a student to be able to demonstrate knowledge through expressive performance



173

Linguistic Component Area 3: Pragmatics

61

Pragmatics is the most complex aspect of linguistic functioning, as it requires integration of information across numerous cognitive systems.

Consequently, for intervention to yield effective long-term outcomes, clinicians need to approach pragmatics as an integrative domain combining neurocognitive abilities (i.e., language processing speed, supralinguistic skills (main idea, details, inferencing, predicting, reasoning, world/background knowledge, and executive functioning including planning, organizing, flexibility, attention and working memory) and linguistic knowledge. (Martin & McDonald, 2003).



174

Linguistic Component Area 3: Pragmatics

61

Continuous monitoring of the setting, purpose, and needs of the listener



175

Characteristics

61

- Main idea (when teacher is talking and while reading)
- Level 1 and level 2 details
- Making inferences
- Making predictions
- Taking listener's perspective (teacher, character and/or author's perspective)

176

Tests



177

62-63

Younger Students: Pragmatics/Social Skills

	Acceptable	Needs Improvement	Critical need for improvement	Nonexistent
↳E Maintains attention to the speaker				
↳S Can make a connection to something that has been said				
↳S Understands the main idea of the conversation				
↳S Maintains the main idea of the conversation				



178

Older Students: Pragmatics/Social Skills

	Acceptable	Needs Improvement	Critical need for improvement	Nonexistent
↳S Initiates a topic appropriately				
↳S Maintains topic				
↳S Identifies details as not the main topic				
↳S Comments on the topic				
↳S Transitions to a new topic appropriately				
↳S Infers from the conversation				
↳S Predicts where the conversation is going				
↳S E Responds appropriately				
↳S Takes a listener's perspective				
↳S Understands/uses jokes				
↳S Understands/uses sarcasm				

179

Activity

1. Do you have students that are on your caseload or that you know about that struggle with social communication that are not on the spectrum?
2. How do you incorporate the neurocognitive aspects to address the underlying issues?



180

Linguistic Component Area 4: Metalinguistic Skills

69-70

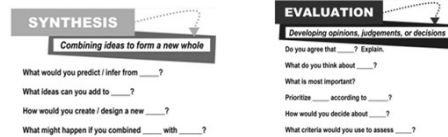
- Difficulty with figurative language
- Difficulty with jokes and riddles
- Feeling lost while listening to stories with many events and characters
- Difficulty joining in conversations
- Difficulty with main idea and supporting details



187

Linguistic Component Area 4: Metalinguistic Skills

- Difficulty with reasoning and inferences
- Difficulty problem solving
- Difficulty understanding math story problems
- Difficulty sequencing steps to solve math problems (ie: order of operations)



188

Building Background Knowledge

70

"The most straightforward way to enhance students' academic background knowledge is to provide academically enriching experiences" (Marzano, 2004).

"What students already know about the content is one of the strongest indicators of how well they will learn new information relative to the content" (2004, p. 1).



189

Building Background Knowledge

70

Cossett Lent (2012) states the following example, "I remember one autumn day when we were reading Of Mice and Men (Steinbeck, 2002), and I lead my high school students outside so they could walk across the fallen leaves and listen to how they crunched under their feet in just the way Steinbeck described."



190

Acquisition of Background Knowledge

71

1. A student's ability to process and store information leads to acquiring background knowledge.
2. The number and frequency of our academically oriented experience will increase background knowledge
3. Students' information-processing abilities + access to academically oriented experiences = academic background knowledge.

191

Accessing Background Knowledge

71

- 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

192

Direct Approaches to Enhance Academic Background Knowledge

Academically out of class experiences

- Field trips (museums, art galleries, outdoor labs, etc)
- Petting zoo into the school
- Plays/performances
- Mentoring relationships with community members (structured format)



193

Indirect Approaches

- Design field trip/outdoor activities within the school



194

Building Background Knowledge Virtually

1. Textbooks often include lists of websites of supplemental material such as film clips, music, or photographs.
2. Digital textbooks have links that will take students all over the world instantly.
3. Virtual Fieldtrips (as mentioned above)

195

<https://www.today.com/parents/try-these-virtual-field-trips-educational-fun-home-t176105>

<https://freedomhomeschooling.com/virtual-field-trips/> (free)

<https://kidsactivitiesblog.com/135714/virtual-field-trips/>

196

Indirect continued

Direct vocabulary instruction for academic vocabulary.

- Linguistic - own definition
- Nonlinguistic -
 - picture (mental then drawn)
 - physical (see, smell, touch, hear, taste)
 - Video, act it out, hear it




197

Sentence Frames for Vocabulary

Word	Meaning	Example
Question:		
Sentence Frame		
Picture		

198

Example: Sentence Frames for Vocabulary

Word	Meaning	Examples
Snake	A noun that describes a reptile with a long, slender body but no arms or legs. Snakes are closely related to _____ (lizards). There are _____ (2,900) different species or kinds.	Snakes are found throughout the _____ (world) except for _____ and _____ poles. Most snakes live on the _____ (ground) but some prefer _____ (trees).
Question: What kind of snakes should you avoid? Sentence Frame: I should avoid _____ snakes because _____. Picture 		

199

Relational Reasoning

74

Ability to revise stored background knowledge and misconceptions based on new information.

Ability to perceive similarities and differences in new information and the ability to extract meaningful patterns.

200

Knowledge Revision

There are three conditions necessary for knowledge revision: coactivation, integration, and coherence (Dumas, Alexander, and Grossnickle, 2013).

201

Four Relational Constructs in Knowledge Revision

Dumas, Alexander, and Grossnickle (2013) identify four constructs necessary for relational reasoning.

202

Four Relational Reasoning Constructs for Knowledge Revision

- Analogical Reasoning - similarities/compare
- Antithetical Reasoning - differences/contrasts
- Anomalous Reasoning - unexpected or abnormal occurrence
- Antinomial Reasoning - what it is not

203

Analogical Reasoning

Identify similarities in information, ideas, concepts or events



204

Analogical Reasoning: 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

ie: Would you rather have a Chevrolet or a Honda

Chevrolet: Built Like a Rock Honda: The Power of Dreams

205

Analogical Reasoning: Therapy Strategies

- 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



206

Antithetical Reasoning

Identify contrasting positions. "Myside" bias often comes into play



207

Antithetical Reasoning: Therapy Strategies

Justifying a Position

Examples

- Fast food containers hurt the environment.
- Plastic straws are harmful to the environment..
- Dogs are better pets than cats.

208

Analogical and Antithetical: Compare and Contrast

Compare and Contrast Chart

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P.O. Box 1000

Item #1	Item #2
How are they alike?	
How are they different?	

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209

Anomalous Reasoning

identify an unexpected or abnormal occurrence that departs from an established pattern (Schulz, Goodman, Tenenbaum, and Jenkins, 2008).

By flying a kite, what did Edison discover?
(It was not Edison but Franklin)



210

Anomalous Reasoning: Therapy Strategies

Semantic Absurdities

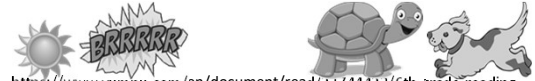


Don't be Silly, Ms. Millie (Cox, 2013)

211

Antinomous Reasoning

Identify what something is by identifying what it is not



<https://www.yumpu.com/en/document/read/23/44423/6th-grade-reading-comprehension-worksheets-extreme-weather>

212

Overall Strategies for Activating Relational Reasoning

213

Knowledge Revision During Reading

- Coactivation – detect what they know and new information
- Integration – Determine relational reasoning analogous, antithetical, anomalous, or antinomous
- Coherence – Find similarities, differences, or to compare and contrast the new information to what the student knows

214

Making Inferences

Each day, before Renee goes to work, she puts on her brown uniform and sturdy work boots. She has to get to work early because a lot of creatures, big and small, are counting on her for their breakfast. Later in the day, she will make sure their habitats are clean. Sometimes she gets dirty at work, but she enjoys seeing all the people who come to visit, peeking through fences and windows as she works.

Where does Renee work? How do you know?

<https://www.education.com/download/worksheet/170472/reading-between-the-lines.pdf>

215

New York Times example

Sept 18, 2015



216

Making Predictions

6	develop design	formulate assemble	author construct	investigate compose
Create Produce new or original work	Compose a song, skit, poem, or rap Expand your finding Prepare a flow chart Design a model		Tie your learning to _____ What questions need to be assessed Formulate your thoughts on _____	

- Websites listed for activities

217

Making Predictions

Read each story event, and predict what happened next.

Zack and Andy were building a spaceship from a kit Zack got for his birthday. There were lots of small pieces spread out all over the table. "That's a lot of pieces!" Andy said.

Zack unfolded the paper that had the directions. It had pictures to show how to put the spaceship together, step by step. He showed the paper to Andy.

"Look," said Zack. "It starts with four of these long thin pieces.

What probably happened next?

Example from k5 learning

218

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>

219

Additional Strategies

- Using Figurative Language

— Idioms -

Idioms

Having a meaning that cannot be derived from the meanings of its elements

Give it a shot - Try	Get a kick out of - Enjoy
Speak your mind - Say what you really feel	Read between the lines - Find the hidden meaning
A piece of cake - Very easy	Have mixed feelings - Unsure how you feel
Slipped my mind - I forgot	Draw a blank - Can't remember
Cross your fingers - For good luck	Have a change of heart - Changed your mind
Be in hot water - Be in trouble	Be second to none - Be the best
It cost an arm and a leg - It was expensive	Get your act together - Behave properly
It's in the bag - It's a certainty	Play it by ear - Improvise
Get cold feet - Be nervous	Have second thoughts - Have doubts
A rip off - Too expensive	
A basket case - A crazy person	

<http://examples.yourdictionary.com/simile-examples-for-kids.html>

220

- Jokes/Riddles
- Brain Teasers and Puzzles

221

Visual Strategies

Highlighting Strategy for Main Idea and Details

Highlight the main idea in one color.

Highlight supporting details in another color

80

Rosa Parks was born February 4, 1913 in Tuskegee, Alabama. She spent her childhood in Alabama. When she was 11, she enrolled in the Montgomery Industrial School for Girls. Later, she worked as a seamstress in Montgomery.

Rosa Parks has been called the "mother of the civil rights movement" and one of the most important citizens of the 20th century. In the early 1950s, the bus system in Montgomery, as in many parts of the United States, was segregated. Blacks were required to board the bus at the front, buy their tickets, and then re-board the bus in the back. Sometimes, they weren't able to get on the bus again before it drove away. They were not allowed to sit in the front of the bus, which sometimes made it difficult to get off at the right stop. Even if they were sitting in the "black section", they were still required to give their seats up to white passengers if the "white section" was full. In December of 1955, Rosa Parks refused to give up her seat on a city bus to a white passenger. The bus driver had her arrested. She was tried and convicted of violating a local ordinance.

COMPREHENSION

Organization and selection of facts and ideas

paragraphs, summaries

Reid _____ in your own words.

What is the main idea of _____?

What differences exist between _____?

Can you write a brief outline?

222

80

Difficulty Understanding Fiction

- Step 1. Read passage (may need to use high/low readers i.e.: High Noon books)
 Step 2. Use main idea and supporting details highlighting strategy
 Step 3: Character Analysis

223

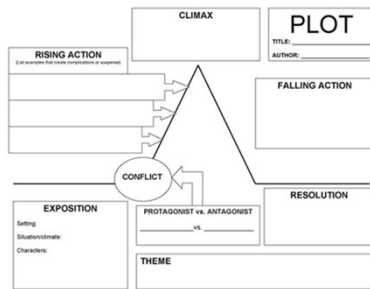
Character's Name	Examples
Character's Appearance	
Character's Words	
Character's Thoughts	
Character Traits	
What Others Say or Feel	

224

Difficulty Understanding Fiction

- Step 4 if not analyzing character: Use Plot Diagram

81



225

Difficulty Understanding Fiction

- Step 5. Use 2/3 1/3 notetaking for story elements

82

2/3 1/3 Notetaking

Name: _____
 Class: _____

- I. Main Idea
 A. Detail
 B. Detail
 C. Detail
- II. Main Idea
 A. Detail
 B. Detail
 C. Detail
- III. Main Idea
 A. Detail
 B. Detail
 C. Detail

Comments
 Questions
 Link to what you know
 Vocabulary
 What you would like to learn more about

ANALYSIS

Expanding a whole into component parts

What are the parts or features of ____?
 Classify ____ according to ____
 Gather: Organize: web / map
 How does ____ compare / contrast with ____?
 What evidence can you present for ____?

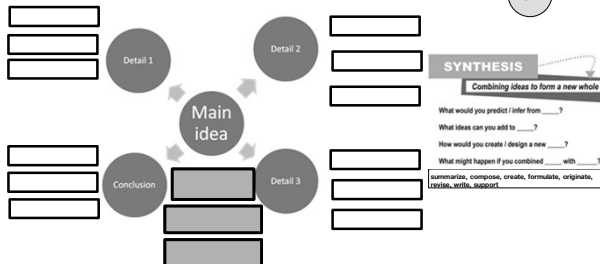
2/3

1/3

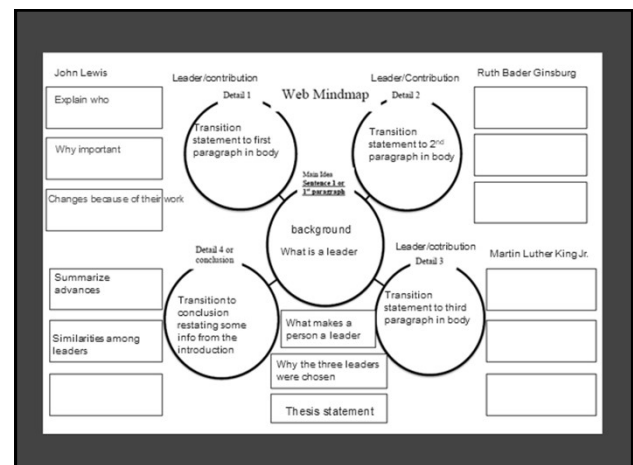
226

Step 6: Use Mind Map to Summarize

82



227



228

Difficulty Understanding Nonfiction

Step 1. Read an ability appropriate passage (www.newsela.com)

Step 2. Use main idea and supporting detail highlighting strategy

Step 3. Fact or Opinion - Does the student try to pull in background knowledge as fact?

83

229

Difficulty Understanding Nonfiction

Step 4. Provide mindmap with important areas outlined

Types of Text Structures in Informational Texts

Text Structure	Definitions	Critical Words	Graphic Organizer	High School Examples of Texts
Description	Descriptive details about characteristics, actions, etc.	Descriptive adjective and words that can mean repeat, within		Representative democracy involves leaders selecting voters from the populace after a period of campaigning for that office. Congressional leaders are considered the most important in the system of government to be successful.
Problem/Solution	Sets up a problem and its solution	Problems, conflicts, a solution, the reason for the problem or question		The type of government created after the American Revolution included the needs of protecting individual liberties while at the same time ensuring the collective good of society. To that end, a government structure was created: executive, legislative, and judicial powers, and federalism was created.
Time/Order Chronological	Gives information in order of occurrence	First, second, before, after, finally, then, next, later		A president did not gain the authority to be President. The second step in the process is for the House or Senate to approve the President's nomination. The last step in the process of a bill becoming law is the final House of Congress passes the bill. It goes to the President to be signed into law.
Comparison/Contrast	Looking at two or more items to identify similarities/differences	While, yet, but, rather, most, more, as well as, less, and, unlike, although		Some countries like the commonwealths offered by the banks including, commonwealth banking, multiple branches, and a large number of ATMs. Other countries offer more personalized service and are better connected to their communities.
Cause/Effect	Gives explanation for happening	Because, since, when, due to, as a result, for this reason, on account of, consequently		As a result of the Great Depression, almost half of all the money in the United States had been savings and bank their ability to support themselves when they were ready to retire. As a result, Congress passed the Social Security Act of 1935 to help the financial situation of the Great Depression in the early.

230

Bringing the Pieces Together: Keep in Mind

- Simplify language
- Post its or laminate (help card)
- Tune into figurative language
- Self advocacy
- Visualization strategies
- Summarize for reading comprehension
- Break down larger assignments
- Multisensory approach
- Allow extra time

231

Overall Classroom Strategies for Language Processing

- Make tasks explicit
- Preview and Review Constantly -Preview, review, and summarize all new and previous lessons including vocabulary words and concepts.
- Relate new material to previous lessons and experiences.
- Preassigned reading, homework, videos, or online
- short preview, outline, vocabulary, key points
- Main idea on the board
- Avoid multiple choice that requires complex analysis of language
- Choices on how to complete assignments

232

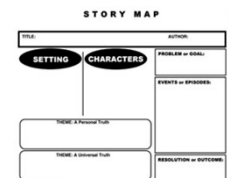
Classroom Strategies

- Connect to individual interests and background knowledge
- Scaffold concepts and tasks to support metacognitive skills
- Use visualization techniques to enhance listening and comprehension
- Use of graphic organizers or graphic organizer apps for note taking from lectures or books

233

Classroom Strategies

- Use story starters for creative writing assignments
- Practice story mapping



234

Classroom Strategies

- Draw out details with questions and visualization strategies
- Don't overuse words. You can shorten sentences by eliminating non-essential words and phrases, as well as limiting double negatives. (See highlighting strategy in presentation: Highly Effective Visual Graphic Strategies)
- Encourage and help the child summarize what he or she is reading and also to write it down for better understanding and retention
- Break down larger reading assignments into small sections; highlight the most important part of a reading assignment.

235

Classroom Strategies

- Use pictures, videos, computer generated models, helps students with LPD use their visual reasoning skills in order to understand the material and to express their own understanding
- Allow students to use visual models and projects as instead of written assignments or spoken presentations if possible
- It is very helpful to allow students to use multisensory materials and approaches
- Avoid using multiple choice items that require complex analysis of language; instead, focus only on the essential details and facts required to master the subject matter

236

Classroom Strategies

- Allow students extra time to listen, think, process and form their own thoughts about the written and/or spoken material in the classroom
- Students may need to get extra clarification from the teacher so allow them to discuss assignments with the teach and also with other students if necessary



237

Linking to Standards: Key Words

- Syntax (report, engage, retell, explain, describe)
- Semantic Retrieval (acquire, use, retell)
- Social Pragmatic (adapt speech to situation or listener, ask, answer, collaborate, engage effectively, theme, details)
- Metalinguistic (explain, determine, clarify, compare/contrast, analyze)



238

Key Words

- Processing Time (participate in, engage effectively, collaborate)
- Organization (retell, summarize)
- Time Management (introduce, support with evidence, conclusion. Any projects with multiple steps)
- Working Memory (engage effectively, ask/answer, support)
- Metacognition (summarize, analyze, delineate)

239

Key Words

- Sustained Attention (engage effectively, participate, ask/answer, collaborate)
- Task Initiation (collaborate, participate, introduce)
- Discrimination (understanding of sounds (phonemes, spelling/sound correspondence)



240



241

For You:
Appendix A: Test Battery
Appendix B: Language Processing
Evaluation Example

242



In Just a Few Minutes



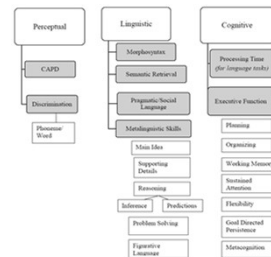
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243

What does language processing mean to you?

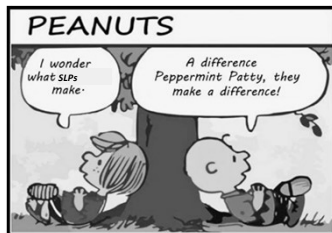
The Linguistic, Cognitive, and Perceptual Characteristics of Language Processing

At the American Speech, Language, and Hearing Association in 2007, Macos, Herel, and Foster presented on language processing providing a definition that includes a perceptual, linguistic, and cognitive perspective. The following has been adapted from their work.



244

Why do you do what you do?



245

Final Thoughts

When we look beyond the form, content, and use of language, we may find a language processing disorder that impacts our students' ability to communicate and participate fully.





246

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Conference Evaluation

- Last page of the handbook
- Use the QR code or web link to access the online evaluation
- Enter this special code: H

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