

Participant Note-Taking Guide



Literacy for All! Designing Inclusive Literacy Learning Environments Foundational Reading Skills

www.inclusionintexas.org

TEA Technical Assistance Networks

Participation Norms

- Be fully present
- Minimize distractions
- Take a chance
- Utilize parking lot for questions

Session Outcomes

Build knowledge and understanding of the science of teaching reading, how learning abilities impact reading, and instructional strategies to reduce the impact of disabilities in learning how to read.

Learning Intentions

- Explain how the brain learns to read.
- Identify the essential components of a reading program.
- Understand how learning abilities, impact reading.
- Apply the understanding of how a learning disability can present barriers in the process of learning to read.

Success Criteria

- I can explain how the brain learns to read and how the essential components of a reading program relate to that process.
- I can explain how learning abilities impact learning to read.
- I can apply my understanding of how a learning disability affects the ability to learn to read by identifying appropriate instructional methods and accommodations to teach basic reading skills.

Personal Learning Goal

If you have questions about HB 3 and the Reading Academies developed by TEA, you can go to their website.

<https://tea.texas.gov/academics/early-childhood-education/hb-3-reading-academies>

How Do Children Learn How to Read?

Reflection Box 1

Reflection Box 2

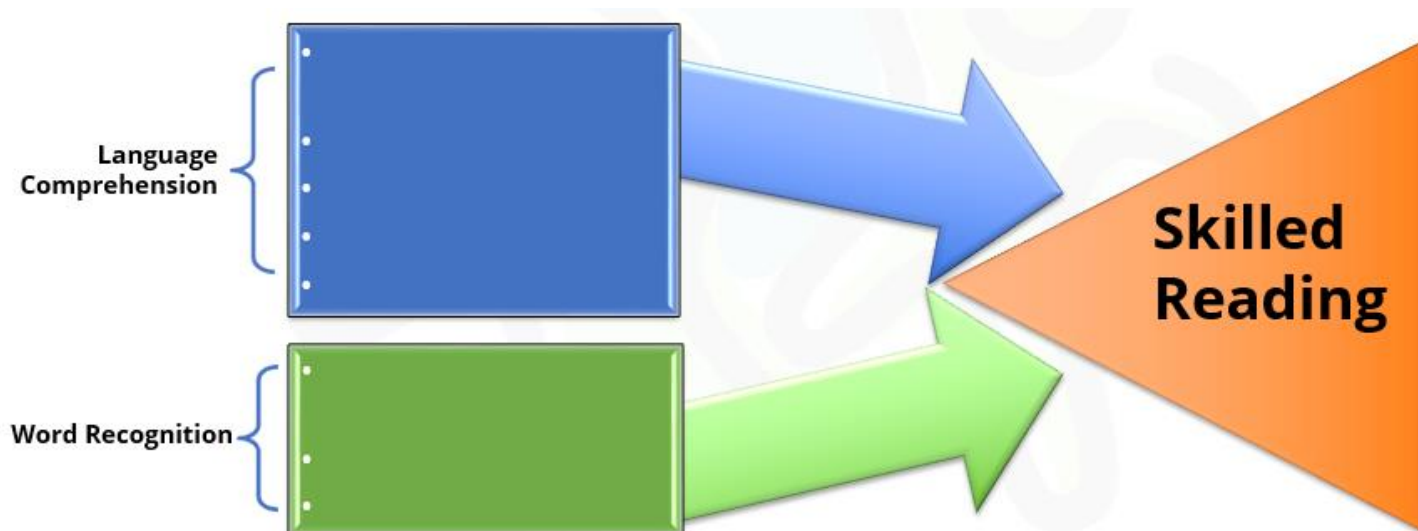
Simple View of Reading

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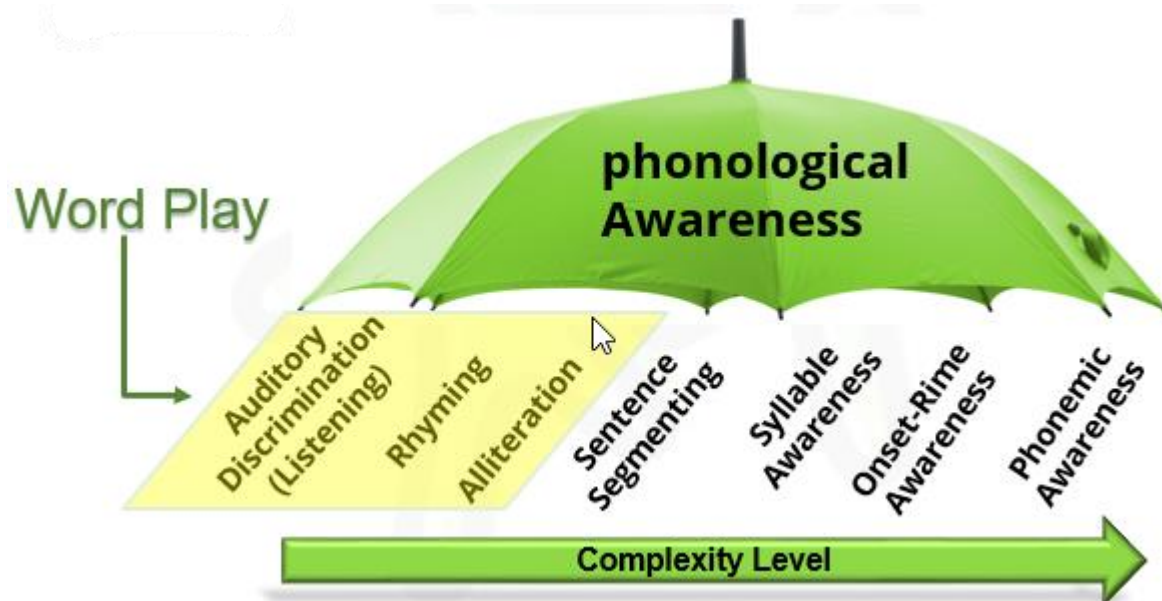
The Strands of Reading



Hollis Scarborough's, the Strands of Reading theory, is also known as

View the Reading Rope at <https://dyslexiaida.org/scarboroughs-reading-rope-a-groundbreaking-infographic/>

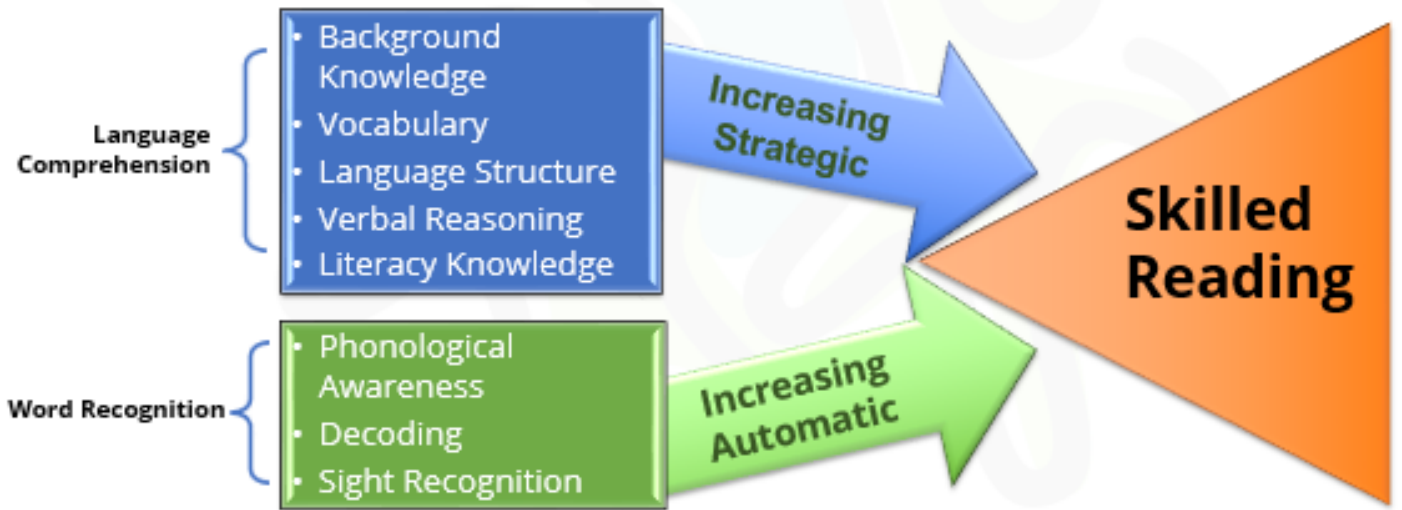
The Strands of Reading (Reading Rope) Theory



Word Recognition Notes:

Language Comprehension Notes:

TEKS Connections



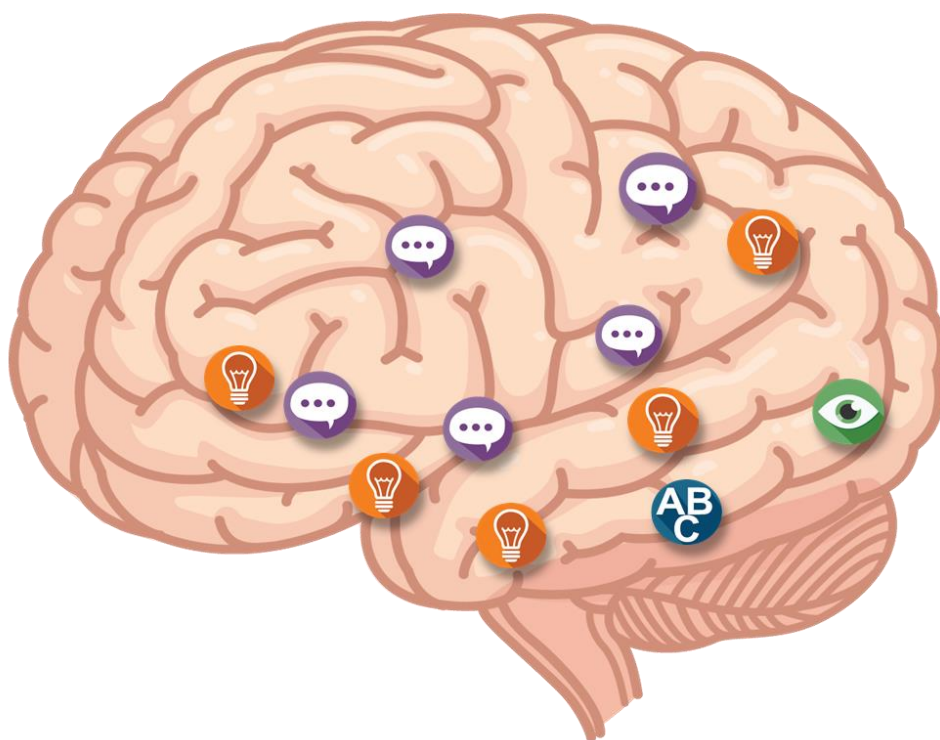
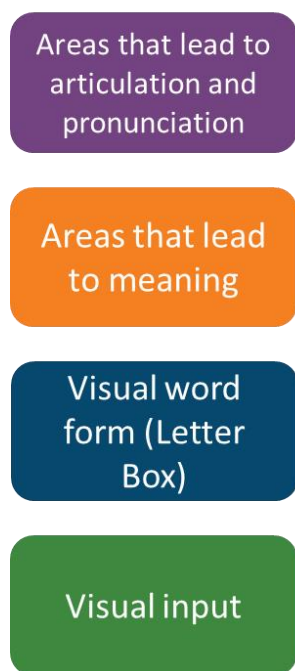
How do the skills progress across grade levels?

Is anything missing in the reading strands theory?

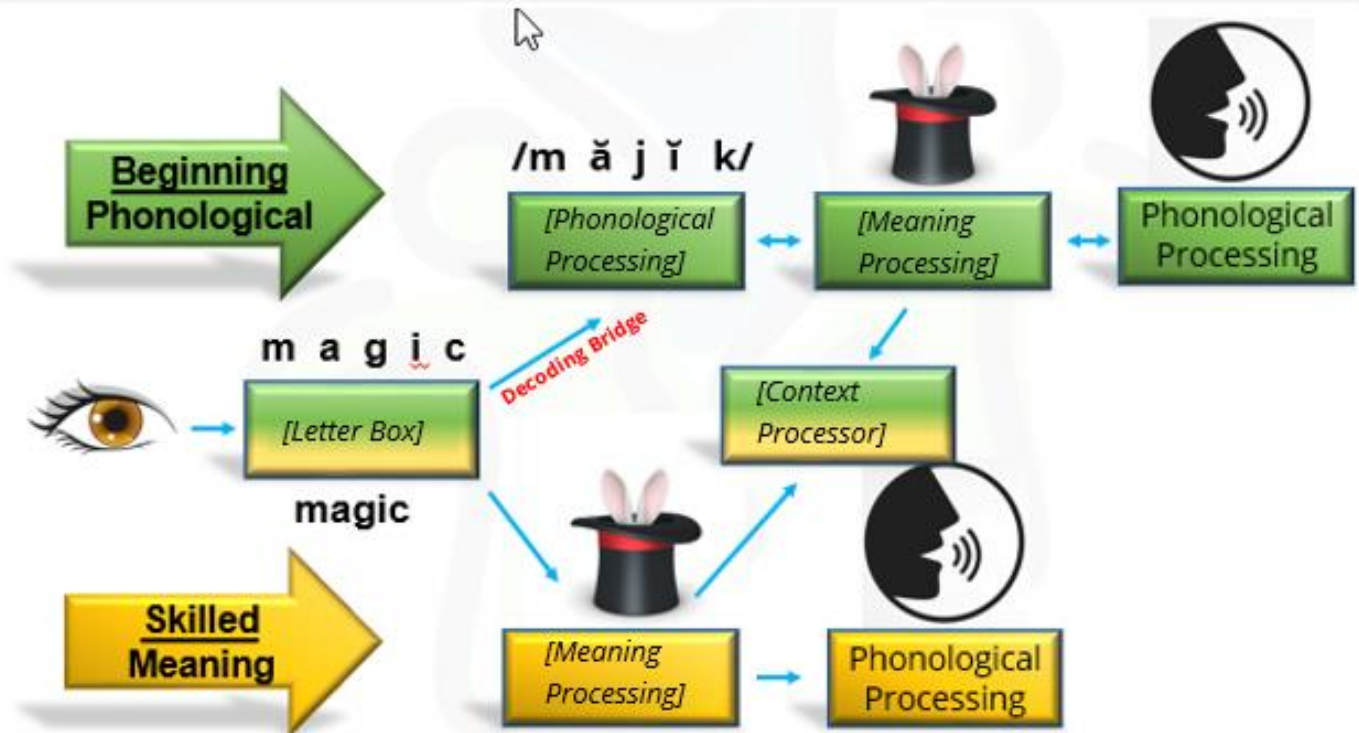
Mini Case Study:

Reading Brain Big Ideas

1. Humans are not born with a brain that is hard wired to learn how to read.
2. Children have to be explicitly taught how to read so the brain can develop the necessary neural pathways.
3. Reading is universal. All skilled readers, regardless of language, use the same brain areas to help identify and comprehend text.
4. The brain of a beginning reader is different than the brain of a skilled reader.



The Reading Brain Pathways

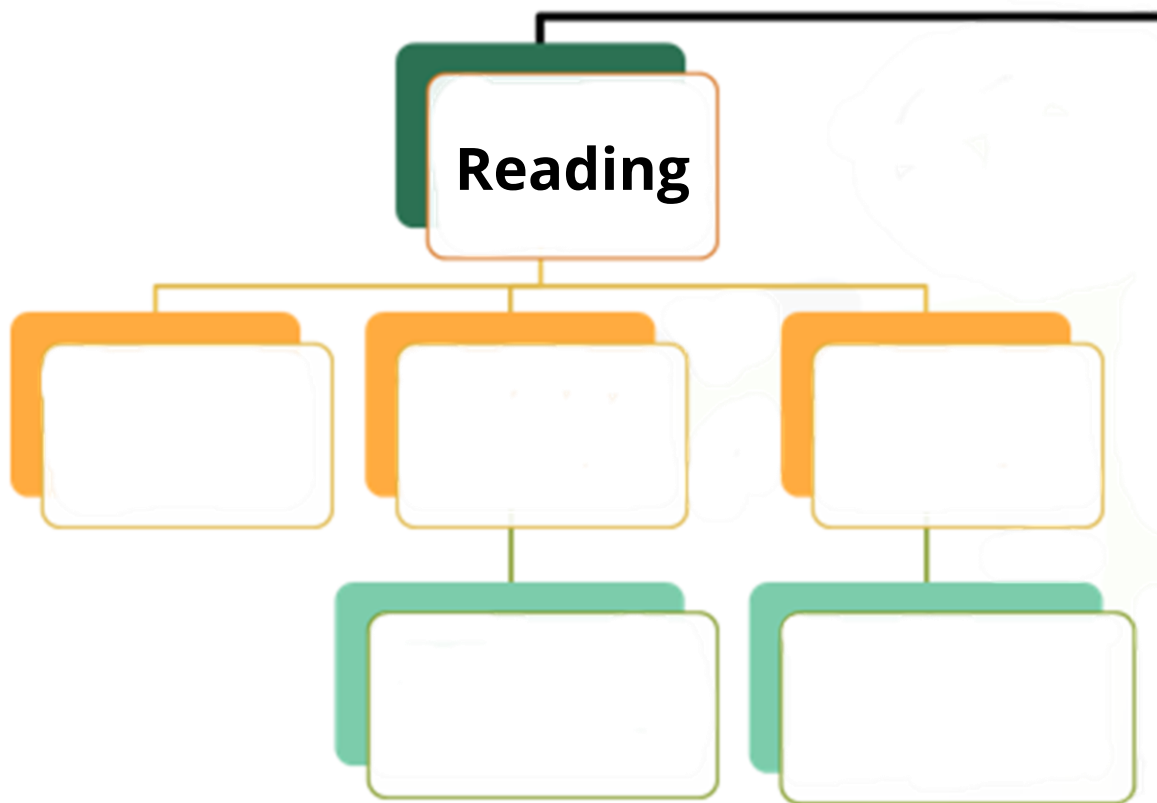


Notes:

Self-assessment: I can explain how the brain processes print and how the essential components of a reading program relate to that process.

← I do not yet understand. I can teach others. →

Specific Learning Disabilities



You can find the Dyslexia Handbook, 2018 Update at

<https://tea.texas.gov/academics/special-student-populations/dyslexia-and-related-disorders>

Dyslexia

Video: What is Dyslexia? Partial Notes

- Dyslexia is caused by a _____ problem.
- People with dyslexia don't have problems seeing language, they have trouble _____ language.
- Students with dyslexia need to _____ to read it.
- Time spent decoding makes it hard to keep up with peers and gain sufficient _____.
- Dyslexia affects up to 1 in 5 people, occurs on a _____, and runs in _____.
- Students with dyslexia need intensive, _____ intervention that breaks the language down and teaches the reader to decode based on _____ and _____.

Video: What is Dyslexia <https://ed.ted.com/lessons/what-is-dyslexia-kelli-sandman-hurley>

Characteristics of Dyslexia

The following are the primary reading/spelling characteristics observed in the classroom:

- Difficulty reading words in isolation
- Difficulty accurately decoding unfamiliar words
- Difficulty with oral reading (slow, inaccurate, or labored without prosody)
- Difficulty spelling

It is important to note that individuals demonstrate differences in degree of impairment and may not exhibit all the characteristics listed above.

The reading/spelling characteristics are most often caused by the following difficulties:

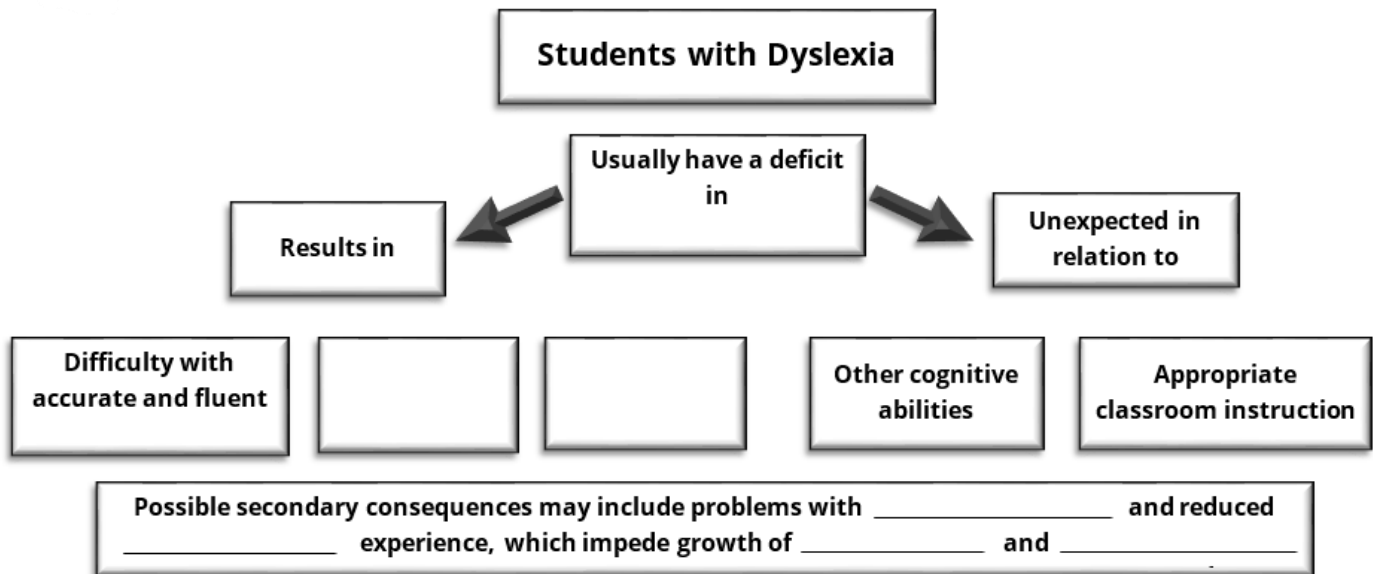
- Segmenting, blending, and manipulating sounds in words (phonemic awareness)
- Learning the names of letters and their associated sounds
- Holding information about sounds and words in memory (phonological memory)
- Rapidly recalling the names of familiar objects, colors, or letters of the alphabet (rapid naming)

The long-term consequences of dyslexia may include the following:

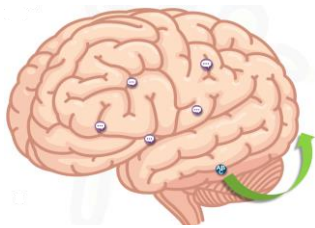
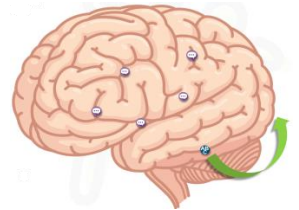
- Variable difficulty with aspects of reading comprehension
- Variable difficulty with aspects of written language
- Limited vocabulary growth due to reduced reading experiences

The Dyslexia Handbook, 2018 Update

Dyslexia and the Reading Brain



Based on what you know about the reading brain, why do most students with dyslexia have difficulty with accurate and fluent word recognition, spelling and decoding?



As students with dyslexia get older, why might they have difficulty with Reading comprehension, vocabulary and background knowledge?

Accommodations for Students with Dyslexia

- Provide copies of notes (teacher or peer provided)
- Provide note-taking assistance
- Provide additional time on assignments and tests
- Reduce/shorten assignments (e.g., chunking assignments into manageable units, fewer items given on classroom test or homework assignment without eliminating concepts, or a student planner to assist with assignments)
- Alternate test location that provides a quiet environment and reduces distractions
- Provide priority seating
- Provide oral reading of directions or written material
- Provide word banks
- Provide text to speech/speech to text
- Allow use of accessibility features in software programs
- Provide audio books
- Provide electronic dictionaries and spellers

Other ideas:

Dysgraphia

What Is Dysgraphia?

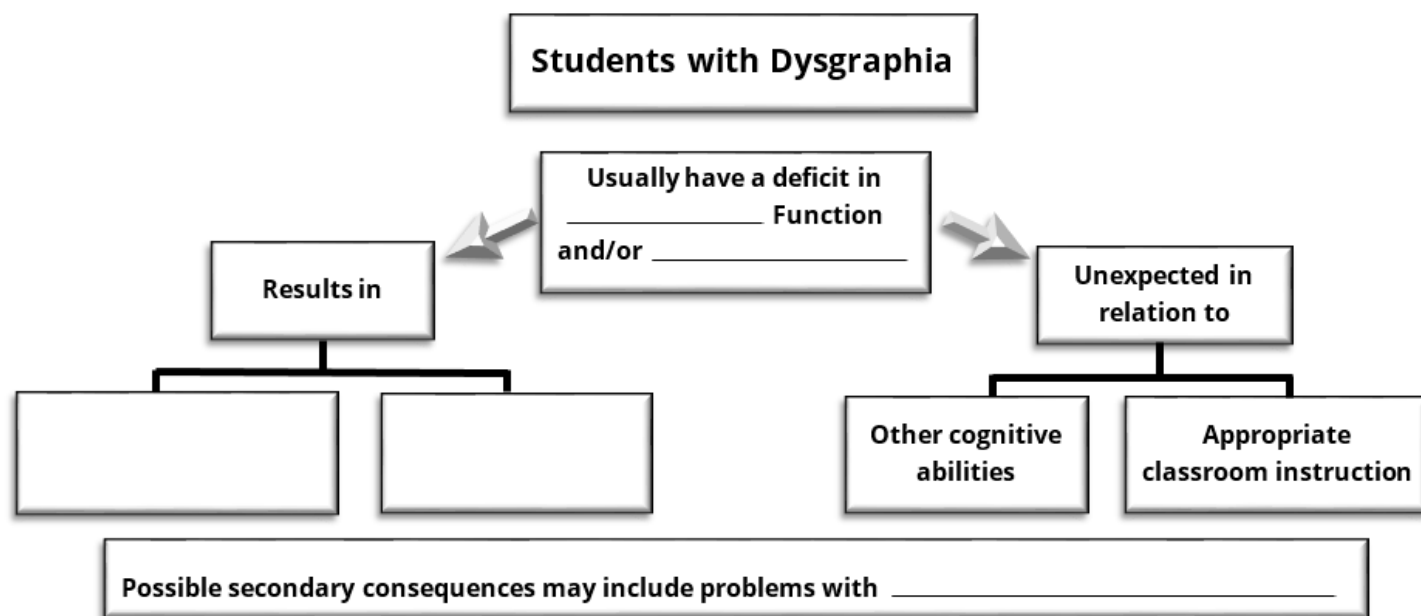
Gary Troia, Ph.D.

Understood
for learning & attention issues

Points to remember:

Video: What is Dysgraphia?

<https://www.understood.org/en/learning-thinking-differences/child-learning-disabilities/dysgraphia/understanding-dysgraphia>



Characteristics of Dysgraphia

The characteristics of dysgraphia include the following:

- Variably shaped and poorly formed letters
- Excessive erasures and cross-outs
- Poor spacing between letters and words
- Letter and number reversals beyond early stages of writing
- Awkward, inconsistent pencil grip
- Heavy pressure and hand fatigue
- Slow writing and copying with legible or illegible handwriting

Additional consequences of dysgraphia may also include:

- Difficulty with unedited written spelling
- Low volume of written output as well as problems with other aspects of written expression

Dysgraphia is not:

- Evidence of a damaged motor nervous system
- Part of a developmental disability that has fine motor deficits (e.g., intellectual disability, autism, cerebral palsy)
- Secondary to a medical condition (e.g., meningitis, significant head trauma, brain trauma)
- Association with generalized developmental motor or coordination difficulties (Developmental Coordination Disorder)
- Impaired spelling or written expression with typical handwriting (legibility and rate)

Dysgraphia can be due to:

- Impaired feedback the brain is receiving from the fingers
- Weaknesses using visual processing to coordinate hand movement and organize the use of space
- Problems with motor planning and sequencing
- Difficulty with storage and retrieval of letter forms

Characteristics of Dysgraphia

Orthographic coding

- Representation of letter forms in short-term and long term memory,
- Access to and retrieval of these representations in memory, and
- Planning for letter production

Graphomotor system

- motor memory
- serial motor implementation
- finger localization and feedback

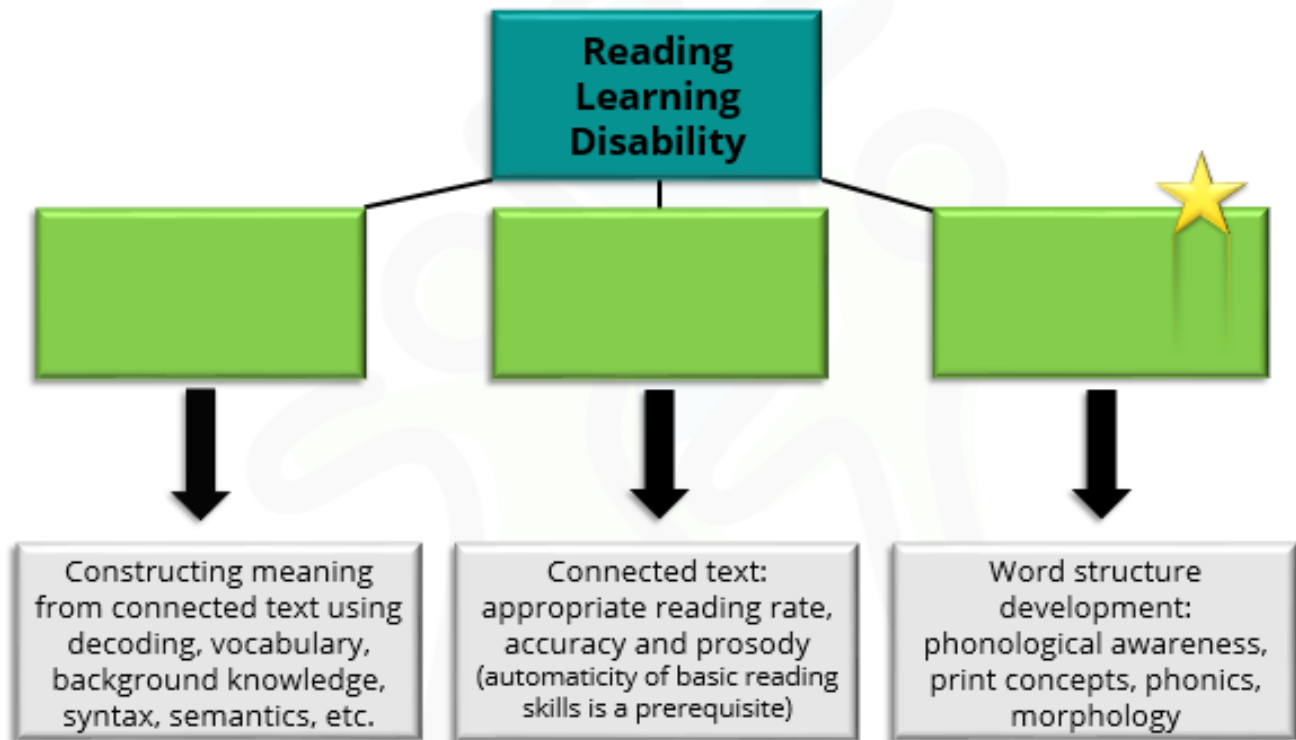
Notes:

Accommodations for Students with Dysgraphia

- Provide paper assignments with name, date, title, etc., already filled in.
- Provide copies of notes or assign a not-taking buddy to assist with filling in missing information.
- Offer an alternative to a written project such as an oral report, dramatic presentation, or visual media project.
- Provide pencil grips or different types of pens or pencils to see what works best for the student.
- Provide handouts so there is less to copy from the board.
- Provide paper with different color or raised lines to help form letters in the right space.
- Help the student break writing assignments into steps.
- Adapt test formats to cut down on handwriting. For example, use circle-the-answer or fill-in-the-blank questions.
- Allow the student to use cursive or manuscript, whichever is easier.

How could you implement the accommodations you highlighted in your grade-level classroom?

Learning Abilities Related to Reading



This is a non-inclusive list.

Phonological Processing is the ability to process spoken and written language.

Phonological awareness is the awareness of the sound structure of a language and the ability to manipulate the structure.

Phonological working memory is the ability to store phoneme information in short term memory.

Phonological retrieval is the ability to recall the phonemes associated with specific graphemes.

Possible Impacts

- Lack of phonological awareness
- Poor spelling
- Lack of alphabetic principle
- Confuses similar sounds
- Difficulty decoding multi-syllable words
- Difficulty blending sounds

How would you explain this learning ability in 20 seconds or less?

Does this learning ability remind you of a student? Why?

What else stands out about this learning ability?

Do you have any questions?

Background knowledge is the ability to comprehend and communicate culturally-valued knowledge and skills such as language, words, and general knowledge developed through experience, learning and acculturation.

Lexical knowledge is the knowledge of the definitions of the words and concepts that underlie vocabulary knowledge.

Possible Impacts

- Difficulty with vocabulary acquisition
- Difficulty finding the right words to say or use
- Difficulty with decoding because the word is not in oral vocabulary.

How would you explain this learning ability in 20 seconds or less?

Does this learning ability remind you of a student? Why?

What else stands out about this learning ability?

Do you have any questions?

Working Memory is the ability to maintain and manipulate information in active attention. The mind's mental "scratchpad" or "workbench".

Auditory short-term storage is the ability to encode and maintain verbal information in primary memory.

Visual-Spatial short-term storage is the ability to encode and maintain visual information in primary memory.

Possible Impacts

- Difficulty remembering the sequence of information
- Difficulty with rote
- Difficulty decoding multi-syllable words

How would you explain this learning ability in 20 seconds or less?

Does this learning ability remind you of a student? Why?

What else stands out about this learning ability?

Do you have any questions?

Orthographic Processing is the ability to rapidly map graphemes to phonemes; rapid processing of visual symbols.

Possible Impacts

- Difficulty remembering letter orientation or sequence of letters in words
- Difficulty learning phonetically irregular words
- Difficulty recognizing orthographic patterns

How would you explain this learning ability in 20 seconds or less?

Does this learning ability remind you of a student? Why?

What else stands out about this learning ability?

Do you have any questions?

Retrieval of Information is the rate and fluency at which individuals can access information stored in long-term memory.

Speed of lexical access is the ability to rapidly retrieve words from an individual's lexicon. Verbal efficiency or automaticity of lexical access.

Word fluency is the ability to rapidly produce words that share a phonological (e.g., fluency of retrieval of words via a phonological cue) or semantic feature (eg., fluency of retrieval of words via a meaning based representation).

Possible Impacts

- Slow to access phonological representations when reading
- Difficulty with rapid retrieval of information

How would you explain this learning ability in 20 seconds or less?

Does this learning ability remind you of a student? Why?

What else stands out about this learning ability?

Do you have any questions?

Processing Speed is the ability to quickly identify, discriminate, integrate, make decisions about and respond to visual or auditory information.

Perceptual speed is the speed and fluency with which similarities or differences in visual stimuli (e.g., letters, numbers, patterns, etc.) can be searched and compared.

Possible Impacts

- Difficulty working within time parameters
- Difficulty completing simple, rote tasks quickly
- Difficulty determining the difference between similar letters or words

How would you explain this learning ability in 20 seconds or less?

Does this learning ability remind you of a student? Why?

What else stands out about this learning ability?

Do you have any questions?

Think, Pair, Listen, Share

Think: Each student comes up with their own idea or response

Pair: Students Team Up

Listen: Partners take turns listening to the other's idea

Share: Partners either collaborate to joint share their ideas or go back to their seat where they are asked to share their partner's ideas.



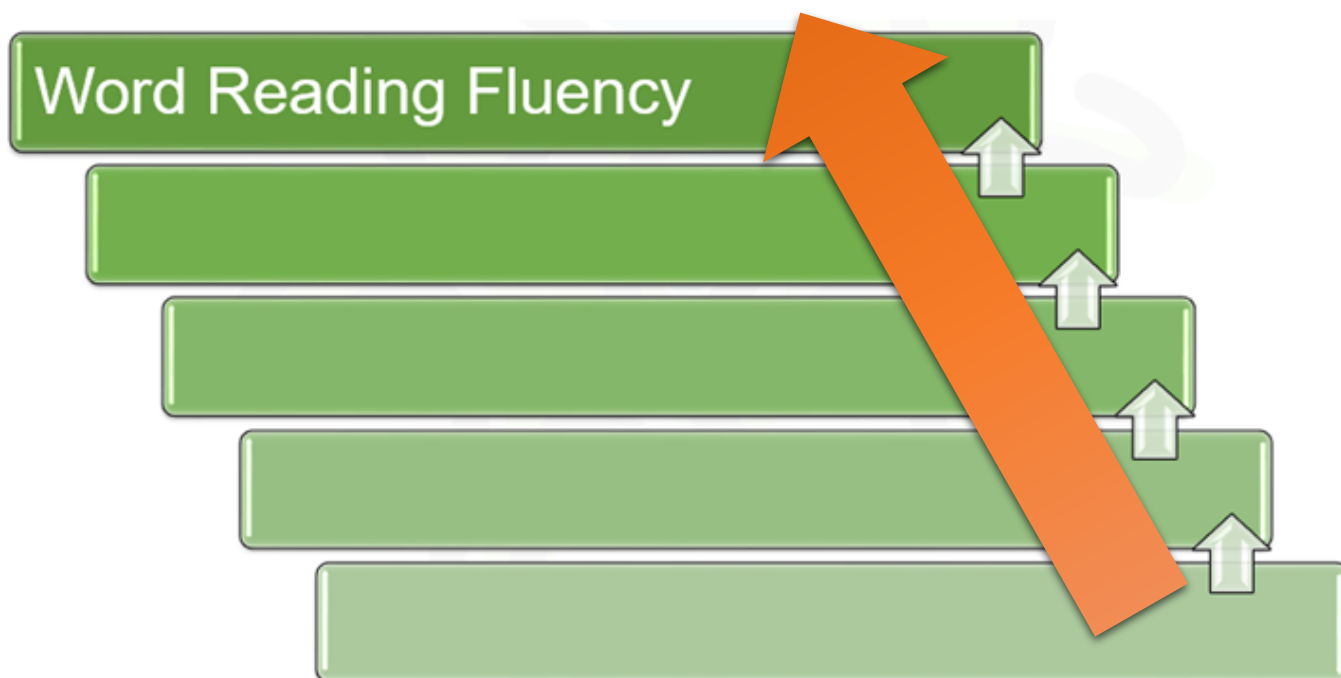
Think: Increases Rigor

Pair: Holds students accountable for their own ideas

Listen: Holds students accountable for LISTENING to their partner's ideas

Share: Scaffolding for Struggling Students

Basic Reading Skills



Notes:

Phonological and Phonemic Awareness

Elkonin Boxes

Explicit Instruction

“Explicit instruction completely and clearly explains the content in a way that students do not have to infer or discover for themselves what they are supposed to learn, know or do.”

(Archer and Hughes, 2011)



Teach students to recognize phonemes by analyzing how the sound is made in the mouth and other characteristics such whether the sound is voiced or is a nasal sound.

Notes:

English Phonemes with Grapheme Examples

Consonants Sounds

Phoneme	Word Example	Graphemes
/p/	pit, span, bump	p
/b/	bat, brought, stubble	b
/t/	town, putt, missed	t, tt, ed
/d/	desk, dress, played	d, ed
/k/	cot, kettle, pack, chorus, quit, mosquito	c, k, ck, ch, q(u)
/g/	got, ghost	g, gh
/f/	half, asphalt, stiff, tough	f, ph, ff, gh
/v/	very, give	v, ve
/m/	milk, bomb, autumn	m, mb, mn
/n/	neck, know, gnaw	n, kn, gn
/ng/	sang bank	ng, n
/th/	think, path, ether	th
/th/	that, seethe, weather	th
/s/	sock, cereal, pass, scent, psychology, dense, recite, mice	s, ss, sc, ps, se, ci, ce
/z/	his, zoo, fizz, rise, xylophone	s, zz, se, s, es, ss
/sh/	martial, shot, special, spacious, pressure, sugar, chagrin, conscience	sh, ssi, su, ch, ci, ti, si
/zh/	vision, measure, garage, seizure	si, s, ge, z
/ch/	cheese, miniature, sketch	ch, tu, tch
/j/	page, jet, badge,	ge, j, dge
/h/	harm, whose	h, wh
/Wh/	whale	wh
/y/	onion, your, Europe, unique,	i, y, eu u
/w/	want, question	w, (q)u
/l/	light, bill, pebble	l, ll, le
/r/	run, wrestle	r, wr
/ks/	box	x

Adapted from Moats and Tolman 2019

English Phonemes with Grapheme Examples

Vowel Sounds

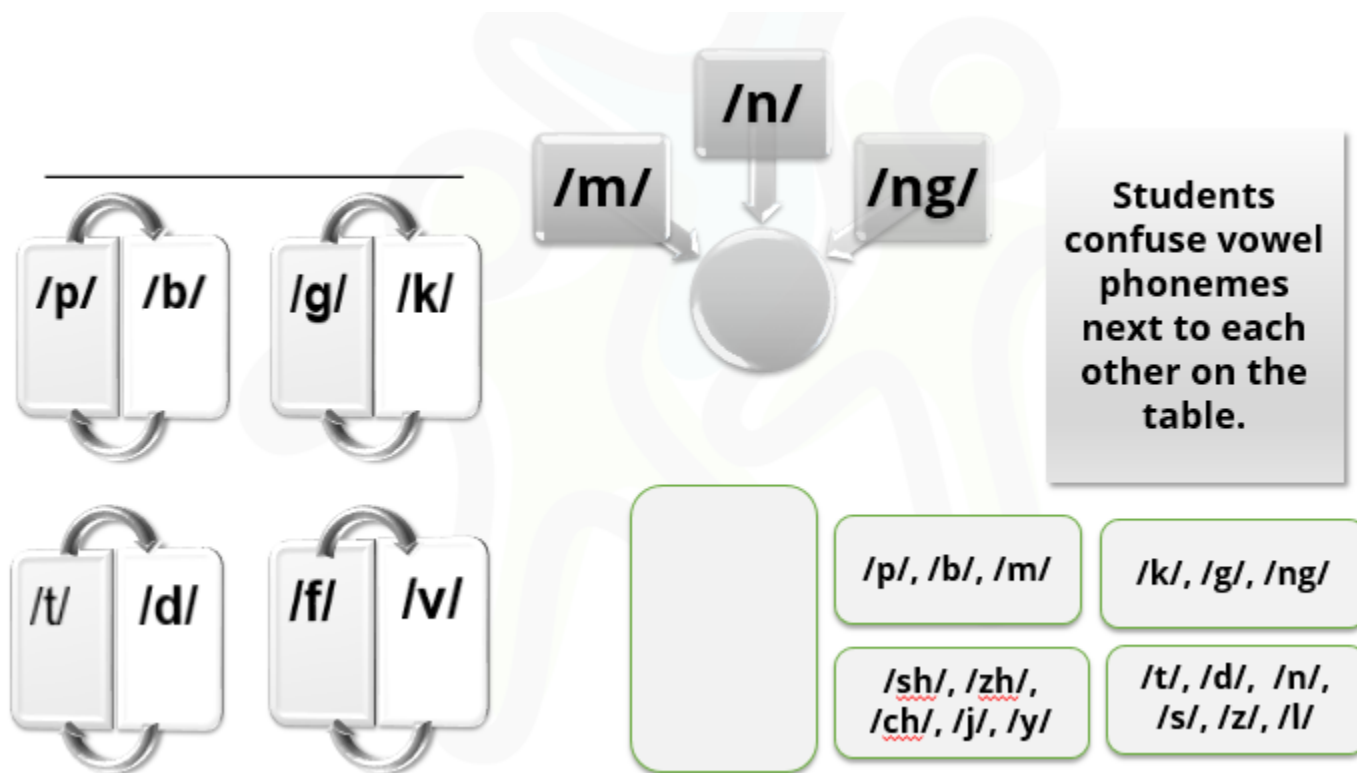
Phoneme	Word Example	Graphemes
/ē/	see, these, me, eat, key, happy, chief, either	y, e, ee, ea, e_e, ey, ie, ei
/ī/	sit, gym	i, y
/ā/	make, rain, play, great, baby, eight, vein, they	a, a_e, ai, ay ea, a_y, eigh, ei, ey
/ĕ/	bed breath	e, ea
/ă/	cat	a
/ī/	time, pie, cry, right, rifle	i_e, ie, y, igh, i
/ō/	fox, swap, palm	o, a
/ŭ/	cup, cover, flood, tough	u, o, oo, ough
/aw/	lost, saw, pause, call, bought	o, a, au, aw, ough
/ō/	open, vote, boat, snow, toe	o, o_e, oa, ow, oe
/oo/	put, took, could	u, oo, ould
/ū/	moo, tube, soup, blue, chew, suit	oo, u_e, ou, ue, ui
/yū/	universe, cute, few, feud	u, u_e, ew, ew
/oi/	oil, boy	oi, oy
/ou/	out cow	ou, ow
/er/	her, doctor, cellar, fur, sir	er, or, ar, ur, ir
/ar/	cart	ar
/or/	sport	or
/ə/	about, lesson, elect, definition, circus	a, e, o, u

The phonemes close together in this column are the sounds students confuse the most. For example /ō/ and /ŭ/.

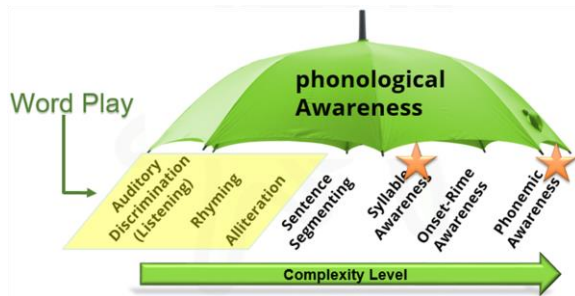
The first 2 graphemes are the most common spelling for the phoneme.

Adapted from Moats and Tolman 2019

Phonological and Phonemic Awareness



Word	Student Spelling	Possible Reason
second	s <u>acud</u>	
evening	e <u>fening</u>	
track	ch <u>rag</u>	
sparkle	s <u>brkl</u>	



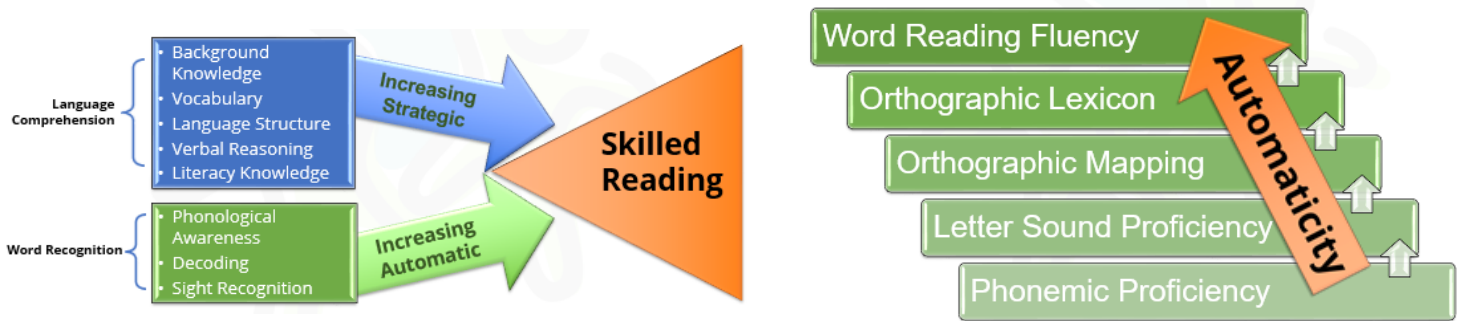
Which learning abilities, if they were a weakness, would impact a student's ability to learn phonemic awareness. Why?

When working on grade level material that is impacted by a weakness in phonemic awareness, what accommodations could you provide a student?

Notes:

Decoding

Fluency vs Automaticity



- Fluency is the ability to read text at an appropriate _____, with _____, _____, and appropriate phrasing (_____).
- Automaticity is the ability to _____ recall stored knowledge without _____.
- _____ is one aspect of reading fluency.

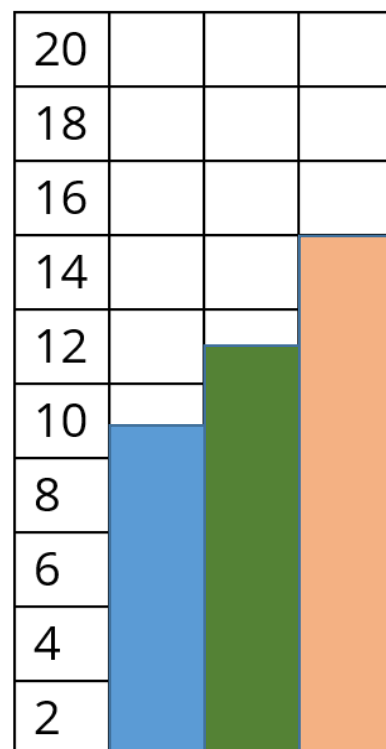
Orthographic Mapping

shirt
boast
money
flank
rang
action
satire
needed
looked
fox

Orthographic Mapping

Quick Reads

t	b	R	E	p
e	p	T	r	B
t	R	b	P	e
B	P	E	t	R



Notes:

<https://www.interventioncentral.org/home> This is a site that generates fluency charts.

Decoding Multisyllabic Words

Brain is a Pattern Detector

"The human brain has evolved to recognize patterns, perhaps more than any other single function. Our brain is weak at processing logic, remembering facts, and making calculations, but pattern recognition is its deep core capability." (Forte 2018)



Example: English
3 years



Example: Spanish
3-6 months

What impact could this have on a student with a disability?

What implications does it have for the literacy instruction you provide?

Decoding Multisyllabic Words – Syllable Patterns

Syllable Pattern	Examples	Notes
A closed syllable ends in at least one consonant; and the vowel is short.	at, cat, fast, splint, magnet, beverage	
An open syllable ends in one vowel and the vowel is long.	go, rerun , prevent	
A vowel-consonant-e syllable ends in one vowel, one consonant and a final e. The final e is silent and the vowel is long.	bake, homemade, brake, contrive	
A vowel team syllable has 2, 3, or 4 adjacent vowels that make one vowel sound.	aid, cow, though, hay, suit, boat, right, straw, awful , steak, prey, boil, toy, moon, teeth The vowel teams are ai, ea, ay, ey, oa, oo, ee, aw, oy, oi, ou, ow	
A vowel r syllable has an r after the vowel. The vowel makes an unexpected sound.	bird, doctor, cart, furniture , monster The “r-controlled” vowels are ar, er, ir, or, ur.	
A final stable syllable has a consonant-le combination or an irregular but reliable spelling.	stable, beetle, mingle, handle, action, future, fusion	

Decoding Multisyllabic Words – Syllable Sort

Closed	Open	VCema	Vowel Team	Final Stable	Vr

Words that can be made with the syllables

Which learning ability deficits would make this activity challenging?

What accommodations could you provide that would reduce barriers to learning?

Helping Students with Dyslexia Read Long Words: Using Syllables and Morphemes

(Kearns and Whaley 2018)

On pages 5-8, read to find out:

What is a simple way to teach students to use syllables to read a polysyllabic word?

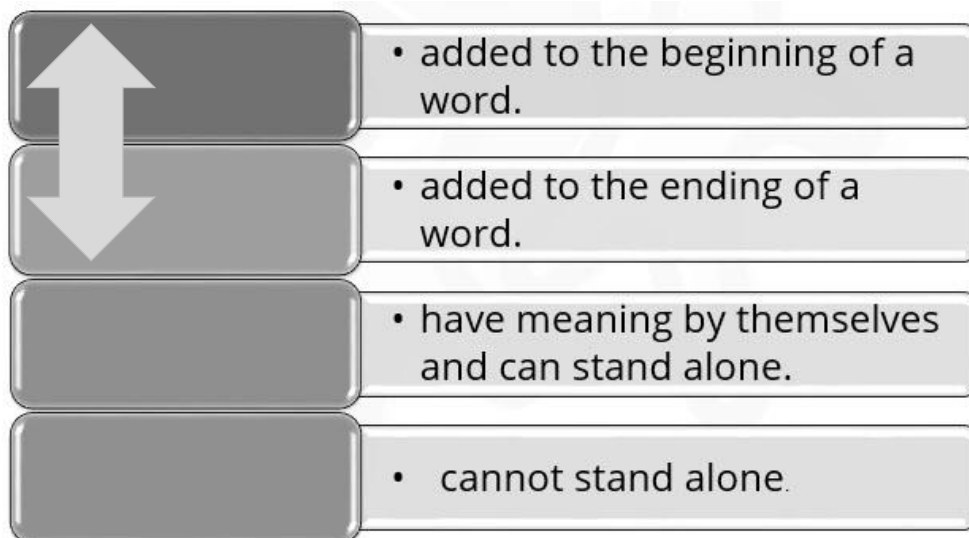
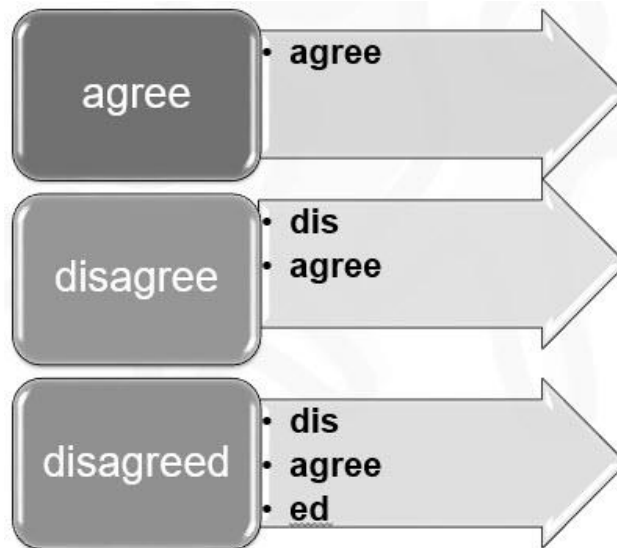
When do students have to be flexible in the process of sounding out a word?

What is the authors' suggestion for using nonsense words?

What is the authors' suggestion for using context clues to help with reading a word?

Decoding Multisyllabic Words – Morphology

How many morphemes in each?



Building Automaticity for Decoding Multisyllabic Words

Quick Reads

rate	sipe	mope	febe	flute
lel	clot	brick	plum	dab
rote	plat	clock	jute	tish
plug	mane	vise	sten	pete

re	pre	un	pre	in
un	in	mis	re	un
pre	mis	un	in	re
mis	in	re	mis	pre

"Speed drills play a role in increasing fluency and automatic recognition. They can include word parts, words, high-frequency words, irregular words, phrases, or sentences" (Moats and Tolman 2019, 299).

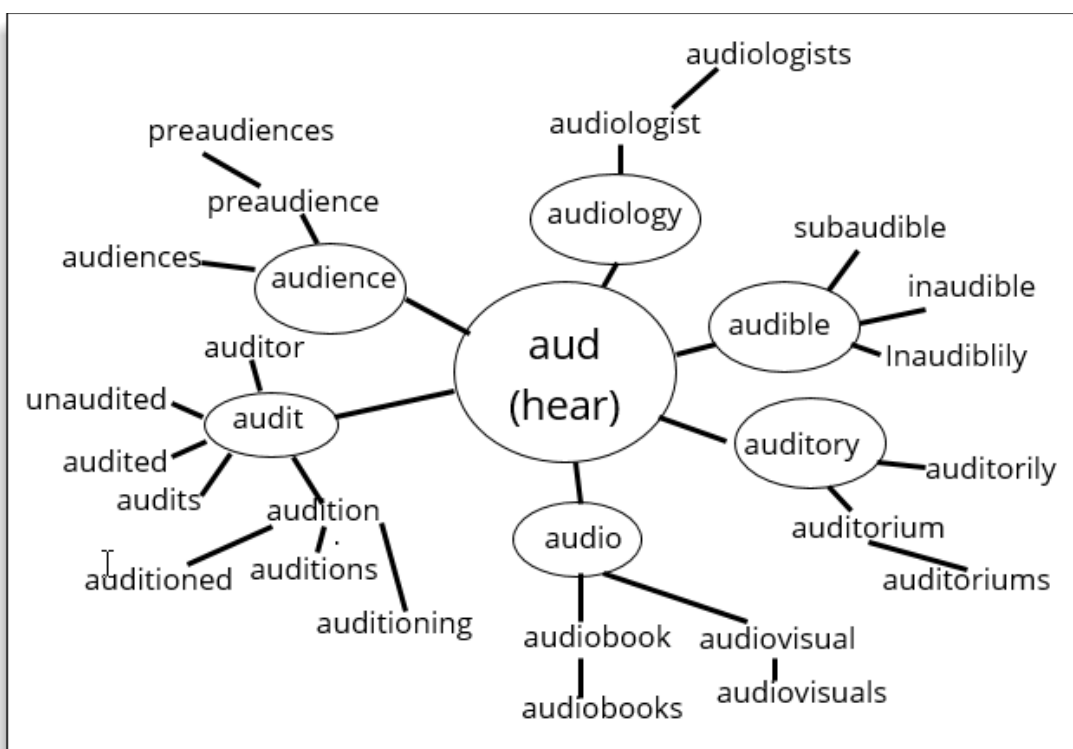
Quick Writes



My word: _____

Building Automaticity for Decoding Multisyllabic Words

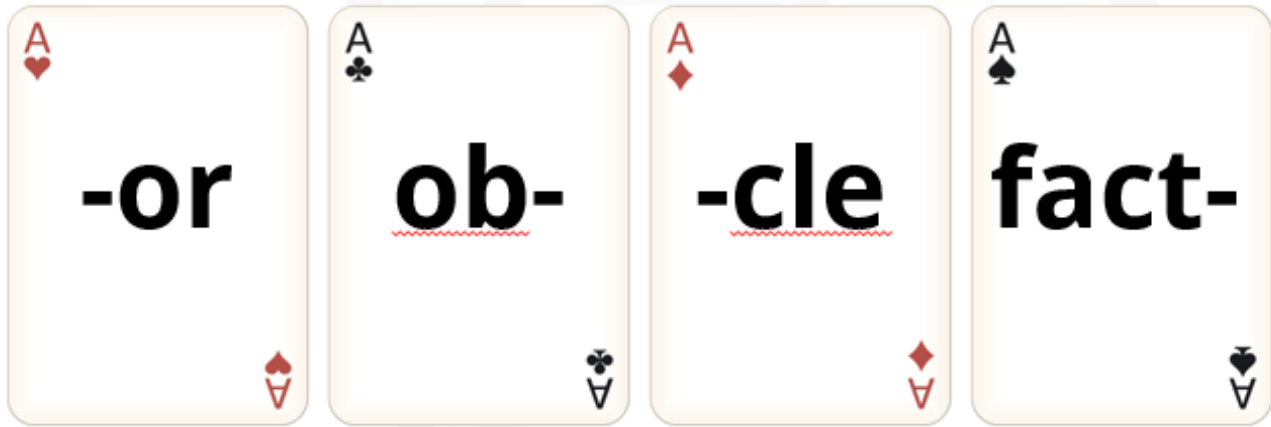
Morphological Maps



Notes:

Building Automaticity for Decoding Multisyllabic Words

Word Rummy



Game Directions for a group of 5

1. Choose words that the students have seen before and divide them into syllables.
2. Choose words so that you have enough syllables to fill up at least 24 cards (1 syllable per card).
3. Create at least 6 extra cards in addition to the 24: examples – draw an extra card, lose a turn, wild and also any affixes that could be added to the words.
4. Each person is dealt 4 cards. The rest of the cards are put in the middle for players to draw from on their turn. The top card of this pile is turned face up in the middle of the table. This will be the discard pile.
5. The first person to go, decides if she wants to draw a card from the remaining deck (draw pile) or take the card that was laid face up.
6. Player 1 decides if she can make a word with the cards in her hand. If so, the cards are laid face up in front of the player. She must read the word she lays down.
7. When player 1 is finished, she discards a card from her hand on top of the discard pile.
8. Player 2 follows steps 5-7.
9. If a player has an affix card that could be added to another player's word, he lays the affix card down in front of him (not on the other player's word).
10. When there are no more cards in the draw pile, shuffle the cards in the discard pile to create a new draw pile.
11. If there are no more cards in either the discard or draw pile, players pass one card from their hand to the player to his right. All players can lay down words they can make at this time. Players continue passing cards until one player uses all of his cards.
12. The person with the most cards (not words) laid down wins that round.
13. Students may be able to make words not on the initial list. If this happens, some of the words on your list cannot be made.

Reading Long Words

Syllable Division

VC-CV

- Fur-nish
- con-vince
- ac-cent
- in-vade

V-CV

75%

- de-tain
- na-tive
- ri-val
- bea-con

VC-V

- wag-on
- riv-er
- trav-el
- clos-et

Blends, diagraphs

- mon-strous
- lunch-eon
- ath-lete
- con-flict

Reading Long Words Routine

1. Identify the affixes.
2. Underline the vowels.
3. Use syllable division rules. (Diagraphs and blends stay together)
4. Use syllable patterns to decode the vowel sounds.
5. Read the word.
6. Be flexible with vowel sounds.

Reading Long Words Routine Notes

historically

Notes for Introducing the Reading Long Words Routine

Accommodations Needed for Effective Use of the Routine (Pages 19-24)

Sight Recognition of Words

Irregular Words

Predictability exists on a continuum; some words are perfectly regular, some are a little bit odd, and others are very odd.

- Approximately _____% of all English words can be spelled accurately by sound-symbol correspondence patterns alone.
- Approximately _____% can be spelled accurately except for **one** speech sound.
- The remaining _____%, the very odd words, are usually borrowed from another language or are the oldest words in our language.

“When newly encountered words are not sounded out, they are poorly remembered.” (Share 2019)

Suggested Instructional Routine for Irregular Words

This word is [____]. What is this word? What is the first sound you hear in [____]? Is this sound spelled the way we would expect? What is the second sound in [____]? Is this sound spelled the way we would expect? No, it's not. It is spelled [____] Let's underline that part so we can remember that it is an irregular spelling for the [1st, 2nd, etc.] sound that we just have to memorize. What is the last sound in [____]? Is this sound spelled the way we would expect?

So, this word only has [1, 2, etc.] irregular spelling(s) that we have to memorize. All the other parts are regular spellings. Please write the word [____] on your paper and underline the irregular part (s). Check your spelling with mine. Turn to your neighbor and spell the word [____] and then tell them the sound(s) that has an irregular spelling and how it is spelled in [____]. We are going to add the word [____] to the flash card deck.


said

Front


săd

Back

Edward Fry's Instant
Word List
(in order of frequency)

Building Automaticity for Decoding Multisyllabic Words

Instructional Tips

- When introducing new vocabulary, talk about the parts of the word, in addition to talking about the definition.
- During intervention lessons, the words you introduce should only contain word patterns you have already taught or will teach using the words introduced.
- During grade level instruction, talk about the word patterns and the definition. Locate the word in text and read the sentence together. If possible, do this the day before the lesson.
- **Always** follow up decoding instruction with students reading connected text containing words the student can practice decoding. The student should be able to read 95% or more of the words.

Notes

Making Connections

How does a weakness in **phonological processing** impact a student's ability to decode accurately and automatically?

Possible Accommodations:

How does a weakness **background knowledge** impact a student's ability to decode accurately and automatically?

Possible Accommodations:

How does a weakness in **working memory** impact a student's ability to decode accurately and automatically?

Possible Accommodations:

How does a weakness in **processing speed** impact a student's ability to decode accurately and automatically?

Possible Accommodations:

How does a weakness in **orthographic Processing** impact a student's ability to decode accurately and automatically?

Possible Accommodations:

How does a weakness in **retrieval of information** impact a student's ability to decode accurately and automatically?

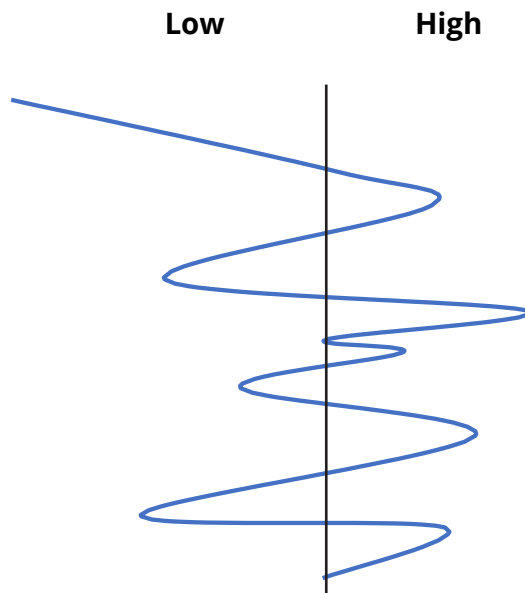
Possible Accommodations:

Learner Variability



Learner variability is a scientifically validated concept that recognizes all students are different in how they learn and take in information.

What is Your Variability?

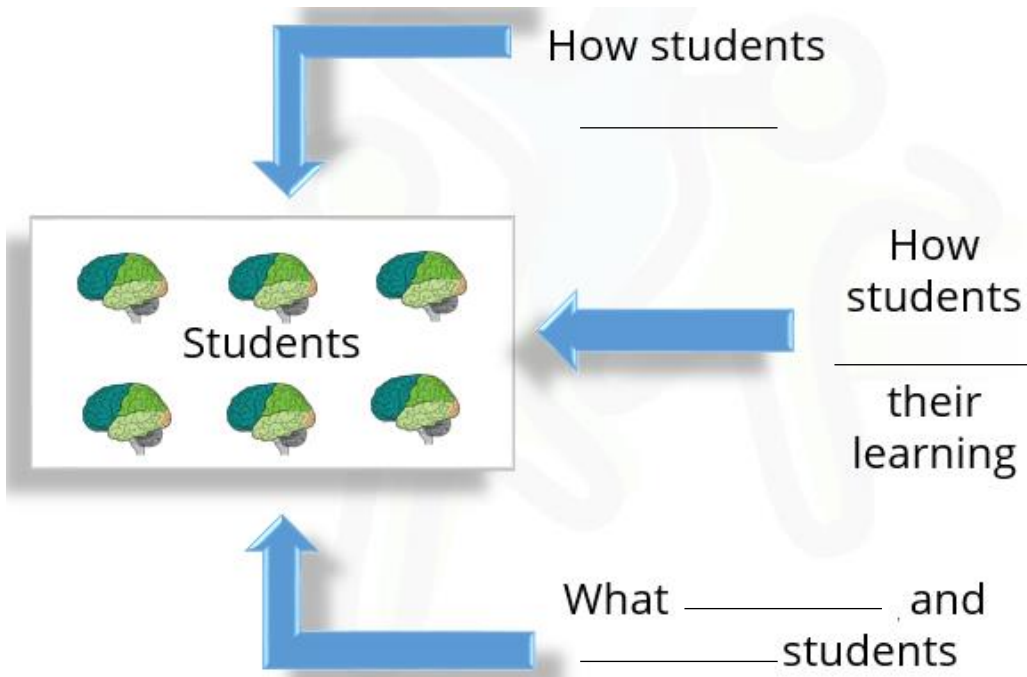


Learner Variability is the _____

Learner Variability

Does your environment help to celebrate and embrace learner variability, or does it work in favor of sameness and inflexible learning environments?

Self-Reflection



Supporting Strategies for Learning Abilities

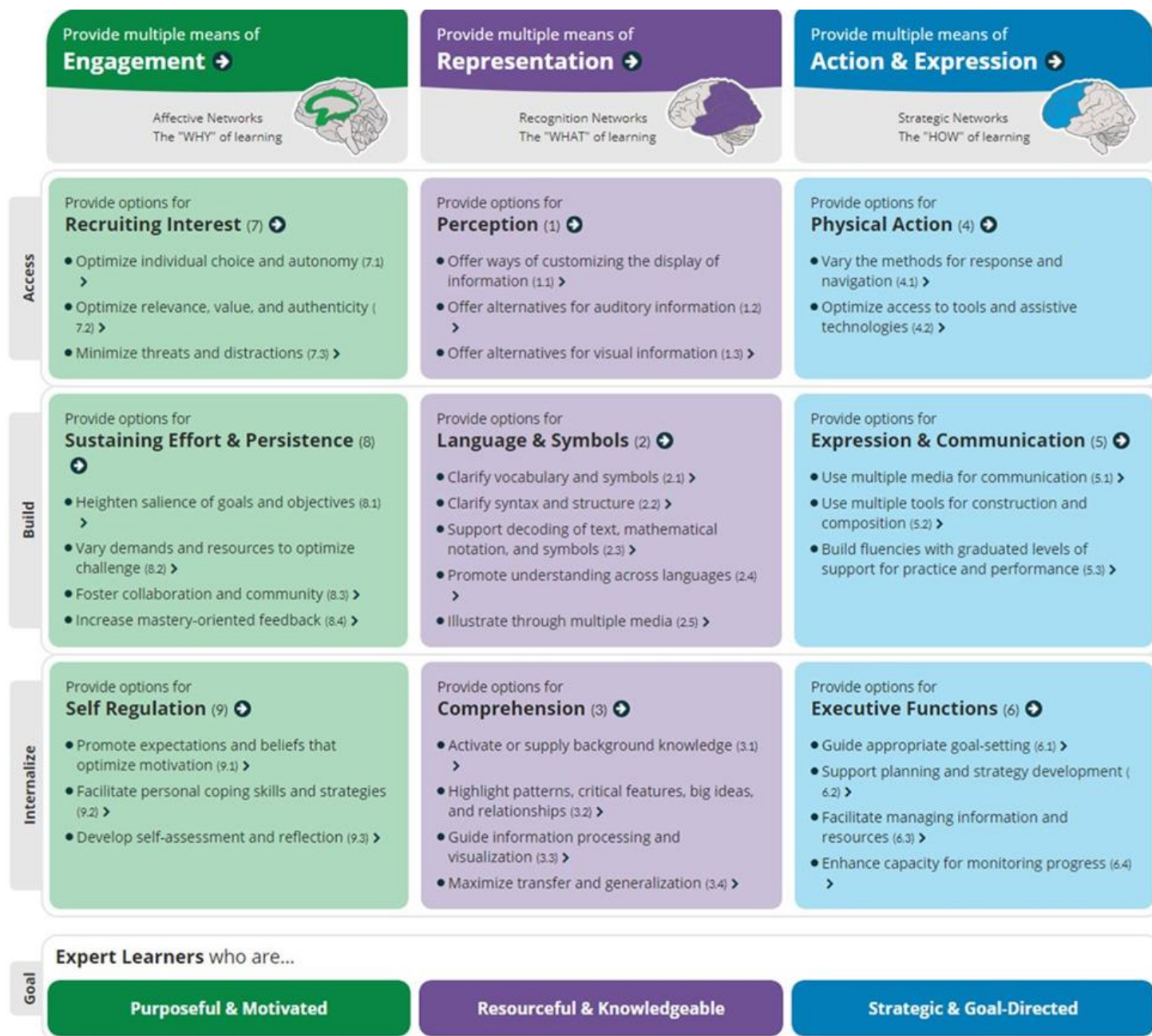
	Phon. Processing	Processing Speed	Working Memory	Retrieval of Info.	Backgr. Knowledge	Vis. Sp. Processing
<u>Identify Key Parts</u> Highlight important concepts and steps in a lesson			X			X
<u>Model</u> Teacher demonstrates a new concept or approach to learning while students observe		X	X	X		
<u>Chunking Information</u> Break larger amounts of information into smaller units		X	X	X		
<u>Mnemonic Aids</u> Students associate familiar words and phrases with terms they're struggling to remember			X			
<u>Task Analysis</u> A description of steps (mental or physical) or tasks needed to complete an activity		X	X	X		
<u>Rote Repetition</u> A memorization technique based on repetition and repeated learning			X	X		
<u>Hands-On Learning</u> Students learn and explore through concrete activities			X			X
<u>Acronyms</u> A word or name formed from initial letters of words or concepts as a type of abbreviation			X	X		
<u>Music or Rhythm</u> Adding concepts and steps to music or creating chants helps support retrieval of information			X	X		
<u>Make Student Connections</u> Connect learning to student experiences, interests, and/or real-world examples			X			
<u>Graphic Organizers</u> An organization tool or map that uses visual symbols to express knowledge		X	X	X	X	X
<u>Games</u> Make a game out of the concept(s) and skill(s) being taught			X			
<u>Activate Prior Knowledge</u> Building initial knowledge and connecting it to what students already know			X			

	Phon. Processing	Processing Speed	Working Memory	Retrieval of info.	Backgr. Knowledge	Vis. Sp. Processing
<u>Stories and Scenarios</u> Teach concepts using meaningful stories to which student(s) can relate			X			
<u>Exemplars</u> Provide visual examples of steps, processes, and concepts throughout the learning	X		X			X
<u>Include Note-Taking Handouts</u> Provide handouts that will allow student(s) to take notes under the key points learned		X	X		X	
<u>Multiple Means of Representing Information</u> Teaching the same information in as many formats as possible to increase the chances of retention		X	X		X	X
<u>Manipulatives</u> Concrete objects that allow students to manipulate concepts to strengthen their learning			X	X		X
<u>Emphasize Colors and Patterns</u> Utilize colors and patterns in teaching and make them clearly defined for key information			X	X		X
<u>Slow Down Instruction</u> Take your time and present information as slowly as possible with embedded practice		X				X
<u>Semantic Clustering</u> Grouping information by category		X		X	X	
<u>Integrating Strategies</u> Using more than one strategy at a time				X		
<u>Emotions Tied to Learning</u> Emphasize concepts and skills by using a variety of emotions within scenarios as you teach				X		
<u>Imagery</u> A visual mode of teaching information that supports students in forming mental images				X		X
<u>Elaboration of Information</u> Linking new information with related prior knowledge		X		X		
<u>Verbal and Visual Prompt</u> Teacher guides the student(s) by providing step-by-step hints that lead to a direct answer		X		X		X

	Phon. Processing	Processing Speed	Working Memory	Retrieval of Info.	Backgr. Knowledge	Vis. Sp. Processing
<u>Study Cards</u> Important information and steps condensed to a notecard that supports students in reviewing and recalling critical components of a lesson or process				X		
<u>Retrieval vs. Repeat</u> Retrieval is repeatedly recalling and applying information across multiple units; repeat is to practice many times within the same lesson				X		
<u>Chaining Strategy</u> Individual steps in a process are broken down into small steps. Each step is taught within the sequence by itself.		X		X		
<u>Dual Encoding</u> Using both visual and verbal representation of information		X		X		
<u>Verbal and Visual Cues</u> A hint that does not lead the student to a direct answer		X		X		
<u>Brief, Focused Small-Group Lessons</u> Teacher reviews chunks of information with a small group of students for short periods				X		
<u>Spiral Review</u> Providing students with a repeated opportunity to practice skills previously taught				X		
<u>Pre-Teach Key Terms</u> Teach students vocabulary terms before they engage in the lesson					X	
<u>Identify Key Terms</u> Identify vocabulary and concepts by having students highlight, underline, or visually notate					X	
<u>Label</u> Students label parts word (e.g., prefix, vowel, syllable)					X	X

	Phon. Processing	Processing Speed	Working Memory	Retrieval of Info.	Backgr. Knowledge	Vis. Sp. Processing
Talk Aloud Talk out processes as you are modeling decoding skills		X			X	
Color Code Directions Place directions in a different color than tasks. Be consistent with colors used throughout assignments.						X
Limit Visual Stimuli Using a cover (e.g., notecard, blank paper), cover parts of the handout to reduce overstimulation		X				X
Use Wide-Ruled Paper Use wide-ruled paper when having students write						X
Provide Copy of Class Notes Provide notes of class lessons, steps, and processes						X
Provide Extra Time to Respond to Questions Allow students time to think and gather thoughts before expecting an oral response		X				X
Reduce Assignment Length Reduce the number of questions within the same TEKS/assignment		X				

Universal Design for Learning (UDL)



The UDL guidelines are a tool used to design learning environments that are accessible and challenging for all. These guidelines offer a set of concrete suggestions for reducing barriers to student learning.

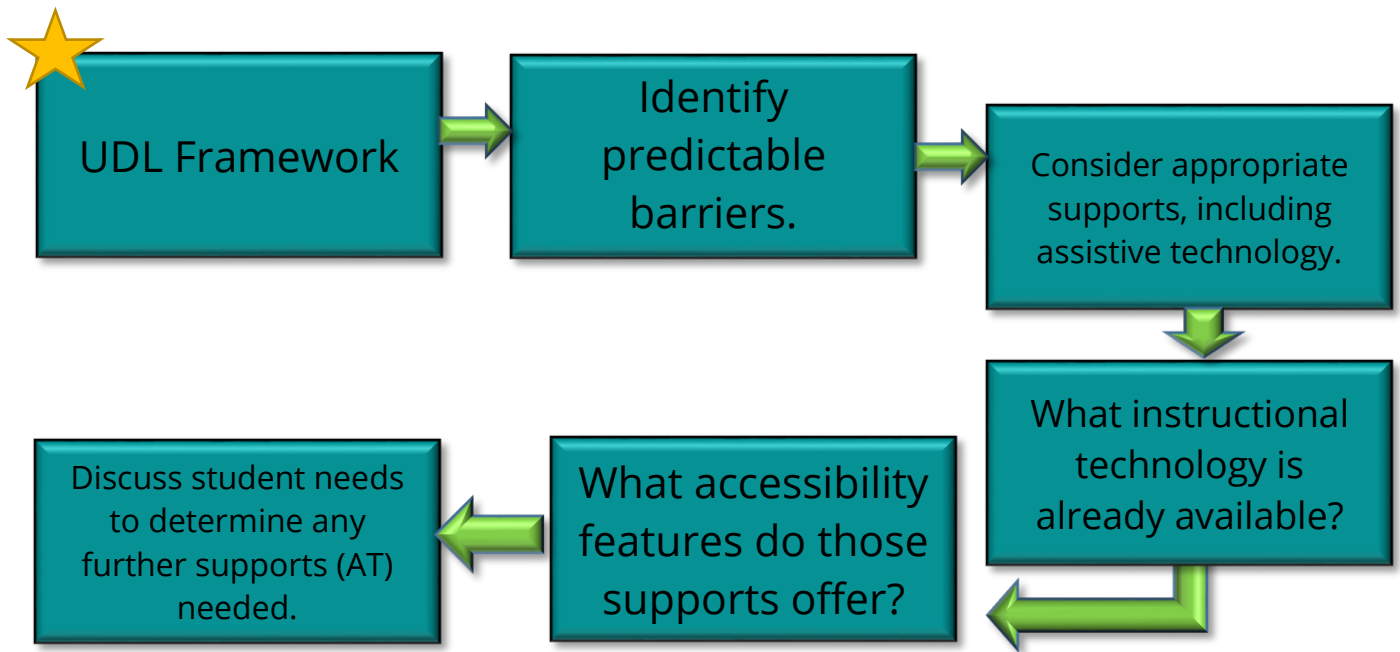


<http://udlguidelines.cast.org>

Reprinted by permission from CAST. (2018). *Universal design for learning guidelines version 2.2*. Retrieved from <http://udlguidelines.cast.org>.

Universal Design for Learning (UDL)

Optimize Access to Tools and Assistive Technology



Resources

Windows 10 Accessibility Features - https://www.microsoft.com/en-us/accessibility/windows?activetab=pivot_1%3aprimar2

Microsoft Accessibility Technology and Tools - <https://www.microsoft.com/en-us/accessibility>

Apple Accessibility Features - <https://www.apple.com/accessibility/>

Google Accessibility Features - <https://www.google.com/accessibility/>

Additional Assistive technology resources can be found at www.inclusionintexas.org.

Universal Design for Learning (UDL)

Optimize Access to Tools and Assistive Technology

Tool	What it does	Benefit
Text-to-speech	Allows text on screen to be read aloud to the student	Increases student independence and frees teacher time
Speech-to-text	Allows student to speak and their words appear on the screen	Allows with writing difficulties to focus on the content and not the spelling or handwriting
On-screen keyboard	Provides alternate option to view and interact with the keyboard	Focuses attention on the screen versus having to look up and down; decreases fine motor demands
High color contrast	Changes colors of the text and background	Improves visibility
Magnification	Enlarges print	Improves visibility
Virtual manipulatives and apps	Provides a visual representation on the screen	Increases engagement and interaction without standing out to peers

Reflection

1

Use a sticky note.



2

Two points that squared with your beliefs

3

Three points you are taking away

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- Shannon Paige, Assistive Technology Specialist
- Cara Wyly, Project Manager Inclusion in Texas Network and Reading Specialist

Content Expert Collaborator

- Devin Kearns, Ph.D., Reading Researcher and Associate Professor of Special Education at the University of Connecticut.

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