Beyond Buzzwords
Using the Science of Reading for Impact

Literacy Coach   Literacy Coach

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Spring 2021

ALL Students Proficient and Showing Growth in All Assessed Areas

1

EVERY Student Graduates from High School and is Ready for College and Career

2

EVERY Child Has Access to a High-Quality Early Childhood Program

3

EVERY School Has Effective Teachers and Leaders

4

EVERY Community Effectively Uses a World-Class Data System to Improve Student Outcomes

5

EVERY School and District is Rated "C" or Higher

6

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1 **ALL** Students Proficient and Showing Growth in All Assessed Areas

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VISION

To create a world-class educational system that gives students the knowledge and skills to be successful in college and the workforce, and to flourish as parents and citizens

MISSION

To provide leadership through the development of policy and accountability systems so that all students are prepared to compete in the global community

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Develop a shared understanding of the *Science of Reading*

Relate brain science to effective reading instruction

Changing misconceptions about phonics and phonemic awareness instruction

Provide guidelines for utilizing decodable texts

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Contextualizing the Science of Reading

Creating a Shared Understanding of the *Science of Reading*
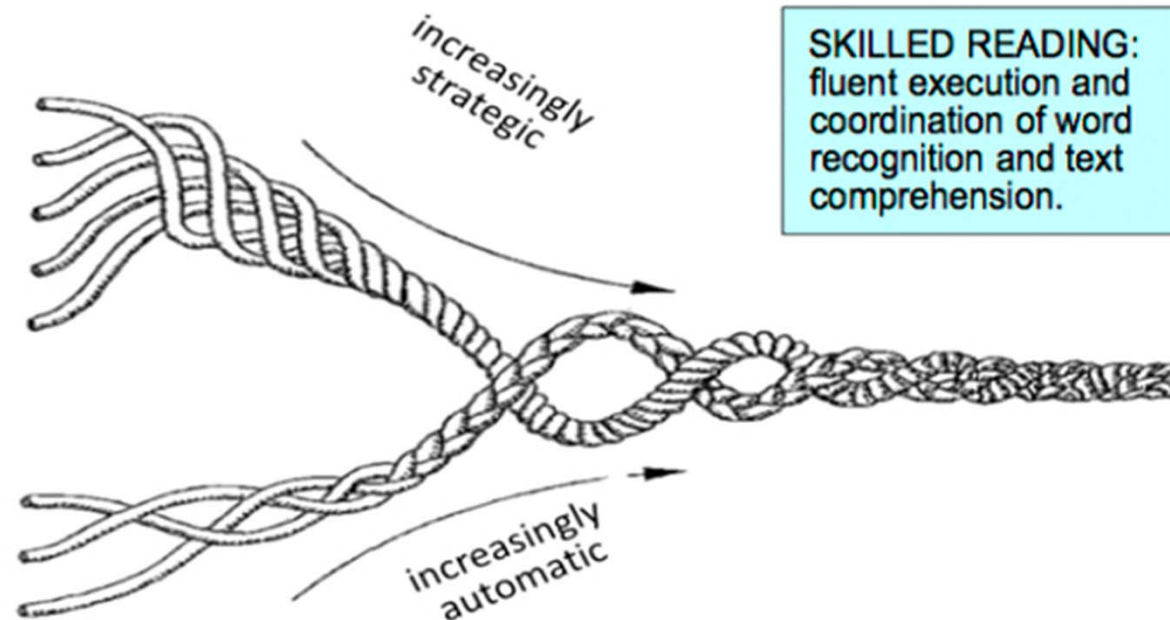
Scarborough's Reading Rope (2001)

LANGUAGE COMPREHENSION

- Background Knowledge
- Vocabulary Knowledge
- Language Structures
- Verbal Reasoning
- Literacy Knowledge

increasingly strategic

SKILLED READING: fluent execution and coordination of word recognition and text comprehension.

WORD RECOGNITION

- Phonological Awareness
- Decoding (and Spelling)
- Sight Recognition

increasingly automatic

Reading is a multifaceted skill, gradually acquired over years of instruction and practice.

LANGUAGE COMPREHENSION

- Background Knowledge
- Vocabulary Knowledge
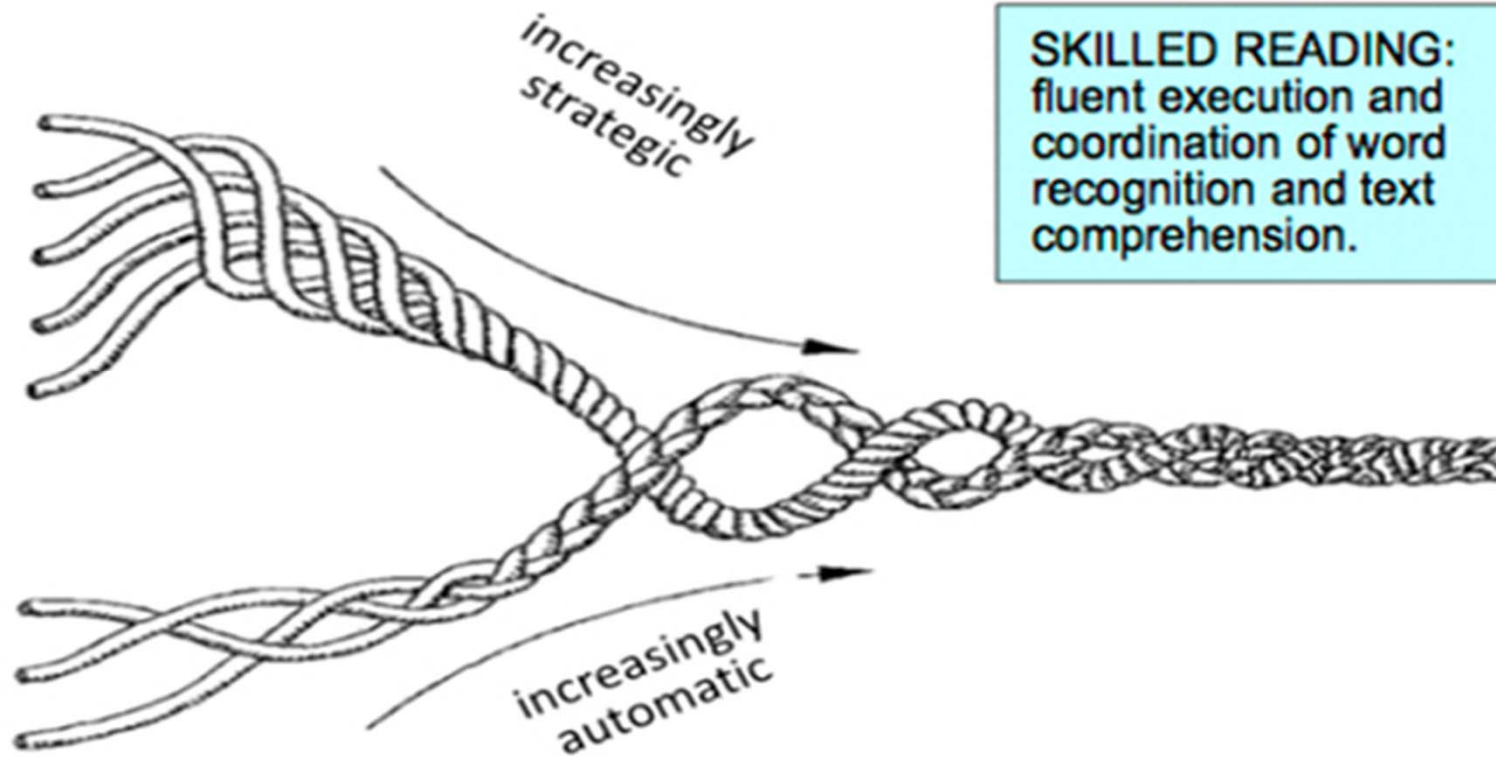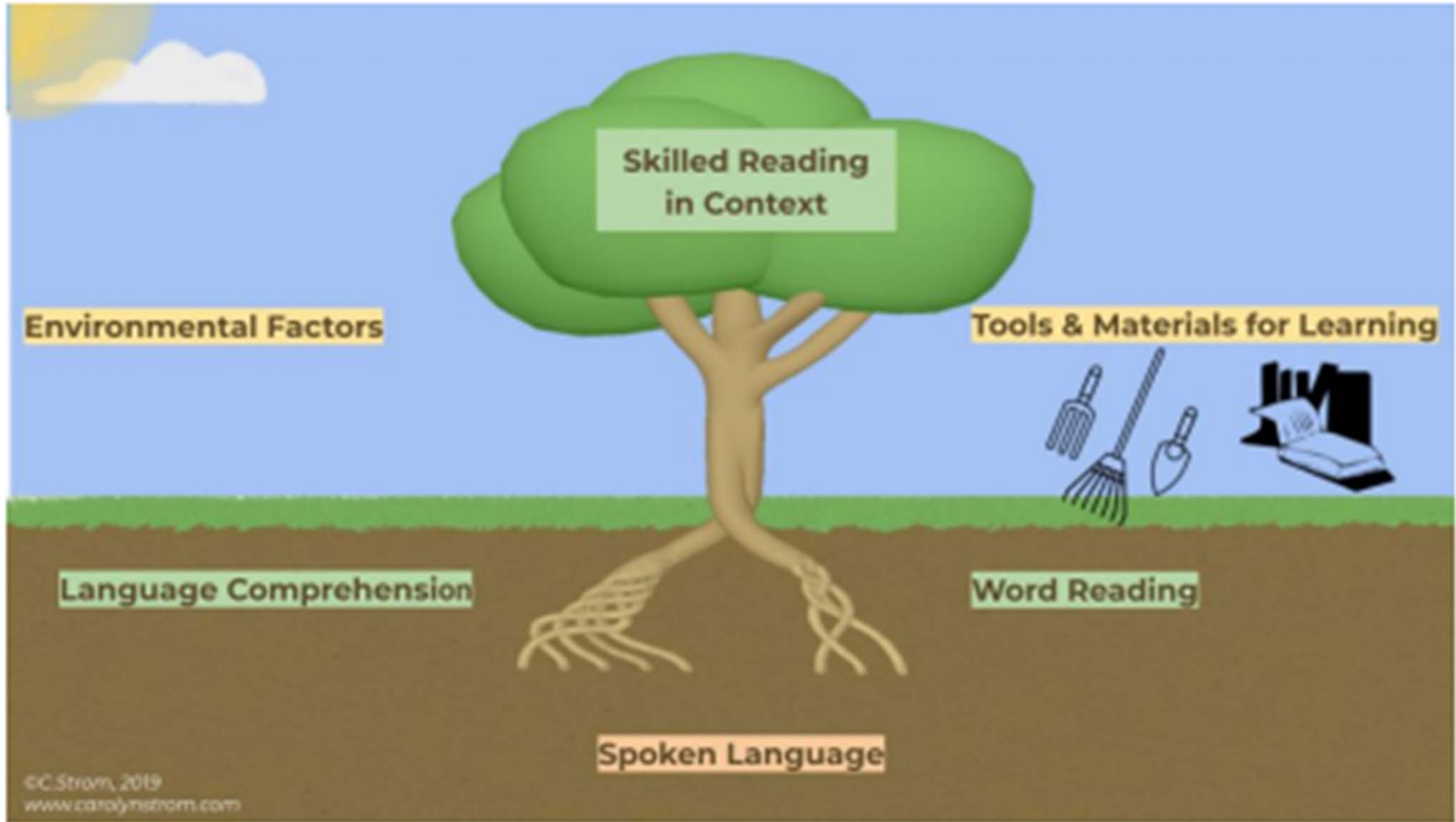- Language Structures
- Verbal Reasoning
- Literacy Knowledge

- There are 5 sub skills within this section.

- Under each of those sub skills, Scarborough gives a few examples of what they mean.

- All of these must be mastered to ensure skilled reading.

WORD RECOGNITION

- Phonological Awareness
- Decoding (and Spelling)
- Sight Recognition

- There are 3 sub skills within this section.

- Under each of those sub skills, Scarborough gives a few examples of what they mean.

- All of these must be mastered to ensure skilled reading.

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increasingly strategic

increasingly automatic

SKILLED READING: fluent execution and coordination of word recognition and text comprehension.

Relating Brain Science to Reading Instruction

Leveraging Stakeholders with Science

Let's center ourselves in the mind of a beginning reader:

ɪn ðə greɪt griːn ruːm

ðeə wɒz ə ˈtɛlɪfəʊn

ænd ə rɛd bəˈluːn

ænd ə ˈpɪktʃə of the kaʊ

dʒʌmpɪŋ ˈəʊvə ðə muːn

ænd ðeə wɜː θriː ˈlɪtl

beəz ˈsɪtɪŋ ɒn tʃeəz

Let's add an illustration:

ɪn ðə greɪt griːn ruːm

ðeə wɒz ə ˈtɛlɪfəʊn

ænd ə rɛd bəˈluːn

ænd ə ˈpɪktʃə of the kaʊ

dʒʌmpɪŋ ˈəʊvə ðə muːn

ænd ðeə wɜː θriː ˈlɪtl

beəz ˈsɪtɪŋ ɒn tʃeəz

Translation to English:

ɪn ðə greɪt griːn ruːm
ðeə wɒz ə ˈtɛlɪfəʊn
ænd ə rɛd bəˈluːn
ænd ə ˈpɪktʃə of the kaʊ
dʒʌmpɪŋ ˈəʊvə ðə muːn
ænd ðeə wɜː θriː ˈlɪtl
beəz ˈsɪtɪŋ ɒn tʃeəz

In the great green room there was a telephone and a red balloon. And a picture of the cow jumping over the moon. And there were three little bears sitting on chairs.

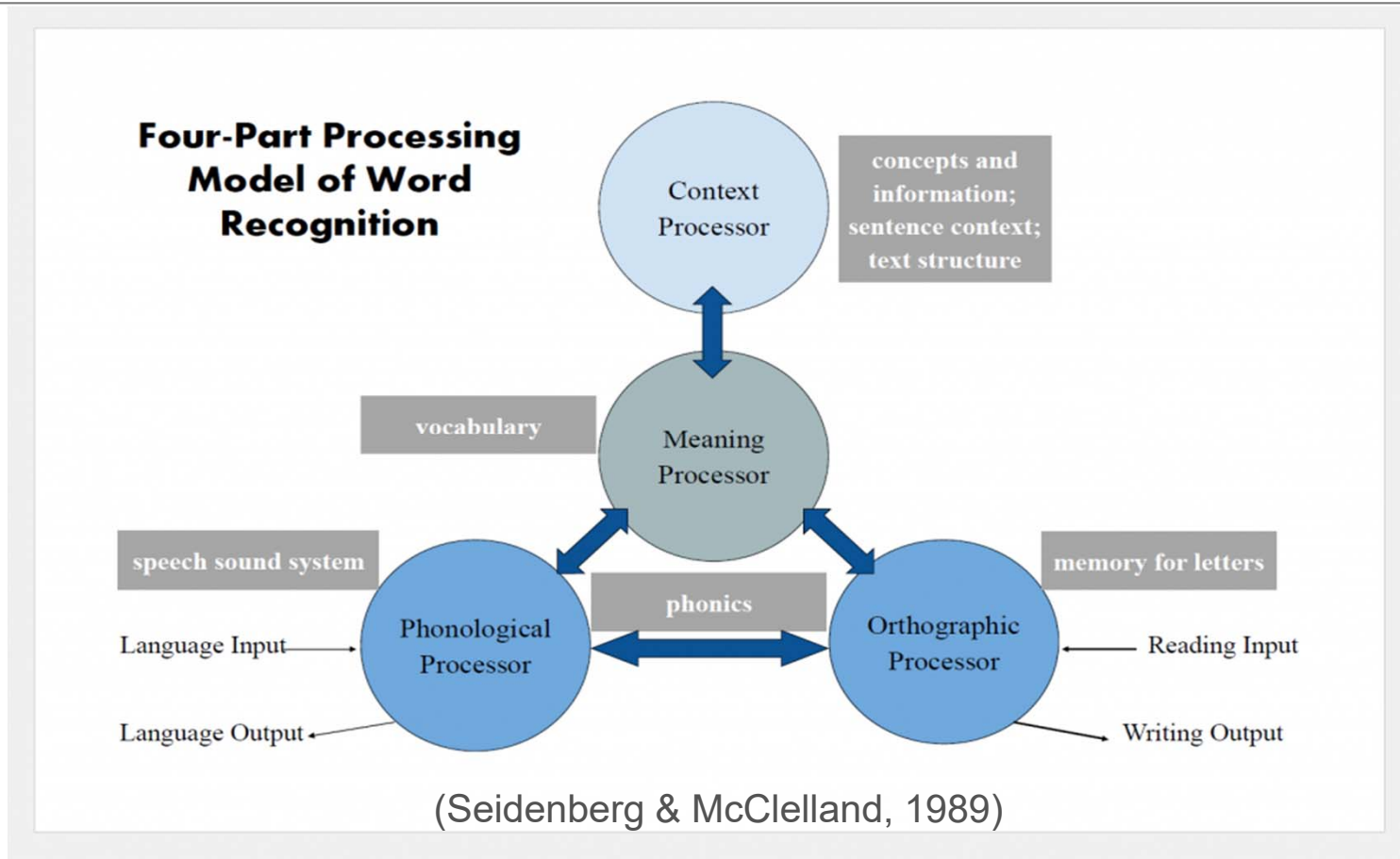**The Brain:**

Reads by breaking words into sounds.

Is naturally wired for speech, but not for reading.

Relies on other systems already in place, mostly in the brain's language center, to work together to read.

Four-Part Processing Model of Word Recognition

Context Processor

concepts and information; sentence context; text structure

vocabulary

Meaning Processor

speech sound system

phonics

memory for letters

Phonological Processor

Orthographic Processor

Language Input

Language Output

Reading Input

Writing Output

(Seidenberg & McClelland, 1989)

The **phonological** and **orthographic processors** work together for **word recognition.**
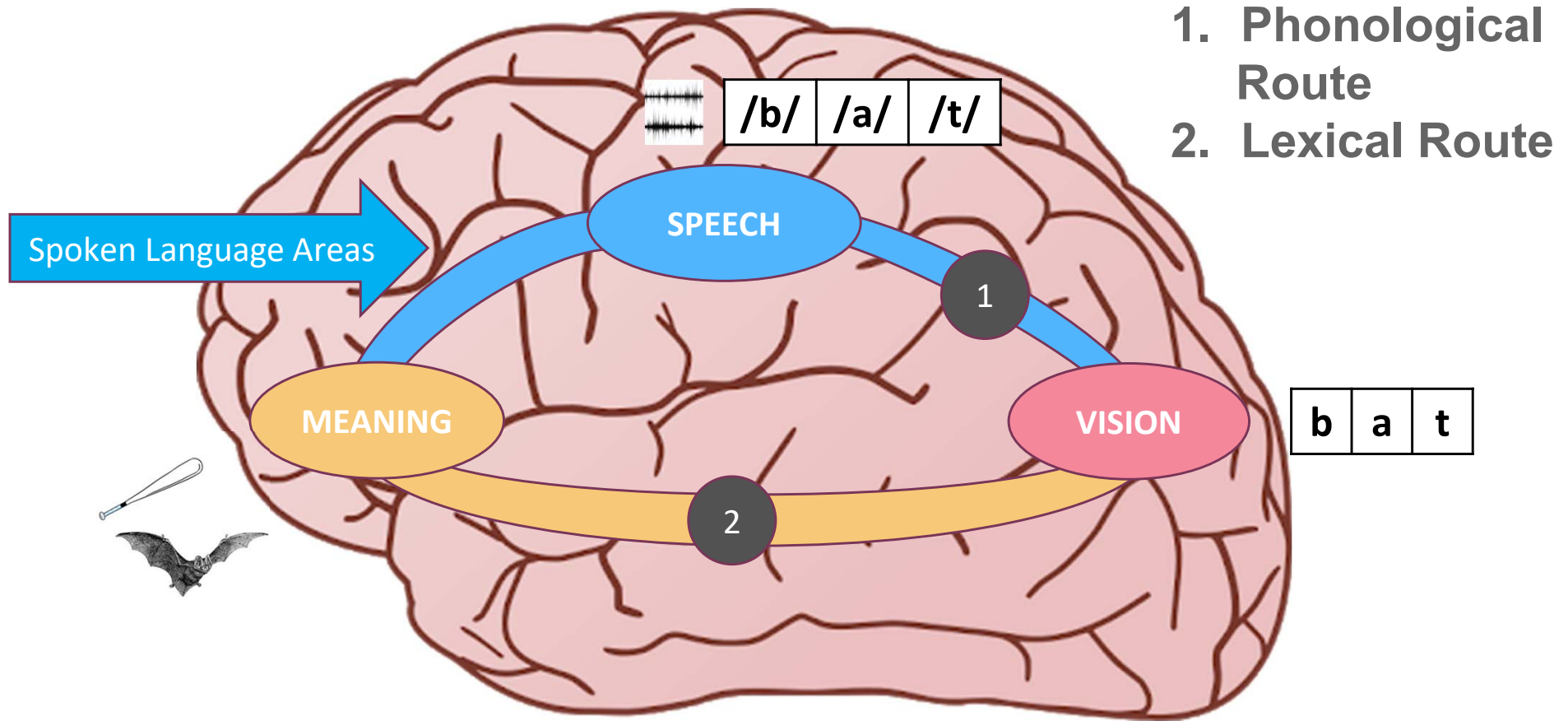
Phonological Processor

- Identifies, remembers, interprets, and produces speech sounds

- Phoneme awareness is just one of the jobs of the phonological processor
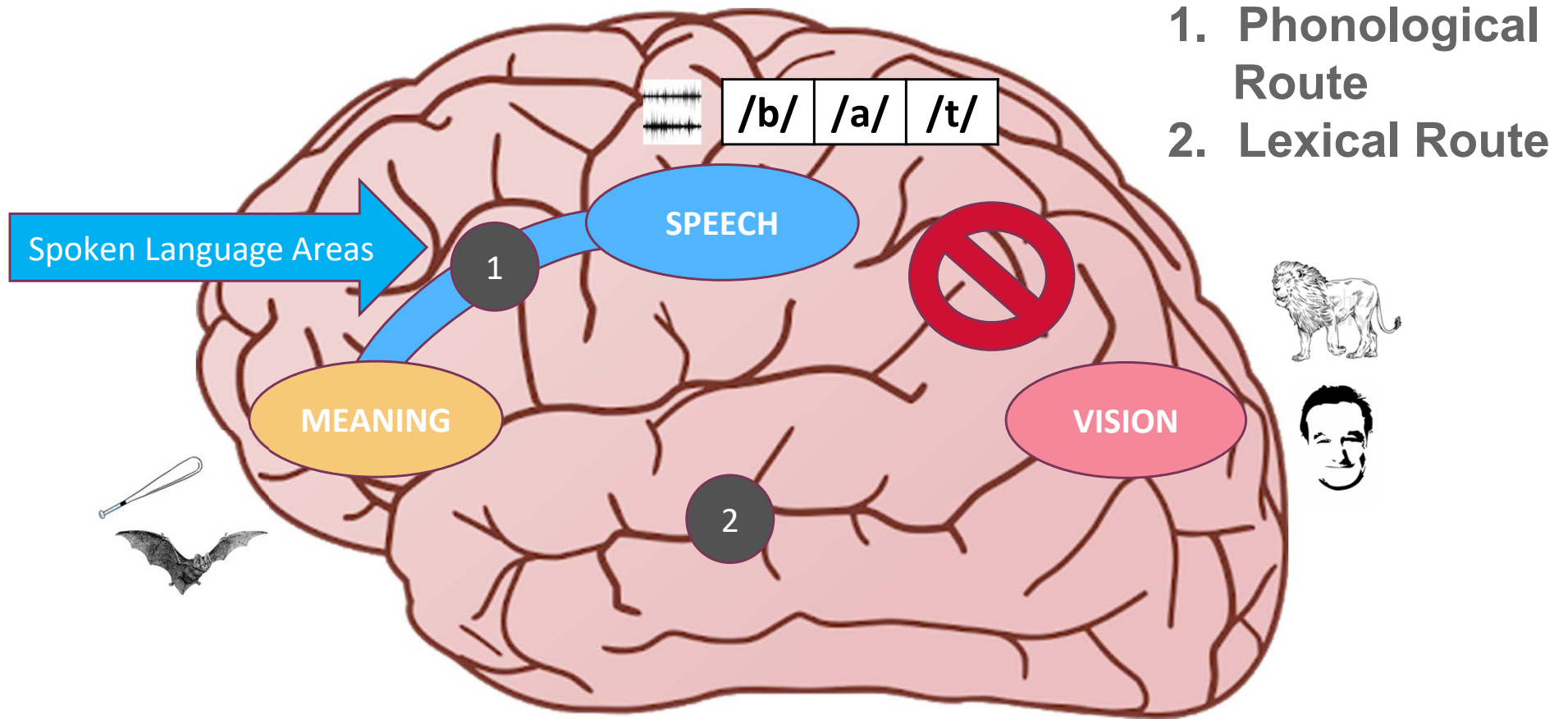
Orthographic Processor

- Identifies and processes the letters and letter patterns that our eyes see on the page

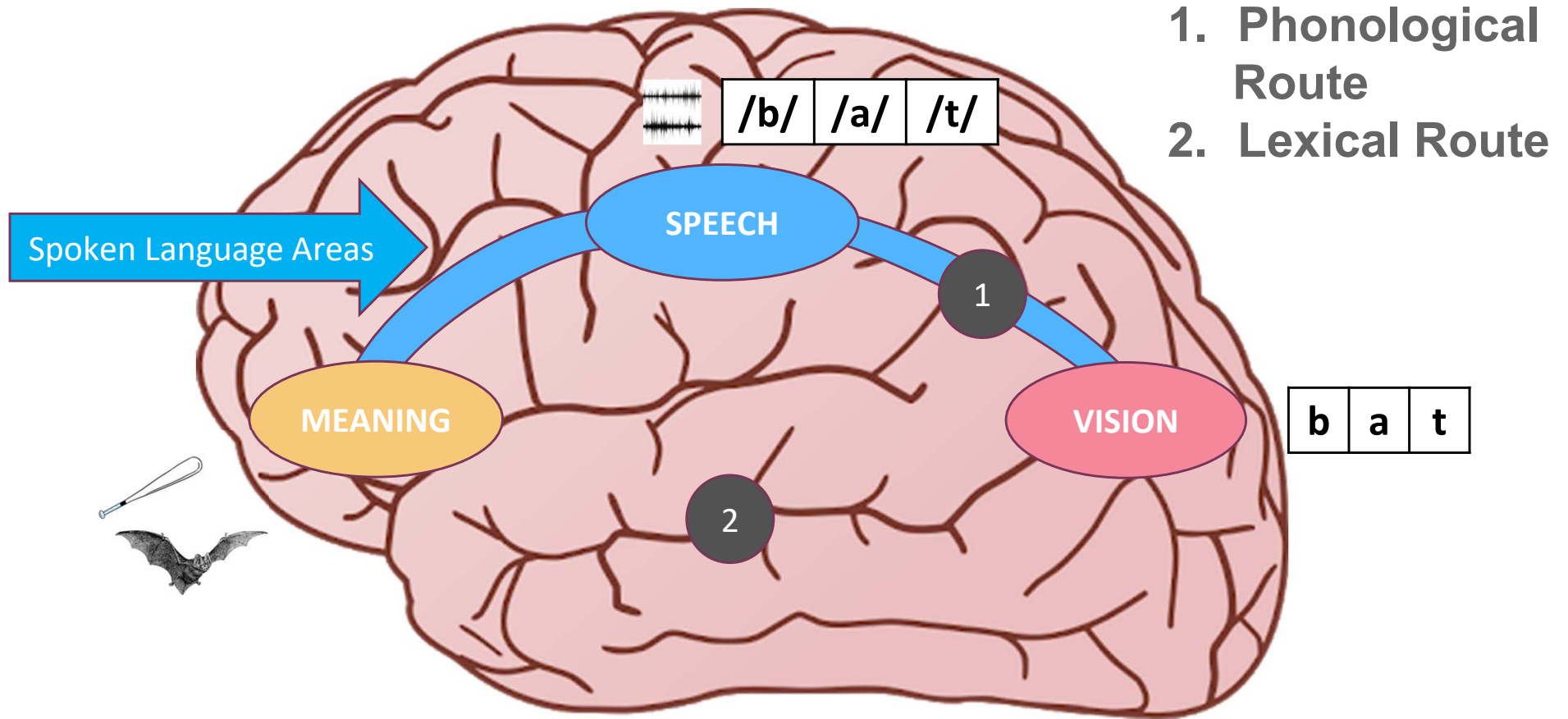- Helps us remember letter sequences for spelling

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1. Phonological Route
2. Lexical Route

/b/ /a/ /t/

SPEECH

Spoken Language Areas

1

MEANING

VISION

b a t

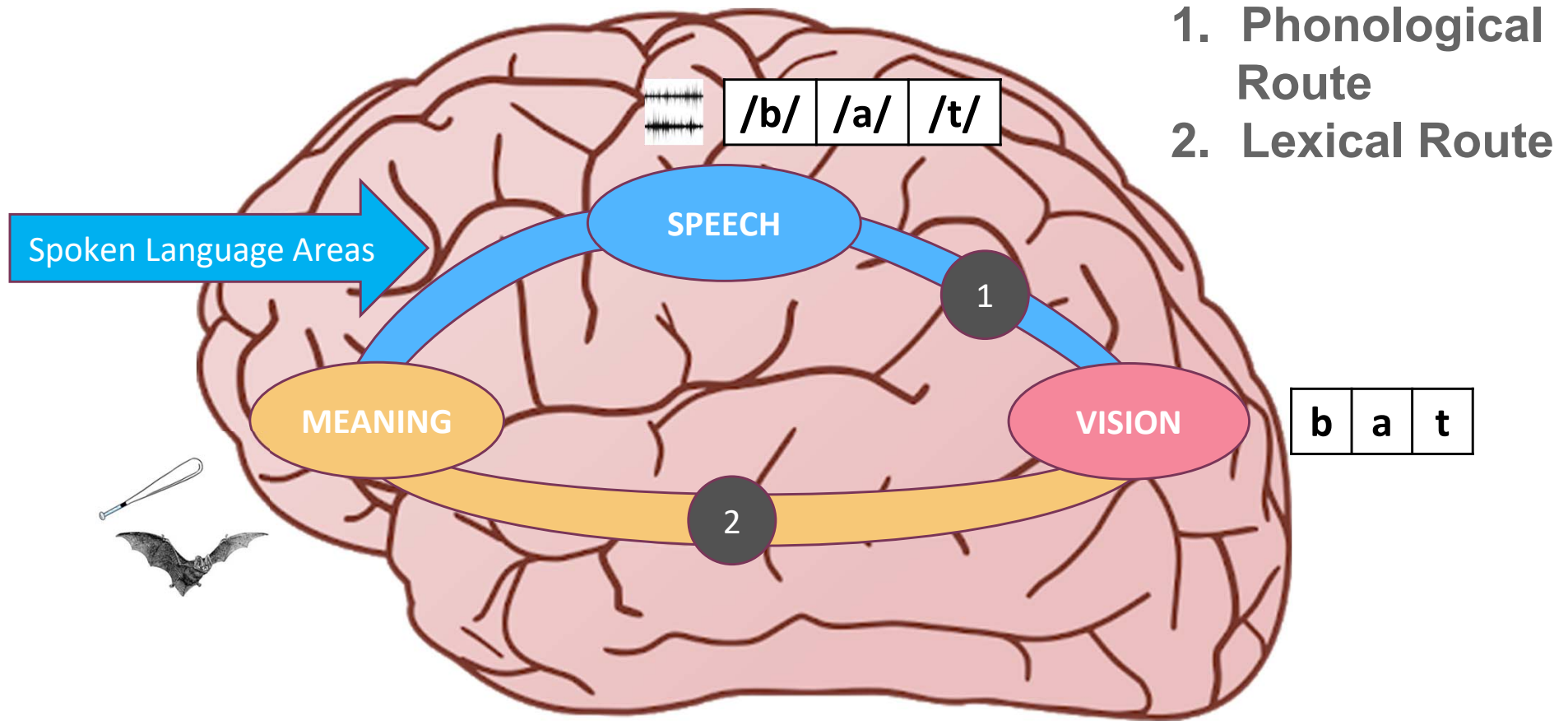2

1. Phonological Route
2. Lexical Route

/b/ /a/ /t/

SPEECH

Spoken Language Areas

1

MEANING

2

VISION

1. Phonological Route
2. Lexical Route

/b/ /a/ /t/

SPEECH

Spoken Language Areas

1

MEANING

VISION

b a t

2

1. Phonological Route
2. Lexical Route

/b/ /a/ /t/

SPEECH

1

Spoken Language Areas

MEANING

VISION

b a t

2

What We Teach:	What Our Students Do:	What They Learn:
Eagle Eye — Look at the picture. Think "what is in the picture that starts with the beginning letter?"	*Look at the pictures.*	I don't need the words to read.
Lips the Fish — Get your mouth ready! Say the beginning sound.	I see the shark. "I see the s/h/ă/r...?" *Look at the pictures.*	I don't need the words to read. Pictures are more useful than letter sounds.
Chunky Monkey — Break the word into chunks you already know. mat, flat, splatter	The gopher hops up. "The g/ŏp/h/...?" *Look at the pictures.*	I look for chunks but sometimes they don't work. Pictures are more useful than words.
Flippy Dolphin — Flip the vowel sound. Try the long & short sounds.	I see the shark. "I see the s/h/ă/r/k... s/h/ā/r/k?" *Look at the pictures.*	Letter sounds (especially vowels!) are not reliable. I can count on the pictures.
Skippy Frog — Skip the tricky word. Read to the end. Go back & try it again.	*Skip the words and look at the pictures.*	Reading is easy, especially if I ignore the words!

(Right to Read Project, 2019)

Changing Misconceptions

Engaging Students with Wordplay

"The difficulty lies, not in the new ideas, but in escaping from the old ones."

-John Maynard Keynes

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Misconception 1: Phonics instruction is boring

Changing the misconception

- Phonics activities can be enjoyable and engaging

- Phonics instruction is equated with greater motivation to read, more reading for pleasure, and higher academic self-esteem

Kirsch et al. (2002), Anderson et al. (1998), McArthur & Castles (2017)

Misconception 2: English is too irregular

Changing the misconception

- More than 80% of one syllable words in English are decoded regularly

- Students receive additional assistance with irregular spellings through routines that involve partial decoding and memorization (Heart Words, Red Words)

Share (1995)

Misconception 3: Phonics teaches kids to read nonsense words

Changing the misconception

- The goal of phonics instruction is to teach children to sound out *words* independently

- A one syllable cvc pattern such as "caf" may be a nonsense word on its own, but it may be part of a larger multi-syllable word such as "caf-eteria"

Castles et al. (2009)

Misconception 4: Phonics interferes with comprehension

Changing the misconception

- Phonics supports comprehension by allowing a child to link an unfamiliar printed word with a familiar word in oral vocabulary

- Phonics develops fluency and automatic word recognition freeing up the working memory to attend to the meaning of the text

- Children taught systematic phonics made gains in comprehension as well as word reading and spelling

Perfetti and Hart (2002), Ehri et al. (2001)

Phonics Facts

- Learning to read does not occur naturally
- Word reading is a process that requires building and lots of practice
- Children taught systematic phonics made gains in comprehension as well as word reading and spelling
- Good phonics lessons require analytical thinking as well as attention to word meaning
- Phonics can be extremely engaging, as opposed to rote, and can leverage human curiosity and love of word play

Strom (2021)

Example Activities

For Engaging Students with Wordplay

pudding = udding

donut = onut
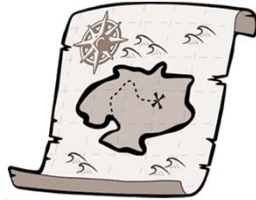
pickle = pick

broccoli = broccol

- Give students a word, and then repeat the word omitting either the initial or final sound

- Students identify whether the beginning or final sound is missing.

- Students then clearly articulate the sound back to the teacher

Starting Word	New Sound /a/

Change the Medial Sound

- Identify the starting word and medial vowel sound using the first picture

- Students then change the medial vowel sound as directed by the teacher

- Words should only change the middle phoneme

Students will substitute the initial phoneme in the words of familiar songs, rhymes, poems, and phrases.

What would *Row, Row, Row Your Boat* become if we changed the initial phoneme /r/ to /t/, /z/, or /p/?

What would happen if we replaced the initial phonemes in the *Happy Birthday* song to /m/, /sh/, or /z/?

Have students substitute the initial phoneme in the words of familiar songs, rhymes, poems, and phrases.

"Birthday Song"
PhonicsMan

Have students match medial phonemes in words by playing dominoes.

- Scatter domino picture cards face up on a flat surface
- Taking turns, student one places the START domino on the table and says the name and medial sound of the picture on the end of the domino (e.g., "fork, /or/")
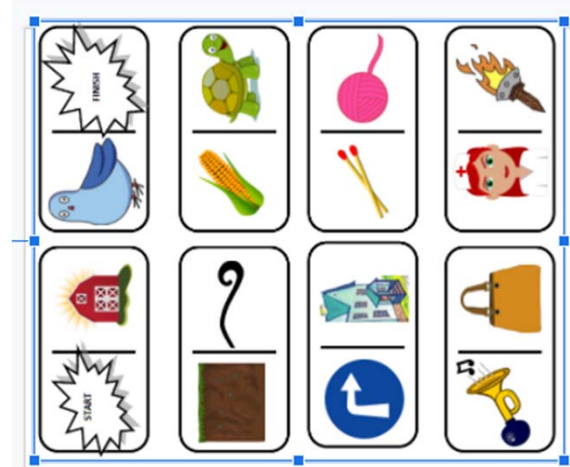
Have students substitute sounds in consonant blends.

- Give students a word containing a consonant blend in the initial position.
- Have students repeat the word and orally change one of the sounds in the blend to form a new word.

Teacher says the word *stack.*

Students repeat the word.

Teacher asks what would the word be if we changed the */t/* to */n/*?

Students give the word *snack.*

Decodable Texts

And Repeated Reading

- Decodable texts use only phonics skills that have been previously taught enabling students to be successful during reading by ensuring only known skills are included in the text

- Decodable texts are meant to be reread multiple times with different levels of support using a variety of reading strategies such as modeled, choral, and echo reading

Decodable Texts

Overview: Students read two to three passages per week with the target sound symbol relationship with support gradually reduced between the first and second passage

The four steps below are used repeatedly throughout the week

1	Guide students to highlight the targeted pattern words in the text
2	Have students read only the highlighted words
3	Have students read the whole passage using the highlighted copy
4	Give students a clean copy and have them read the whole passage

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Decodable Texts

Sample Transfer to Text Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
	PASSAGE 1		PASSAGE 2		PASSAGE 3
Highlight Skill Words	X		X		
Read Highlighted Words	X				
Read Passage with Highlighted Words	X	X	X		
Read Clean Copy of Passage		X		X	X

(From Phonics First Library, by *95 Percent Group Inc.*)

Kim's Kit

Kim is a kid. She has a mom and dad. Mom and Dad got Kim a big bag.

In the bag was a kit. Can Kim do a kit? The kit is for a big kid and Kim is not a big kid.

Kim's kit is a doll kit.

The doll kit has a hat, a tan can, a tan tin, a mop top, lots of pins and lots of rags. Kim can do it!

New sound /k/

Day 1 - Heavy Support

- Highlight target words
- Read highlighted words
- Model read the text
- Cloze read the text
- Echo read the text
- Oral reading practice
- Monitor and correct errors as they occur

Kim's Kit

Kim is a kid. She has a mom and dad. Mom and Dad got Kim a big bag.

In the bag was a kit. Can Kim do a kit? The kit is for a big kid and Kim is not a big kid.

Kim's kit is a doll kit.

The doll kit has a hat, a tan can, a tan tin, a mop top, lots of pins and lots of rags. Kim can do it!

New sound /k/

Day 2 - Less Support/Clean Copy

- Choral or echo read as needed
- Oral reading practice
- Monitor and correct errors as they occur
- Students read clean copy

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The tan tin **can** go on top of the tan **can**. The mop top **can** go. on top of the tan tin and the hat on top of the mop top.

Kim has to **cut** and pin the rags. The rags go on the tan **can**.

Kim did it! She did the doll **kit**! **Kim's** doll is a big doll, and **Kim** is a big **kid**!

New sound /k/

Day 3 - Heavy Support

- Highlight target words
- Read highlighted words
- Model read the text
- Cloze read the text
- Echo read the text
- Oral reading practice
- Monitor and correct errors as they occur

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The tan tin can go on top of the tan can. The mop top can go. on top of the tan tin and the hat on top of the mop top.

Kim has to cut and pin the rags. The rags go on the tan can.

Kim did it! She did the doll kit! Kim's doll is a big doll, and Kim is a big kid!

Day 4 - Less Support/Clean Copy

- Choral or echo read as needed
- Oral reading practice
- Monitor and correct errors as they occur
- Students read clean copy

New sound /k/

Kim's Kit

Kim is a kid. She has a mom and dad. Mom and Dad got Kim a big bag.

In the bag was a kit. Can Kim do a kit? The kit is for a big kid and Kim is not a big kid.

Kim's kit is a doll kit.

The doll kit has a hat, a tan can, a tan tin, a mop top, lots of pins and lots of rags. Kim can do it!

The tan tin can go on top of the tan can. The mop top can go on top of the tan tin and the hat on top of the mop top.

Kim has to cut and pin the rags. The rags go on the tan can.

Kim did it! She did the doll kit! Kim's doll is a big doll, and Kim is a big kid!

Day 5 - New Text or Additional Practice with Existing Text

- Read a clean copy of a new text
- Fluently read the whole text
- Continue practicing the same text if needed

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- Images used to represent *Science of Reading* do not address the roles of spoken language, quality instruction, and environmental factors on learning to read

- Ensuring stakeholders understand the brain science behind SOR creates more buy-in for structured literacy initiatives

- Phonics instruction should be fun and engage children's love for speaking and word play

- Decodable texts help students develop automatic word recognition by providing practice with new and familiar phonics patterns

Strong Readers Strong Leaders

Statewide public awareness campaign promotes literacy, particularly among PreK-3 students

Campaign aims to equip parents and community members with information and resources to help children become strong readers

Visit strongreadersms.com for more information!

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