

The New Science of Vocabulary: How AI Can Support Language Learning

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Target Words: Narrative Texts

chimed
concluded
flickered
gallant
preparations
slender

2

Target Words: Informational Texts

dwarfed
presence
outfitted
procedure
transferred
snug
calculate
perch
enthusiastic
beaming

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Effectiveness of Typical Vocabulary Selection

Wright & Cervetti (2017) review of 36 Studies:
Direct instruction of word meanings (even long-term, multifaceted interventions) did NOT improve generalized **comprehension**, beyond the immediate instructional texts.

Cervetti et al. (2023) meta-analysis of 39 Studies:
Direct instruction of word meanings did not expand students' overall **vocabulary** knowledge beyond immediate instructional texts.

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Why Large Language Models Matter for Vocabulary Instruction

- LLMs "read" billions of words. They show us which words are common, rare, and critical for academic success.
- They uncover how words work in context—not just their definitions, but how they connect to ideas and other words.
- LLMs help us focus instruction on words students are most likely to struggle with—and most need to succeed

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Big Data Shifts

Available Corpora

(Large Collections of Words from Texts)

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1927: Thorndike's Teacher's word book based on words from Bible and some children's books

The image shows the cover of 'The Teacher's Word Book' by Edward L. Thorndike, published by Houghton Mifflin Company. Next to it is a page from the book titled 'A to Ace' containing a list of words and their frequencies. Two words, 'around' and 'around', are circled in red on the page.

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School Text Available in 2020s

- Educator's Word Frequency (EWF) database (Zeno et al., 1995): ~17 million words from Grade 1-college texts
- TextProject's TextBase: ≈ 10 million words from trade books and content area, leveled, and decodable texts across 6 grade bands:
 - K-1: 750,00
 - 2-3: 1,750,000
 - 4-5: 1,650,000
 - 6-8: 1,765,000
 - 9-10: 1,260,000
 - 11-College-and-Career Reading: 1,750,000

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Big Data Shifts

Available Databases of Word Features

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Word Zone Profiler, 2000

Word	High Freq. Count	Decodability
a	54	1
all	3	6
and	12	3
around	1	8
backpack	3	8
bark	1	6
bat	1	2
be	2	1
bear	2	5
bears	1	5
bell	1	6
bet	1	2
big	1	2
bird	3	6
blue	1	5
book	1	7
boy	1	7
brown	1	7
bug	1	2
butterflies	1	8
butterfly	7	8

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Word Zone Profiler, 2020

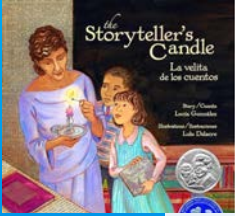
Word	Frequency	Word Length	Number of Syllables	Supersyllabic	Phonological	Age of First Acquisition	Complexity	Number of Phonemes	Number of Syllables	Number of Letters	Mean Length of Utterance	Mean Complexity
a	1	1	1	0	0.000000	0.0000	0.0000	1	1	1	1.00	1.00
all	3	3	1	0	0.000000	0.0000	0.0000	1	1	3	1.00	2.27
and	12	3	1	0	0.000000	0.0000	0.0000	1	1	3	1.00	1.52
around	1	6	2	0	0.000000	0.0000	0.0000	1	1	6	1.00	1.90
backpack	3	8	1	7	0.000000	0.0000	0.0000	1	1	8	1.00	4.96
bark	1	4	1	0	0.000000	0.0000	0.0000	1	1	4	1.00	1.52
bat	1	3	1	0	0.000000	0.0000	0.0000	1	1	3	1.00	1.52
be	2	2	1	0	0.000000	0.0000	0.0000	1	1	2	1.00	1.52
bear	2	4	1	0	0.000000	0.0000	0.0000	1	1	4	1.00	1.90
bears	1	5	1	0	0.000000	0.0000	0.0000	1	1	5	1.00	2.27
bell	1	4	1	0	0.000000	0.0000	0.0000	1	1	4	1.00	1.90
bet	1	3	1	0	0.000000	0.0000	0.0000	1	1	3	1.00	1.52
big	1	3	1	0	0.000000	0.0000	0.0000	1	1	3	1.00	1.52
bird	3	4	1	0	0.000000	0.0000	0.0000	1	1	4	1.00	1.90
blue	1	4	1	0	0.000000	0.0000	0.0000	1	1	4	1.00	1.90
book	1	4	1	0	0.000000	0.0000	0.0000	1	1	4	1.00	1.90
boy	1	3	1	0	0.000000	0.0000	0.0000	1	1	3	1.00	1.52
brown	1	6	1	0	0.000000	0.0000	0.0000	1	1	6	1.00	2.27
bug	1	3	1	0	0.000000	0.0000	0.0000	1	1	3	1.00	1.52
butterflies	1	8	1	7	0.000000	0.0000	0.0000	1	1	8	1.00	4.96
butterfly	7	8	1	7	0.000000	0.0000	0.0000	1	1	8	1.00	4.96

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Select:
Target Words and
Texts

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An Alternative to Cherry Picking Vocabulary



chimed	2
concluded	1
flickered	1
gallant	1
preparations	1
slender	1

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Can you help me in identifying which of these words are ones that may be challenging for students but are also words that will extend beyond third grade and support their reading in the middle grades and beyond: announcement, parade, chimed, characters, costumes, applause, gallant, fiesta, preparations, event, rehearsed, donations, celebrated, decorations. I also want to help my students' background knowledge on the topic of what is part of a performance like a play.

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Target Words

- "slender" - Limited academic utility, mainly descriptive
- "gallant" - Literary word but limited modern use
- "chimed" - Specific to sound, limited academic use
- "preparations" - ✓ HIGH VALUE - used across subjects and contexts
- "flickered" - Specific to light/movement, limited academic use
- "concluded" - ✓ HIGH VALUE - important for academic writing and reading

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1. "announcement" - ✓ HIGH VALUE - formal communication across contexts	
2. "event" - ✓ HIGH VALUE - used across all subjects	
3. "preparations" - ✓ HIGH VALUE (overlaps with publisher list)	
4. "celebrated" - ✓ HIGH VALUE - cultural and historical contexts	
5. "donations" - ✓ HIGH VALUE - civic and social studies contexts	

Valuable Words for Long-Term Academic Success

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1. "rehearsed" - Understanding performance preparation	
2. "characters" - Understanding story elements and roles	
3. "costumes" - Understanding visual representation	
4. "applause" - Understanding audience participation	
5. "decorations" - Understanding setting creation	

Words Related to Performance

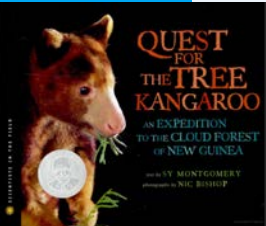
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1. "fiesta" - Understanding cultural celebrations
 2. "celebrated" - Understanding commemoration
 3. "event" - Understanding organized gatherings

Building Background

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An Alternative to Cherry Picking Vocabulary



dwarfed	0
presence	1
outfitted	1
procedure	2
transferred	1
snug	1
calculate	1
perch	2
enthusiastic	1
beaming	1

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FH Can you revisit the words procedure, calculate, transferred, outfitted, enthusiastic, presence, snug, perch, beaming, dwarfed in relation to the specific text--Quest for the Tree Kangaroo--how many of these words are essential for the meaning of this text?

ESSENTIAL (3 words):

- Procedure** - Central to understanding the organized scientific process of examining the animals safely
- Calculate** - Critical for the specific mathematical task ("Heart rate is sixteen times twelve. You do the math.")
- Transferred** - Key to understanding how the tracking technology works ("data can be transferred to a computer")

HELPFUL BUT NOT ESSENTIAL (4 words):

- Snug** - Important for collar fitting, but "comfortable but snug" provides enough context
- Perch** - Useful for visualizing the animal's position, but "climbs to the highest perch" is clear from context
- Outfitted** - Describes the collar equipment, but the collar's function is explained without needing this word
- Presence** - Used in "her presence to drive them closer," but the meaning comes through contextually

NOT ESSENTIAL (3 words):

- Enthusiastic** - Describes emotion but doesn't affect plot comprehension ("he wants to go out and hunt for more" conveys the meaning)
- Beaming** - Emotional description alongside "huge and smile" which already conveys happiness
- Dwarfed** - I don't find this word in the text


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Quest for the Tree Kangaroo--this is an informational text in my school's third-grade reading program. Can you give me the top 10 words that are important for students to know, in order to comprehend this text?

- Tracker** - A person who follows and finds animals; essential since trackers are the main characters who locate the tree kangaroos
- Evasive** - Hard to find or catch; key to understanding why finding tree kangaroos is so exciting and difficult
- Anesthesia/Anesthetic** - Medicine that makes animals sleep during medical procedures; central to the safe examination process
- Radio collar** - A special collar with a transmitter to track animals; the main scientific tool and goal of the research
- Transmitter** - A device that sends out signals; necessary to understand how the radio collar works
- Respiration** - Breathing rate; critical for understanding the medical monitoring during the procedure
- Procedure** - A series of steps to accomplish something; helps students understand the organized scientific process
- Examination/Exam** - A detailed check of the animal's health; central to understanding what the scientists are doing
- Temperature** - How hot or cold something is; important for the medical monitoring context
- Frequency** - A specific radio channel or number; necessary to understand how each animal's collar works differently

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1. Selecting words
 Take-aways?



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Teach: Words Explicitly

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Activity 1a: Generating Semantic Maps

Can you organize these words into connected categories that will aid students in understanding the connections across the words and to the core concepts in the book, *Quest for the Tree Kangaroo*: examination, microchip, elusive, agile, radio collar, procedure, cautious, respiration, sedated, satellite, frequency, transmitter, strong, anesthesia.

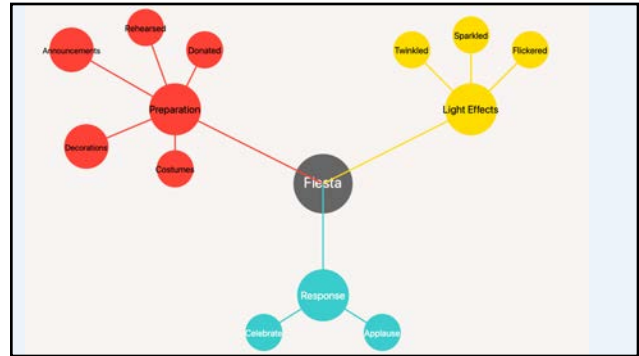
Tree Kangaroo Semantic Map

TREE KANGAROO CHARACTERISTICS
elusive, agile, cautious, strong

TRACKING TECHNOLOGY
radio collar, transmitter, frequency, satellite, microchip

MEDICAL MONITORING AND EXAMINATION
examination, procedure, anesthesia, sedated, respiration

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Activity 1b: Generating Semantic Grids

FH Can you make a semantic grid with the words flickering, sparkled, twinkle and 5 other words that have varied degrees of intensity in the same semantic category. Can you ensure that 2 of the new words are ones that students who are not great third-grade readers can read?

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Semantic Grids: *Storyteller's Candle*

blaze
flash
sparkled
gleam
flickering
shine
twinkle
glow

shout
proclaim
broadcast
announce
notify
tell
say

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Semantic Grids: *Tree Kangaroo*

Intensity of "Hard to Catch/Find"

Secretive
Mysterious
Elusive
Slippery
Evasive
Fugitive

Intensity of "Moving Skillfully"

Steady
Fleeting
Quick
Agile
Athletic
Nimble
Acrobatic

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Activity 1c: Morphological Families: *Storyteller's Candle*

FH Can you make a mind map of all of the morphological relatives for the word announcements.

announce

Verb Forms
announces
announced
announcing

Noun Forms
announcer
announcers
announcement
announcements

Re-Forms
reannounce
reannounced
reannouncing
reannouncement

Pre-Forms
preannounce
preannounced
preannouncing
preannouncement

Un-Form
unannounced

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Morphological Families:
Quest for Tree Kangaroos

<p>transmit</p> <p>transmitter</p> <p>transmitted</p> <p>transmission</p>	<p>sedate</p> <p>sedated</p> <p>sedation</p> <p>sedative</p>
<p>anesthetic</p> <p>anesthesia</p> <p>anesthetize</p> <p>anesthetized</p>	<p>respire</p> <p>respiration</p> <p>respiratory</p>

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My Neural Neighborhoods

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My Neural Neighborhood:
The Storyteller's Candle

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Activity 2: Generating Text Sets with Critical Vocabulary

Can you write a 240 word text that is informational and that includes these words: rehearsal, costumes, applause, preparations. Please repeat the key words—or morphological members of these words (e.g., rehearsal, rehearsed). The text is for third graders who are not the most automatic or motivated readers.

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Preparing for the School Play

Putting on a play takes hard work and careful preparation. First, actors rehearse their lines over and over until they know them perfectly. Some kids feel nervous during their first rehearsal, but they get better each time they practice.

While actors rehearse, others work on costumes. Costumes help tell the story. The costume team measures everyone and picks out special clothes. Kids try on their costumes during dress rehearsal to make sure everything fits.

Behind the scenes, more preparations happen. Students paint colorful backdrops and build props like trees and castles. The lighting crew learns when to make the stage bright or dim.

Finally, opening night arrives. The actors put on their costumes and rehearse their lines backstage. When the curtain opens, families and friends fill the auditorium. At the end of the play, loud applause fills the room. The audience claps and cheers for all the hard work everyone has done.

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The Dancing Zoo Animals

Today our third-grade class put on the play "The Dancing Zoo Animals." For weeks, we had daily rehearsals to learn our parts for the play. Mrs. Cooper, our teacher, made an announcement before the play began: "Remember, we've rehearsed this many times. You are well prepared for the performance!"

But we are too busy looking at one another's costumes to be worried. Jake wore an elephant costume with big floppy ears. My penguin costume was black with a big white bowtie. Sofia's costume was the tallest of all. That's because she was a giraffe.

Finally, the gym was full of our families and friends. We danced out onto the stage just like we had practiced in rehearsals. Jake's elephant trunk made everyone laugh as he pretended to spray water at the audience. When Sofia the giraffe pretended to eat leaves from the paper trees, the audience laughed again. My favorite part was when I and the other penguins waddled in a line and then did the slide move that we had rehearsed.


At the end of the show, everyone in the audience applauded. Some people in the audience even stood up to give us more applause! Mrs. Cooper made one last announcement: "You were great in rehearsals but your performance this afternoon was even greater."

The third graders wore animal costumes for their big show.

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Can you write two stories that include the words announce, celebrate, prepare, rehearse, donate? Please repeat each of the words at least twice in each of the stories. Morphological family members of the key words can also be used such as announcement for announce. Please make the stories about 200 words long. The stories are aimed for third graders who are neither highly automatic or motivated as readers.

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What's a Fiesta?

The word "fiesta" means "party" in Spanish. It can be big or small, loud or quiet, but it is always a time to celebrate. A fiesta can happen for many reasons. People might have a fiesta for a birthday, a holiday, or to honor someone special. Fiestas are a way to celebrate friendship, family, or a special event in the community.

At a fiesta, there is often music. People might play drums, guitars, or sing songs. Sometimes there is dancing. People clap, move to the beat, and enjoy the celebration.


There is almost always food! Some fiestas have tacos, rice, fruit, or sweet breads.

Many people like to decorate for a fiesta. Colorful paper flags, balloons, streamers, and lights help make a place feel bright. These decorations show that something special is happening.

Some fiestas have piñatas filled with candy. Others might have parades, costumes, or face painting.

A fiesta is more than a party. It is a time to celebrate, to share with others, and to make joyful memories that last.

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The Best Fiesta Ever

Luz could not wait for her school's big fiesta. For weeks, her class had rehearsed their special dance. Now they knew every step by heart.

On Thursday, Mrs. Soto made her final announcement to the class: "Remember, tomorrow is our spring fiesta!" Everyone cheered at the end of the announcement.

Early on Friday morning, preparations began. Luz and her friends helped with the preparations by hanging ribbons and balloons. Then it was time to put on their costumes.

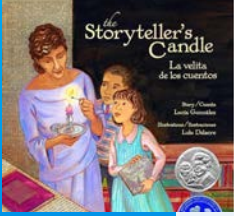
The gym soon filled with family and friends who had come to celebrate. Luz's heart was racing, but she remembered how much they had rehearsed. She knew they were prepared.

The music started. Luz's class danced just like they had rehearsed. When the dance ended, the applause was so loud it made Luz's heart swell with pride.

After the performance, the fiesta continued. Families had donated food to make the party even more of a celebration. Tables were filled with donations: tacos, rice, beans, cookies, and cakes.

"This is the best fiesta ever!" Luz thought as she looked at all the happy faces, the beautiful decorations, and her friends in their costumes. Luz knew she would always remember how it felt to dance in her costume, see all the pretty decorations, and hear that wonderful applause. This had been the best celebration ever!

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Additional Opportunities with Critical Vocabulary

	#Times in Original Text	+Times in Set of 4 Texts
announcement	2	4
applause	1	5
celebrated	1	7
costumes	2	14
decorations	1	4
fiesta	2	17
preparations	3	7
rehearsed	1	14

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Can you generate 4 texts appropriate for third graders who are not highly automatic or motivated readers? Each text should be around 225 words in length. Here are the 4 topics for the texts: (a) an overview of tree kangaroos and their behaviors; (b) the technology that scientists use to track tree kangaroos; (c) what scientists do to keep tree kangaroos safe during examinations; and (d) how tree kangaroos are different than typical kangaroos. Please ensure that these words are included in the texts at least several times: agile, elusive, transmit, frequency (as in a frequency band for a radio collar), anesthesia, and sedated. Morphological family members of the key words can be used (e.g., transmission for transmit, sedation for sedated).

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Tree Kangaroos: Amazing Animals of the Forest

Tree kangaroos are animals that live high up in the trees. They spend most of their time climbing and jumping from branch to branch. Unlike other kangaroos that live on the ground, tree kangaroos are built for life in the trees.

Tree kangaroos are very elusive. That means they are hard to find. They hide so well in the forest that scientists have trouble spotting them.

These animals also show great agility. They are excellent jumpers and climbers. Tree kangaroos can leap from one branch to another. Their agility helps them move quickly and safely through the trees.


Tree kangaroos are also very cautious. When they hear or see something coming, they quietly climb higher to stay safe. This careful behavior protects them from danger.

Don't be fooled by their soft fur and sweet faces—tree kangaroos are strong! They have powerful arms and legs. Their strength helps them hold onto branches and climb tall trees. They can even grab things with their strong paws.

These five traits—being elusive, agile, cautious, strong, and great at tree living—make tree kangaroos just right for life in the forest.

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How Scientists Track Tree Kangaroos



Scientists use technology to study tree kangaroos. They want to learn where these animals go and what they do. First, scientists put a radio collar around a tree kangaroo's neck. This collar looks like a dog collar, but it has special parts inside. The radio collar is comfortable and doesn't hurt the animal.

Inside the collar is a transmitter. A transmitter is like a tiny radio that sends out signals. Scientists can study these signals to track where the animal goes.

Each transmitter sends signals on its own frequency. A frequency is like a radio station number. Just like your car radio has different stations, each tree kangaroo has its own frequency number. This way, scientists know which animal they are tracking.

The collar also has a microchip inside. A microchip is a tiny computer smaller than your fingernail. The microchip stores information about the animal, just like a name tag.

High above Earth, satellites fly around in space. These satellites pick up the signals from the transmitters. The satellites help scientists know exactly where each tree kangaroo is, even when the animals are hiding in thick forests.

This tracking technology helps scientists learn about tree kangaroos without bothering them too much.

This is a koala (NOT a tree kangaroo) but it shows a radio collar that transmits information to scientists.

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Keeping Tree Kangaroos Safe During Examinations



Scientists give tree kangaroos health examinations, just like when you visit the doctor. But scientists follow special procedures to keep the animals safe during examinations because tree kangaroos get scared around people.

The most important part of this procedure is using anesthesia. Anesthesia is special medicine that makes animals fall asleep. When an anesthesia works, the animal becomes sedated. Sedated means the animal is in a deep, peaceful sleep and cannot feel anything.

During the examination, scientists watch the sedated animal carefully. They check three things to make sure the anesthesia is working safely and the animal stays properly sedated. First, scientists check the tree kangaroo's pulse to make sure its heart is beating at a good speed during the procedure. A pulse tells how fast a heart is beating.

Second, they watch the animal's respiration. Respiration means breathing. Scientists count how many times the tree kangaroo breathes in and out each minute. Good respiration shows that the anesthesia is working properly.

Third, they take the animal's temperature. A normal temperature means the animal is healthy during the examination.

Scientists must work quickly during this procedure. They don't want to keep the animal under anesthesia too long. By watching the pulse, respiration, and temperature, they can finish the examination safely and quickly.

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Kangaroos and Tree Kangaroos



Kangaroos and tree kangaroos belong to the same animal family. They have some things in common, but they also live in very different places and move in different ways.

Both animals have long tails and strong back legs. They are mammals, so they have fur and feed their babies milk. A baby kangaroo is called a joey. It stays in its mother's pouch until it is big enough to live on its own.

Kangaroos live on the open land of Australia. They can hop fast and can jump very far in one hop. Their tails help them balance as they move. Kangaroos live in groups called mobs.

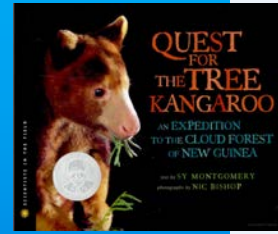
Tree kangaroos live in the rainforests. They are good at climbing. Their legs are short but their front paws are strong for grabbing tree branches. Their tails help keep them balanced as they climb high in the trees.

Unlike land kangaroos, tree kangaroos are quiet and hard to spot. They live alone or in small groups and move slowly through the trees.

Both kinds of kangaroo carry their joeys in pouches. Both use their tails for balance. But one is built for speed and hopping. The other is built for climbing in the trees of the rainforests.

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Additional Opportunities with Critical Vocabulary




Word	#Times in Original Text	+Times in Set of 4 Texts
agile	0	3
elusive	1	3
transmit	1	6
frequency	1	3
anesthesia	5	8
sedated	0	5

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2. Teaching words

Take-Aways



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Assess: Vocabulary and Automaticity

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Maze Assessment

I would like you to make a maze assessment of the attached text. In a maze assessment, the first sentence is kept intact. After that, every 7 words is represented by a blank, followed by parenthesis with three choices: the correct word and two words with the same number of letters and same parts of speech but not silly words.

The School Play

The school play was coming soon! Every day after lunch, the _____ (crew, kids, staff) in Mrs. Smith's class rehearsed their _____ (books, songs, lines). Tom's dad donated snacks for _____ (everyone, nowhere, outside), and Zoe's mom helped make _____ (not, the, fa) decorations for the stage. When _____ (new, old, the) big night came, all the _____ (students, writers, farmers) wore their costumes.

The principal _____ (took, made, kept) an announcement before the show _____ (walked, jumped, started): "Welcome to our winter _____ (text, play, game)!" The children acted out _____ (your, some, their) parts perfectly. At the end, _____ (one, the, few) crowd gave them loud applause.

_____ (Since, After, Until) the show, the whole class _____ (searched, wandered, celebrated) with cookies and juice. Everyone agreed it _____ (felt, was, ran) the best play ever!

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Target Vocabulary

fiesta	applause	donated	rehearsed
celebrated	costumes	decorations	announcement

- Tom _____ his old books to kids who needed them at school.
- The class _____ their songs every day until they knew all the words.
- At the _____ there were fun games and lots of good food to eat.
- The crowd gave loud _____ when the little dog did its trick.
- We put up birthday _____ like balloons and streamers all over the house.
- The teacher made an _____ about the field trip next week.
- The kids put on their Halloween _____ and went to get candy.
- We _____ with cake and ice cream when my team won the game.

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Semantic Family Members

Fill in the blank with the best word.

Words to choose from:

broadcast	notify	announce	shout
proclaim	say	tell	

- The TV station will _____ the football game live across the country.
- The school will _____ parents by email if there is a snow day.
- The principal will _____ important news over the speakers about the fire drill.
- The coach had to _____ instructions to the players during the noisy game.
- The king will _____ his daughter as the new ruler of the kingdom.
- Can you _____ your name clearly when it's your turn?
- I need to _____ you something important about the class party.

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Morphological Family Members

Fill in the blank with the correct word.

Words to choose from:

announced	announcement	announced
announces	announcer	unannounced

- The baseball _____ spoke clearly into the microphone.
- The principal made an _____ about the pizza party.
- My cousin made an _____ visit with her new puppy.
- The teacher _____ the winner of the art contest every Friday.
- Mom _____ that we could get ice cream after dinner.
- The student is _____ the weekly lunch menu over the speakers.

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3. Assessing Words

Take-aways?

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Using AI to:

Select Target Words and Texts	Teach Words Explicitly	Assess Vocabulary & Automaticity
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Potential Problems: AI for Vocabulary Instruction

Generating text with consideration of vocabulary requires clarity of curriculum and developmental progression.

"The lowest hanging fruit": An even larger world of worksheets; fewer opportunities to deal with complex texts.

Knowledge is the commodity of the digital age. Fatuous texts and worksheets can be a barrier to knowledge acquisition as well as a deterrent to motivation and learning.

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Potential Problems: AI for Vocabulary Instruction

"The lowest hanging fruit": An even larger world of worksheets; fewer opportunities to deal with complex texts.

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Potential Problems: AI for Vocabulary Instruction

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Knowledge is the commodity of the digital age. Fatuous texts and worksheets can be a barrier to knowledge acquisition as well as a deterrent to motivation and learning.

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Staircase of TEXT COMPLEXITY

1,000+ Open-Access Texts www.textproject.org

3,500 Most-Frequent Word Families

2,500 Most-Frequent Word Families

300 Most-Frequent Words

Grades K-1: *ReadWorks!*, *Beginning Reads*

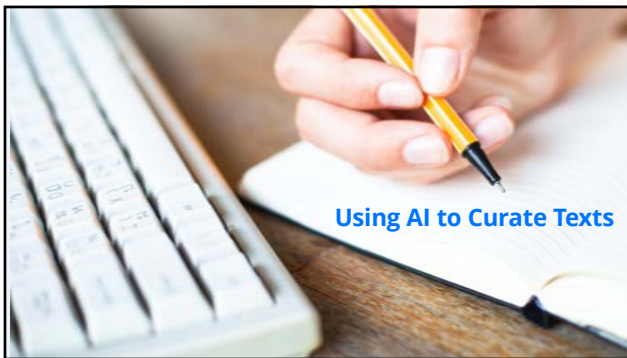
Grades 2-5: *FYI for Kids!*, *Talking Points for Kids*, *Summer Reads*

All Grades: *TextModels*

Middle School: *TeachMeaning*, *STORES OF WORDS*, *BACKGROUNDBUILDERS*

High School: *TeenReads™*, *Heroes!*, *ROGUE READERS*

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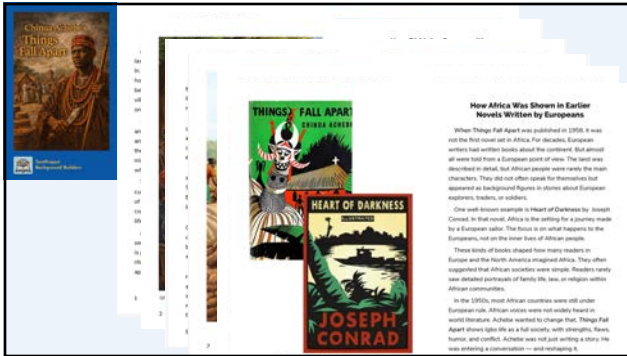
Building Background That Matters: How I Create Text Sets for Adolescent Readers

Elfreda (Freddy) H. Hiebert
TextProject

Building a "Background-Building" Text Set Around a Novel—AI Assisted

AI prompt callout: Text in red boxes are the prompts that I gave AI—in this case, Chat GPT although I also use Claude and Google Gemini.

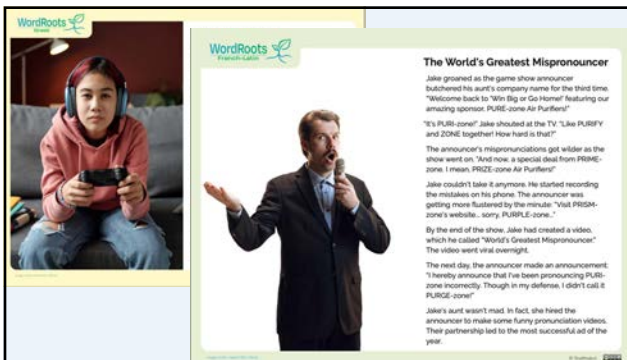
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Underlying Research

- Exposure influences automaticity.
- Words are typically members of morphological families.
- Polysyllabic words (3+ syllables) challenge many students.

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Method

- Identify the 3+ syllable words among the most frequent 1500 words in written English: EWFG database followed by SCOPE "number of syllable" analysis:
 - 175 3+ syllable words
- Using dELP, pick 25 most difficult words
- Identify family members of target words: EWFG

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	Difficulty	Predicted appearances /million	Additional Predicted appearances /million	Target + Family Members 10+/million	# Family members >9 appearances /million
revolution	1.77	63	13	76	1
evidence	1.72	77	9	86	1
policy	1.64	64	29	93	1
frequently	2.19	67	36	103	2
rapidly	1.47	70	34	104	1
situation	1.47	78	34	112	1
specific	1.55	97	21	118	2
established	1.56	70	51	121	3
political	1.81	128	26	154	1
society	2.32	131	25	156	1
education	1.81	122	47	169	2
determine	2.2	69	103	172	4
economic	3.48	113	60	173	2
organization	1.41	67	114	181	4
expected	2.23	88	95	183	3
industrial	2.84	75	114	189	2
individual	1.76	132	66	198	1
particularly	4.05	69	131	200	1
companies	2.06	136	85	223	3
consider	4.62	104	108	212	5
variety	3.69	82	188	270	7
decision	2.04	80	239	299	5
provided	1.87	82	235	317	4
developed	1.45	101	301	402	5
production	2.01	91	559	650	10

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I want to have a text for fourth graders who aren't great readers that describes a class putting on a variety show. I want to use words such as various, varieties, and other members of the morphological family. I want those words to be repeated. I also want to bring in the idea that it is a "production" and that they are producing the variety show....in other words, bring in words related to the morphological family of produce. And I want the text to be interesting and compelling--and something that kids who aren't very good readers will get engaged in. Please make the text no longer than 300 words.

When people make movies, there are always producers they are the people who do what? Our teacher has appointed all of us as producers of this variety show. We're going to give the production several times--once for the first grade class, another time for the other fourth-grade class, and the final time for the PTA.

Is it appropriate anywhere to use the word various--maybe twice?

Could they maybe have various tasks to do?

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Producing a Variety Show

Our class is putting on a variety show--and we are the producers. In movies, producers are the people who plan, fix problems, and keep the show moving. Our teacher said, "You are all producers." That means this production is up to us.

A variety show has different kinds of acts. That's where the word *variety* comes from--lots of different things in one show.

The acts vary from group to group. Mia and Jay are producing a dance. Luis's group is producing a skit about a robot teacher who gives out homework all day. Tara is singing a song which ends with a high note that makes everyone stop and listen. There is a lot of variety in our show.

As producers, we also have various tasks. Some of us are in charge of music. Others find props. Some help people get on stage at the right time.

We run into various problems as we get ready. The music cuts out. A prop goes missing. "Producers fix problems," our teacher reminds us. We find ways to fix the problems that come up.

We will produce this variety show for various groups--first graders, other fourth graders, and the PTA. On the final show for the PTA, the room is full. The lights go down. For a moment, it is very quiet. We smile at each other. We made this production. Then the music starts. And our variety show begins.

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Number of appearances of multisyllabic words from rich morphological families

Producing a Variety Show:

- production: 11
- variety: 9

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Can you generate a set of sentences for a study sheet (with the 7 target words at the top of the sheet and blanks in sentences for specific target words)? I want the sentences to have a contiguous story line and I want the target words to belong to the morphological family of production and of variety. Remember that the students for whom this is intended are in the fourth grade but are neither avid nor automatic readers.

Word Bank: produce, producer, production, producing, produced, variety, various

1. Our class is getting ready to _____ a variety show for the school.
2. Each group is a _____, in charge of one act in the show.
3. The whole _____ includes songs, dances, and funny skits.
4. The acts show a lot of _____, because each one is different.
5. Right now, some students are _____ a dance, while others plan a skit.
6. We have _____ tasks, like running music, setting up props, and helping backstage.
7. By the end of the week, we have _____ a show full of fun and variety.

Study Sheet

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More to Read and/or Hear (for free!):

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- Terminology, Texts and Teachers in an AI World: Possibilities and Problems <https://textproject.org/terminology-texts-teachers-ai/>

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Sincerest thank you for your
time & commitment to our
students and their future!



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