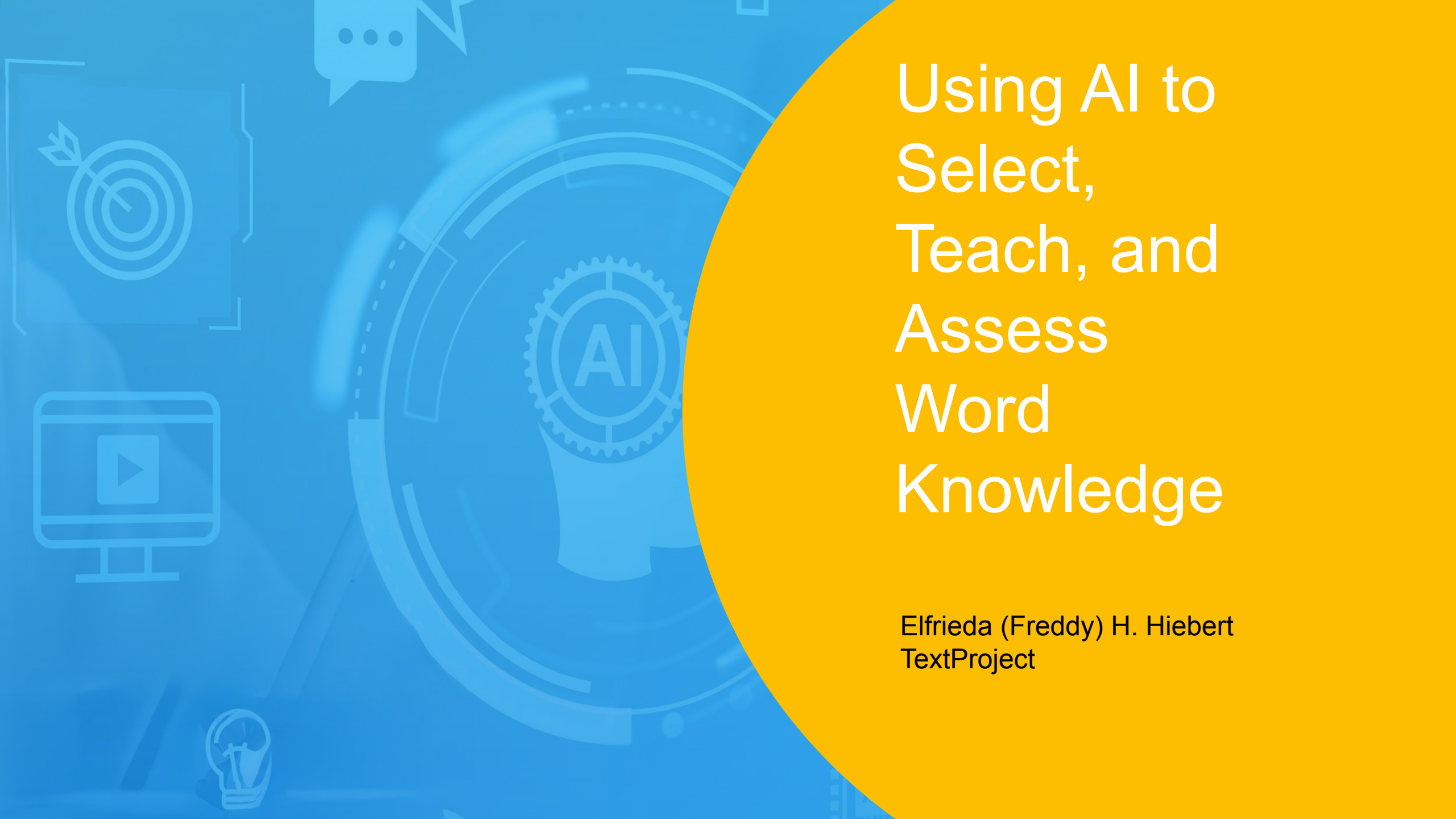
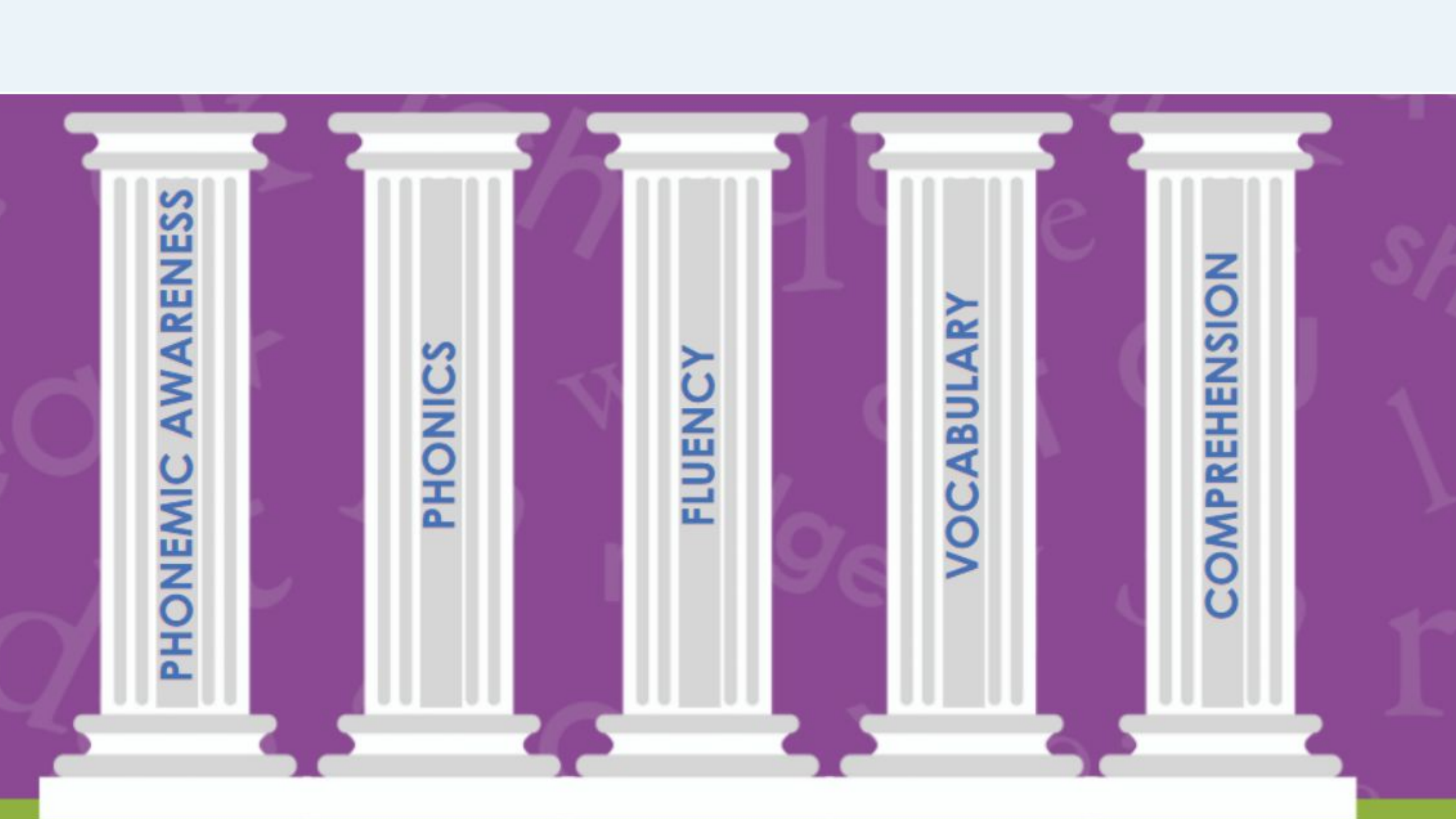




# Using AI to Select, Teach, and Assess Word Knowledge

Elfrieda (Freddy) H. Hiebert  
TextProject

The image features five identical classical columns standing side-by-side on a white base against a purple background. Each column has a grey fluted shaft and a white capital and base. A grey rectangular label is centered on the shaft of each column, containing a literacy skill in blue capital letters. The skills, from left to right, are: Phonemic Awareness, Phonics, Fluency, Vocabulary, and Comprehension. Faint, large letters are visible in the background.

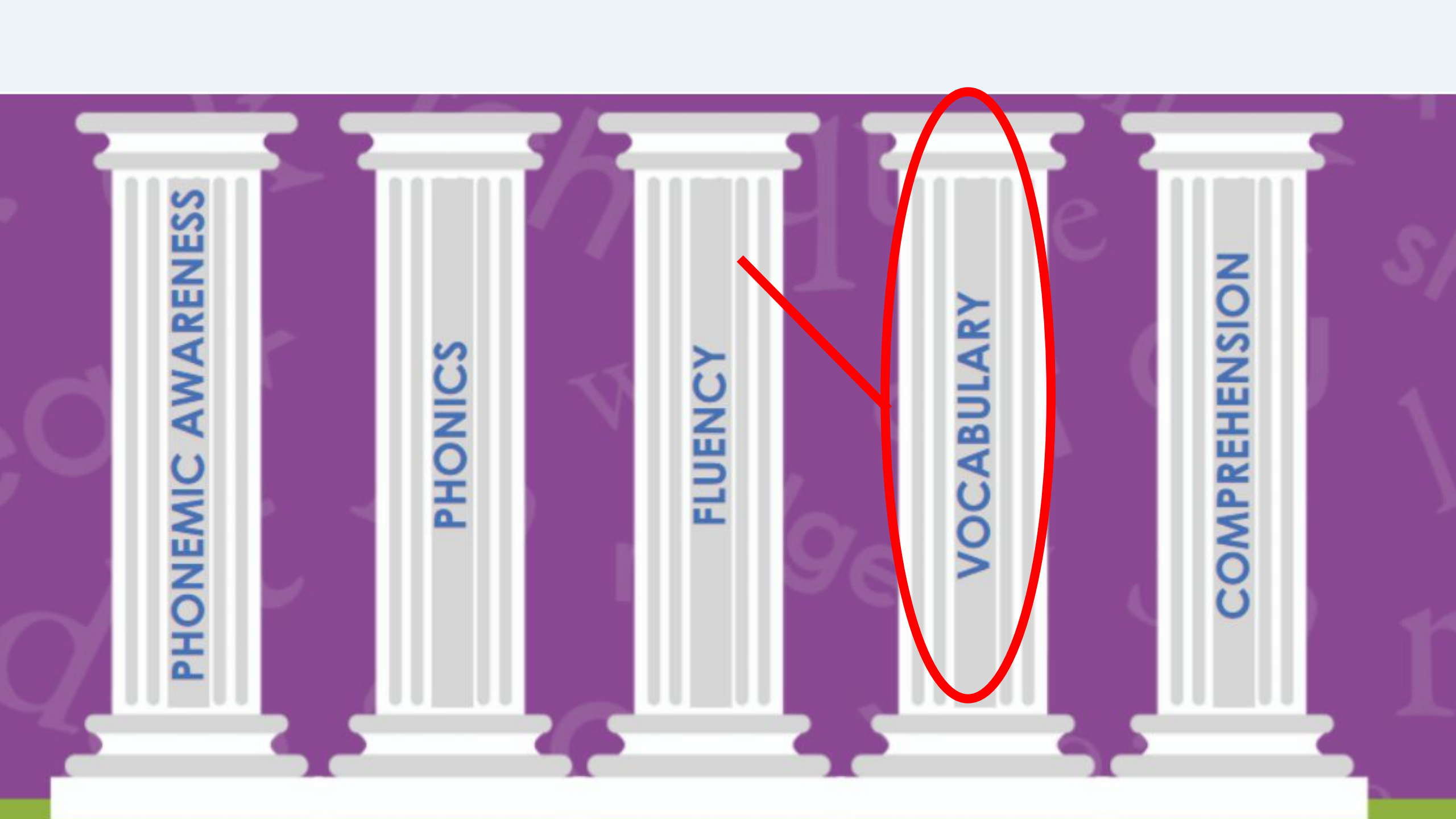
**PHONEMIC AWARENESS**

**PHONICS**

**FLUENCY**

**VOCABULARY**

**COMPREHENSION**



PHONEMIC AWARENESS

PHONICS

FLUENCY

VOCABULARY

COMPREHENSION

# The Size of the English Lexicon (Oxford English Dictionary)

**285,500**  
**root or**  
**head**  
**words**

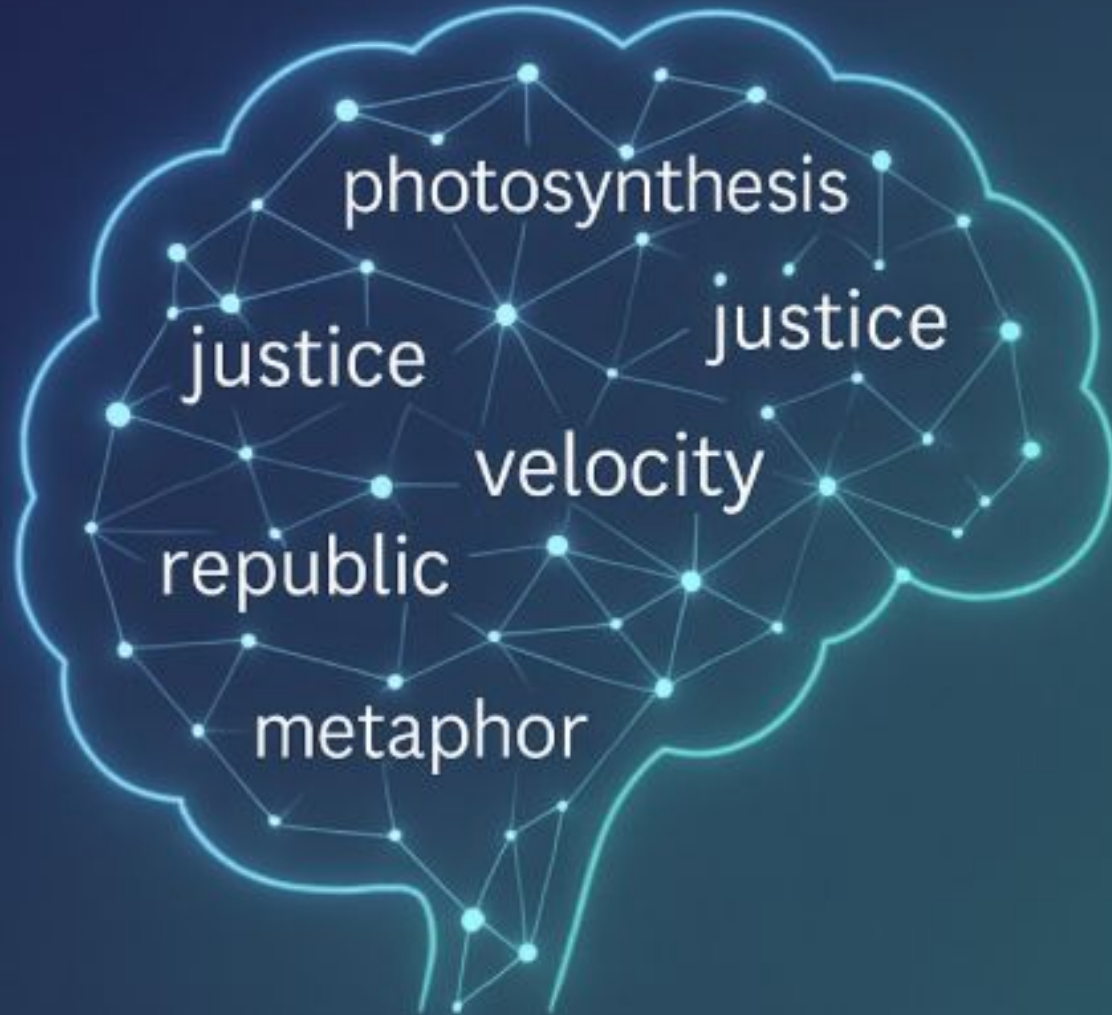
**326,00**  
**derivates**  
**& phrases**

**47,150**  
**obsolete**  
**words**

And this doesn't include the multiple meanings of words.



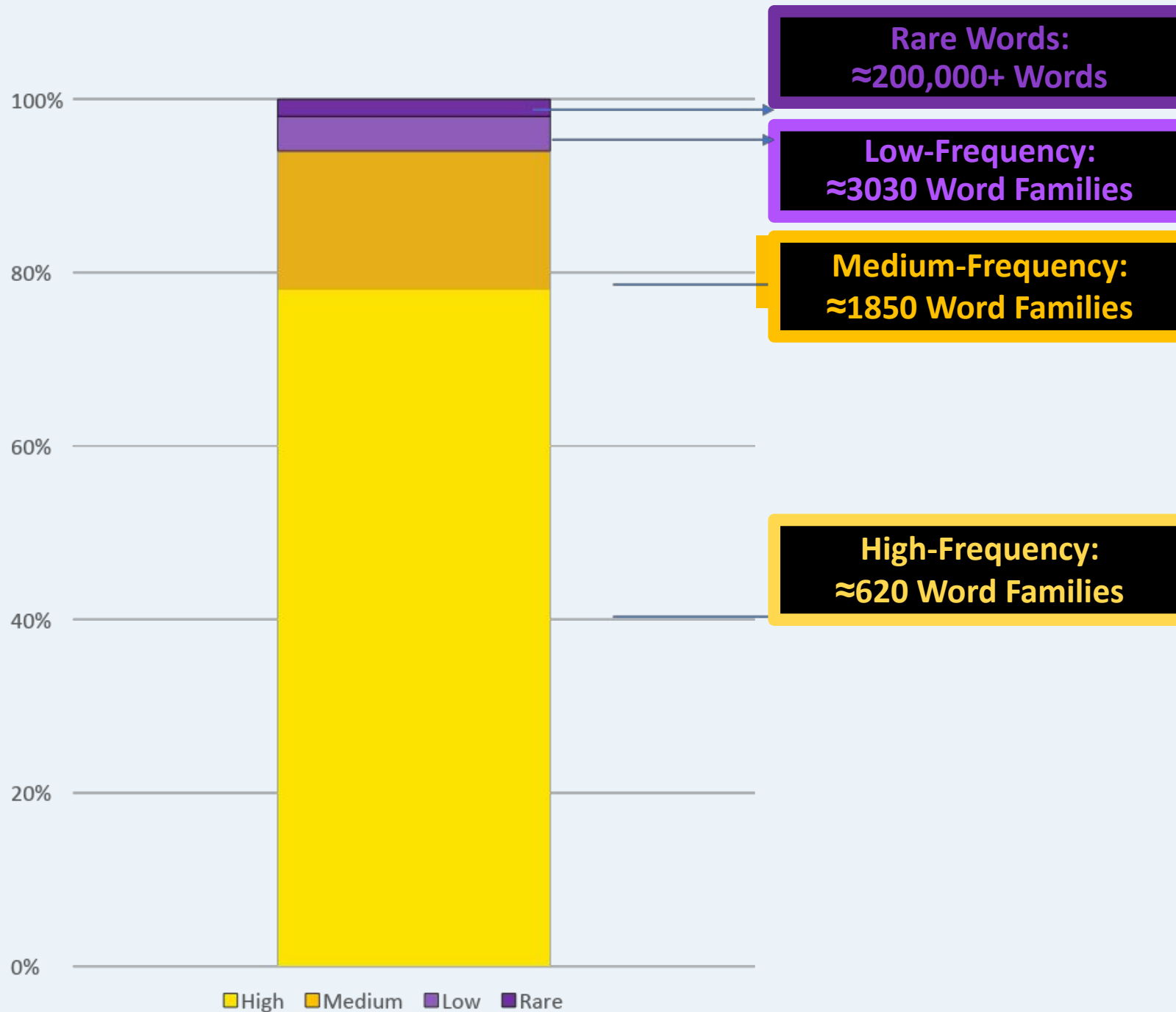
# Why Large Language Models Matter for Vocabulary Instruction

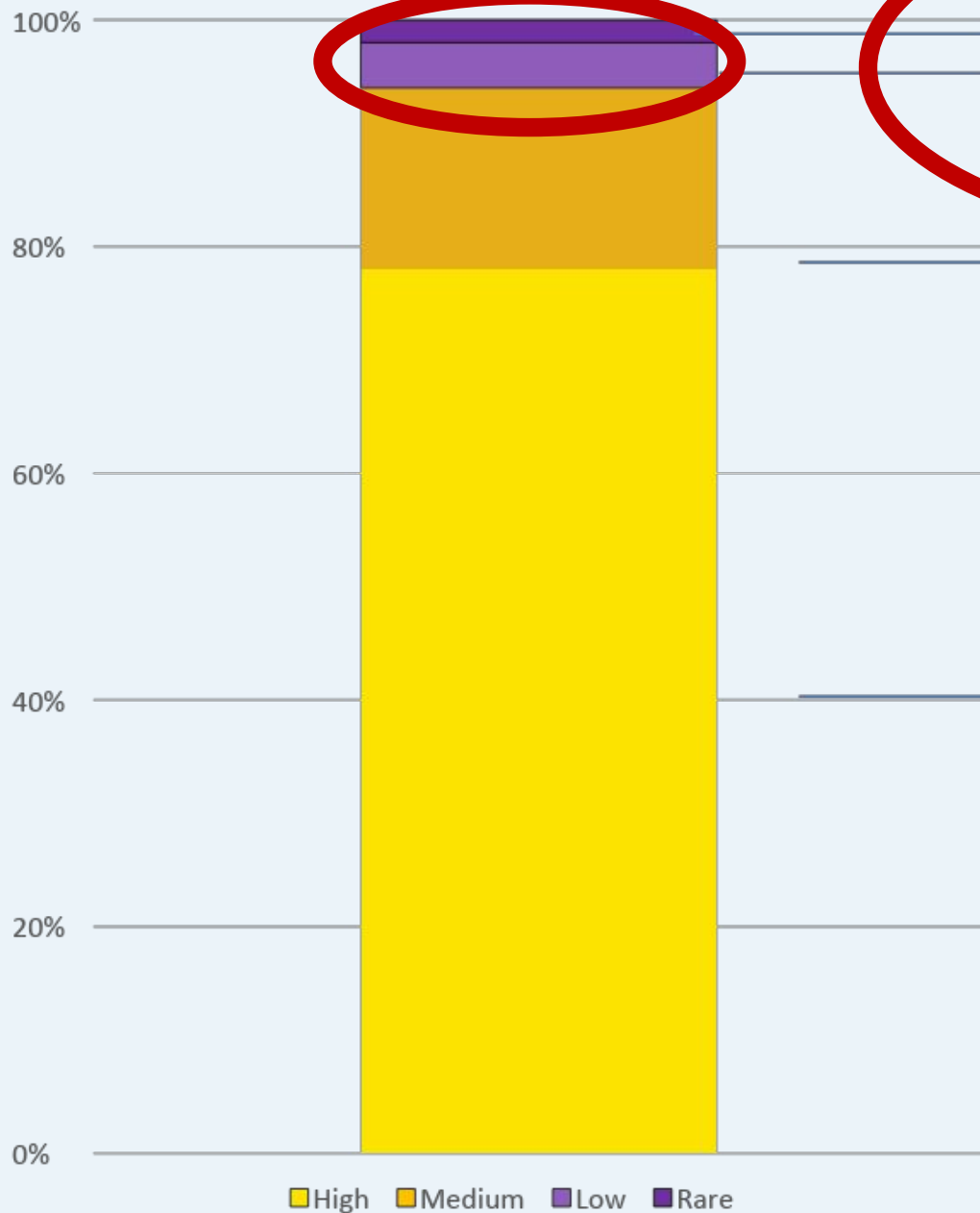


- LLMs “read” billions of words. They show us which words are common, rare, and critical for academic success.
- They uncover how words work in context—not just their definitions, but how they connect to ideas and other words.
- LLMs help us focus instruction on words students are most likely to struggle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



# Word Distribution in School Texts





**Rare Words:**  
≈200,000+ Words

**Low-Frequency:**  
≈3030 Word Families

**Medium Frequency:**  
≈1850 Word Families

**High-Frequency:**  
≈620 Word Families

# Word Distribution in School Texts

# Using AI to:

**Select**

Target Words and  
Texts

**Teach**

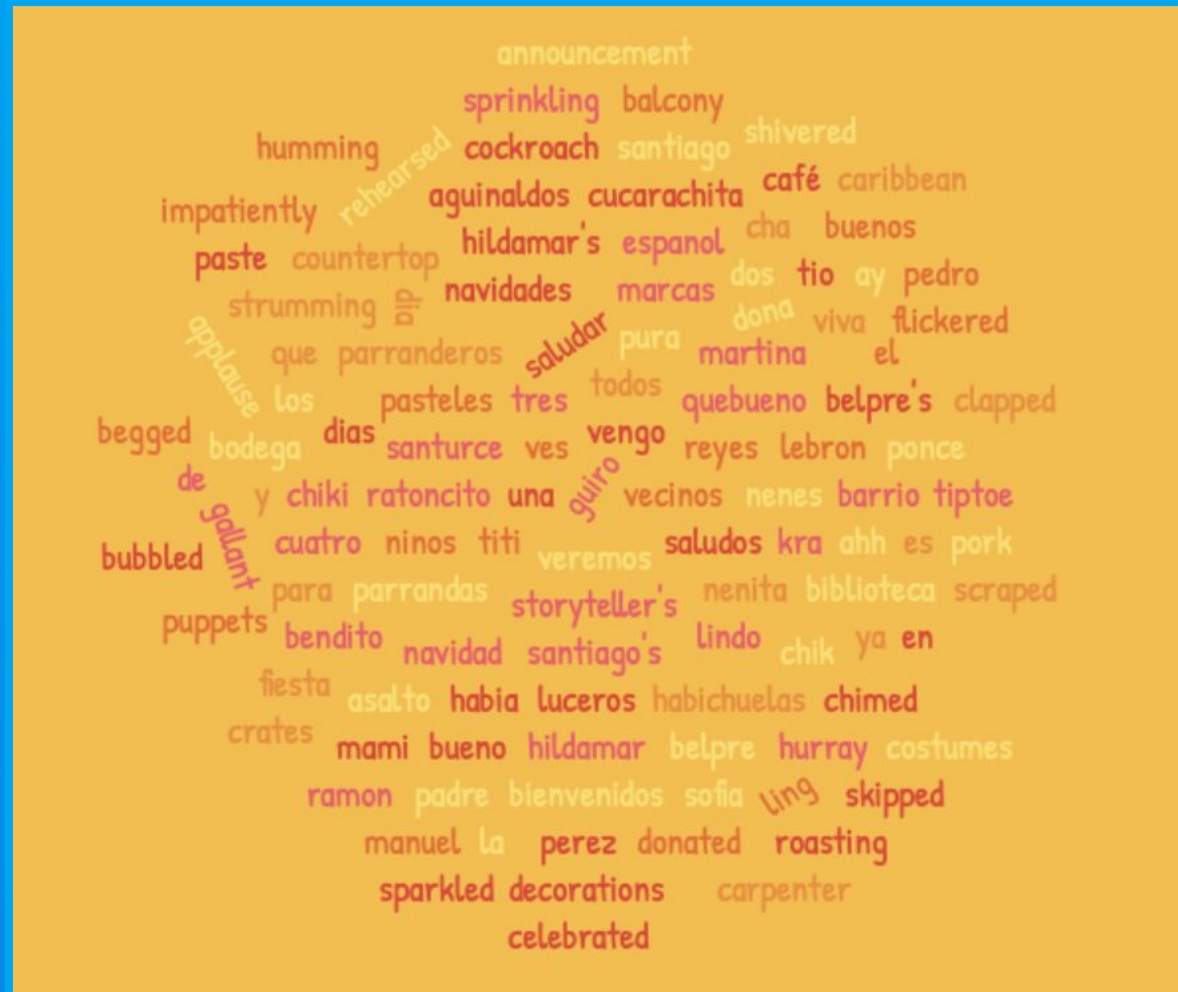
Words Explicitly

**Assess**

Vocabulary &  
Automaticity

# Cherry-Picking Words: Narrative Texts

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





# Cherry-Picking Words: Informational Texts

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

miracle  
pokes elusive waterproof battery  
saplings microchip id gabriel  
toby trackless download scurries outfitted  
insert subtract roo vials im lashed hop  
kangaroo anesthetic clockwork christine pluck  
joshua gorgeous videotape squirming perch  
snug acrobat unties somersaults ferns  
humidity forearms holly collie anesthesia fronds priorities  
enthusiastic twitching screwdriver wiggling pouch  
dials outstretched burlap pricked scanned pulse  
tags underside stethoscope binoculars paw  
antenna exam circumference fern  
kangaroos exhaustion barefoot joel  
hug kilograms fahrenheit paws  
banana kangaroo's  
respiration calculate

# Research on the efficacy of “cherry-picking” vocabulary

- on comprehension

(Wright & Cervetti, 2017)

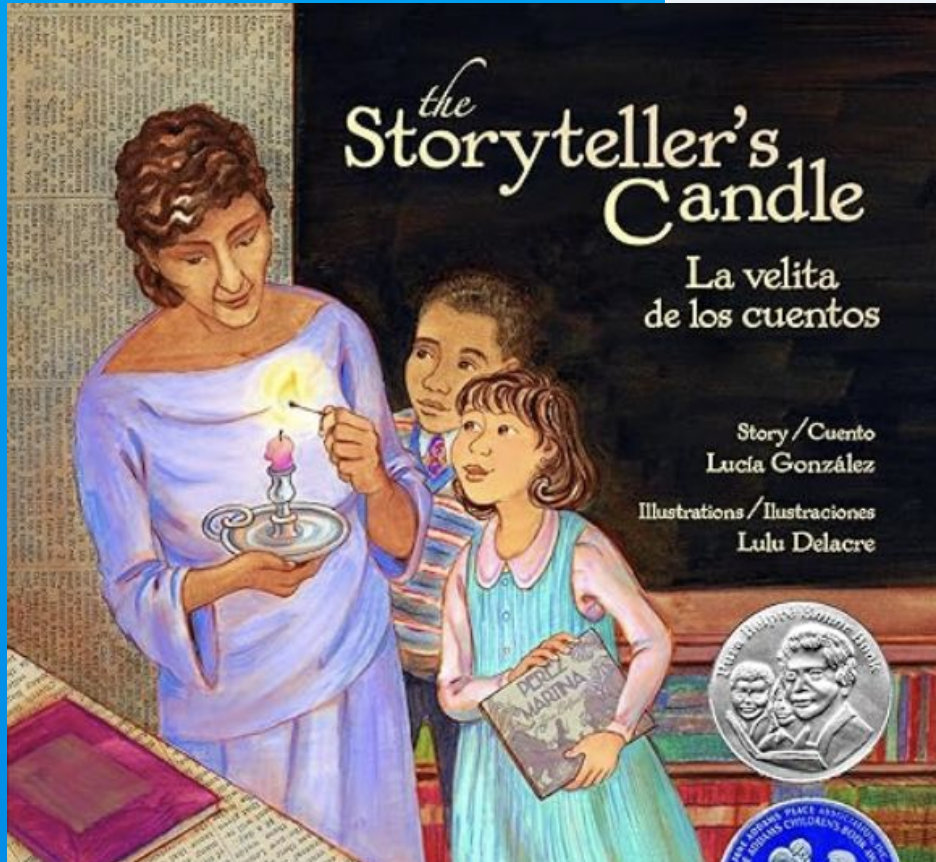
- on vocabulary (beyond  
taught words)

(Cervetti et al. (2023)



Select:  
Target Words and  
Texts

# An Alternative to Cherry Picking Vocabulary



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

FH

I'm a third-grade teacher. Many of my students are not at the level of vocabulary required for strong comprehension. The current story in our program is The Storyteller's Candle. The publisher identified these words for this text: slender, gallant, chimed, preparations, flickered, concluded. Can you review these words in relation to their usefulness in reading across the curriculum and in subsequent grades?

### High Priority Words (Essential to story AND broadly useful):

**Preparations** - This word is central to a major plot element (the community coming together to prepare for Three Kings' Day). It's also highly valuable across the curriculum, appearing frequently in science experiments, social studies projects, math problem-solving, and writing processes. Students will encounter this word regularly in subsequent grades.

**Concluded** - While not critical to story comprehension (students could understand the ending without knowing this exact word), it's extremely valuable academically. This is a key transition/summary word used across all subjects and in standardized testing. It's essential for students' academic vocabulary development.

### Moderate Priority Words:

**Flickered** - Moderately important to the story's atmosphere and the symbolic importance of the storyteller's candle. It's a useful descriptive verb that appears in literature and science contexts (light, fire, movement), making it worthwhile for expanding students' descriptive vocabulary.

**Chimed** - Low centrality to the story (could be replaced with "said" without losing meaning), but it's a useful dialogue tag that helps students understand different ways characters can speak. Appears occasionally in literature and has some cross-curricular value.

### Lower Priority Words:

**Slender** - Purely descriptive of Ms. Belpré's appearance, not essential to plot or character understanding. While it's a good descriptive adjective, it has limited cross-curricular application compared to the others.

**Gallant** - Appears only in the embedded folktale about Ratoncito Pérez. While it's a character trait word that could be useful in literature discussions, it's somewhat archaic and has limited modern usage across subjects.



Which 10 words would you recommend as the most critical words in this story that are worth instructional time if the aim is to support students' overall vocabulary--across texts in other content areas and also in subsequent grades?

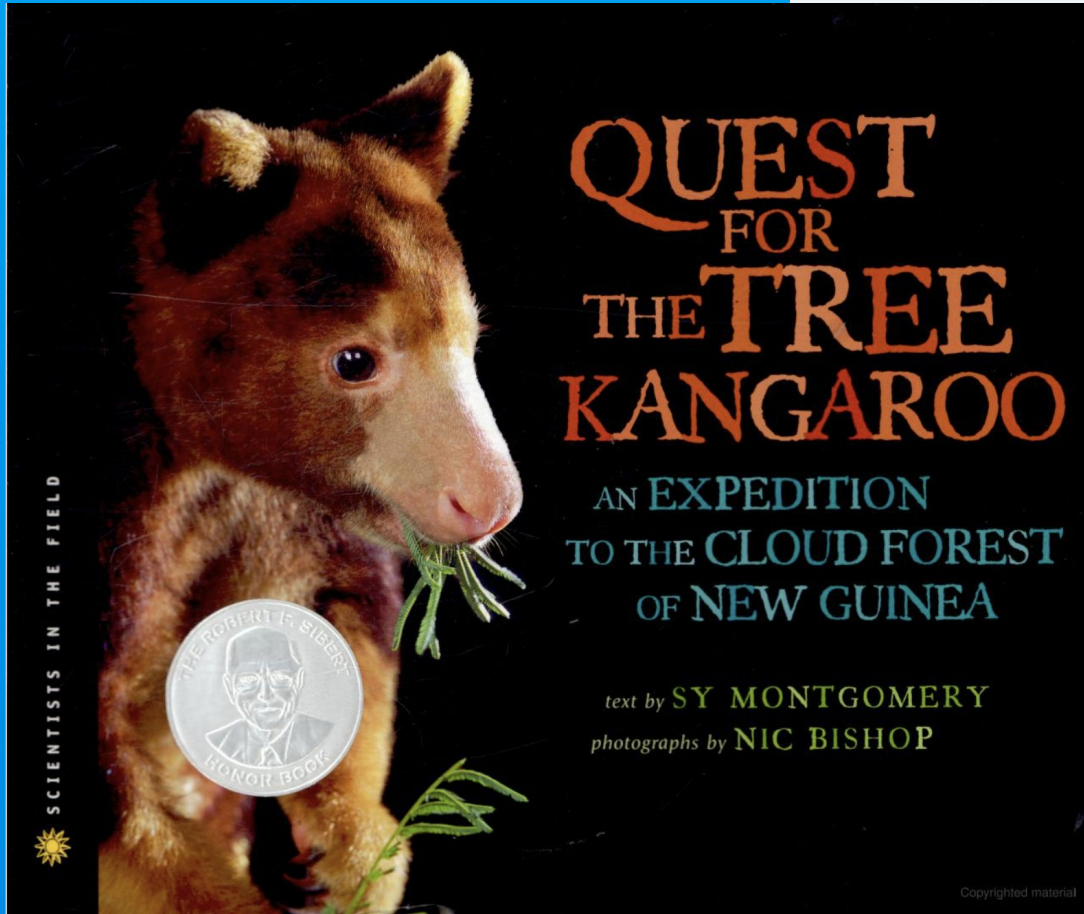
Top 10 High-Impact Vocabulary Words:

- ✓ **preparations** - Central to the story's plot; extremely high utility across all subjects (science experiments, research projects, writing process)
- ✓ **announced/announcement** - Appears twice in the story; essential academic vocabulary for all subjects and grade levels
- 3. **discovered** - Key to the story's theme ("happy to discover books"); one of the most valuable academic words across science, social studies, and literature
- 4. **invited** - Appears multiple times; high-frequency word in academic and social contexts
- 5. **gathered** - Important to the community theme; frequently used in social studies, science, and literature
- ✓ **rehearsed** - Central to the play preparation; valuable for understanding process and practice across subjects
- 7. **concluded** - Story structure word; critical for academic writing and reading comprehension across all subjects
- 8. **special** - Appears multiple times in the story; high-utility adjective that students need for both comprehension and expression
- 9. **journey** - Appears in the story ("The journey took five days"); powerful word used literally in social studies/science and metaphorically in literature and personal writing
- 10. **characters** - Appears in the story ("cast of characters"); essential literature vocabulary that also means "people," making it highly versatile across subjects

|               | #Times in Original Text |
|---------------|-------------------------|
| announcement  | 2                       |
| ✓ applause    | 1                       |
| ✓ celebrated  | 1                       |
| ✓ costumes    | 2                       |
| ✓ decorations | 1                       |
| ✓ fiesta      | 2                       |
| preparations  | 3                       |
| rehearsed     | 1                       |



# 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 |

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 animals' 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 "our 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



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?

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

Can you organize these words into connected categories--three ideally--that will aid students in understanding the connections across these words?

### 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

## 1. Selecting words

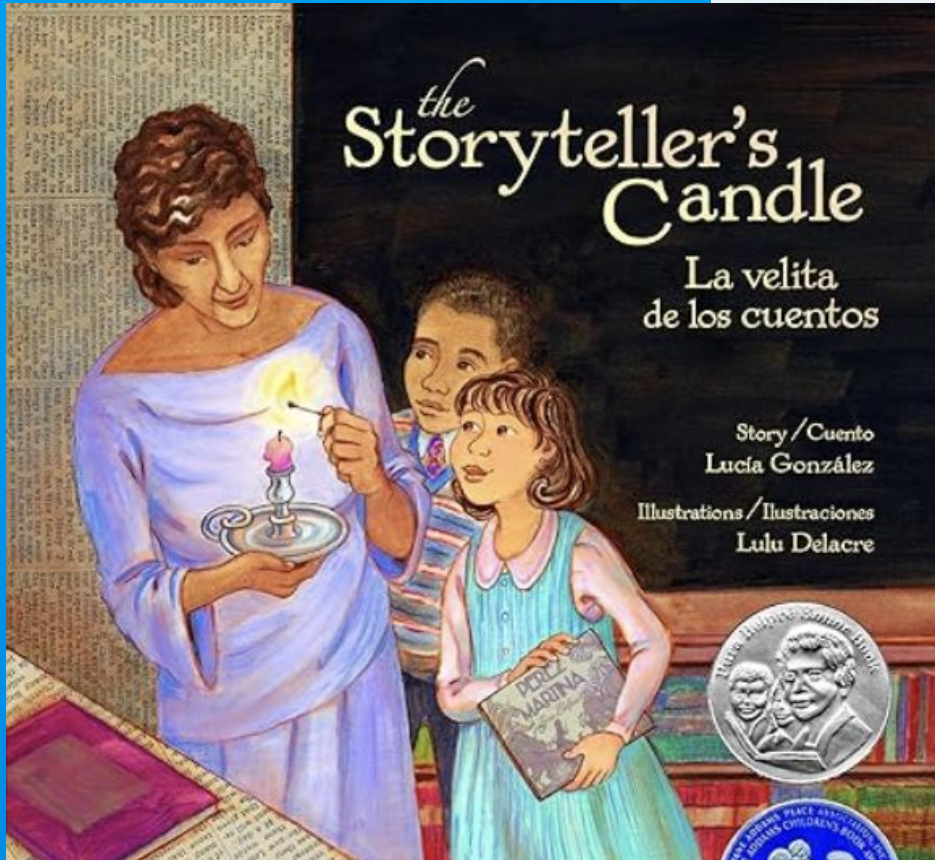
Ideas?



Teach: Words  
Explicitly



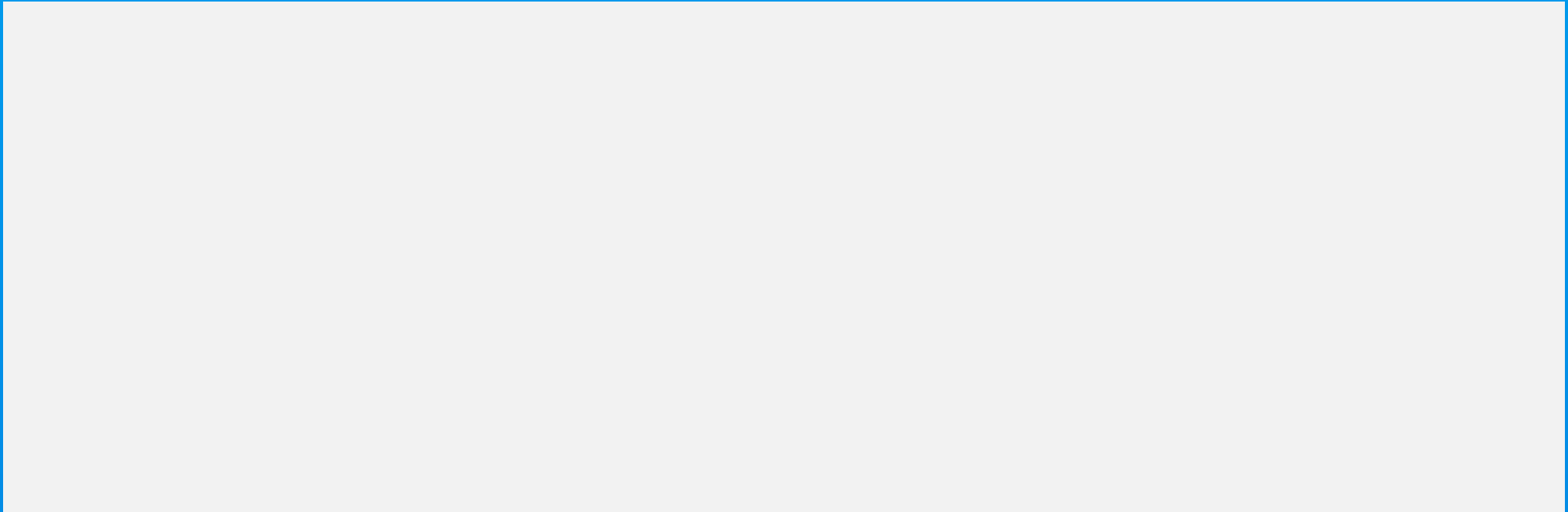
# Additional Opportunities with Critical Vocabulary



|              | #Times in Text |
|--------------|----------------|
| announcement | 2              |
| applause     | 1              |
| celebrated   | 1              |
| costumes     | 2              |
| decorations  | 1              |
| fiesta       | 2              |
| preparations | 3              |
| rehearsed    | 1              |



## Activity 1: Generating Text Sets with Critical Vocabulary





## 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. Music and dancing help bring people together.

There is almost always food! Some fiestas have tacos, rice, fruit, or sweet breads. Eating together is a big part of the celebration.

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 games or 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.





## Preparing for the School Play

Putting on a play takes hard work and careful preparation. First, actors learn their lines and practice moving around on stage. The cast rehearses 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.

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.





## 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!





The third graders wore animal costumes for their big show.

## The Dancing Zoo Animals

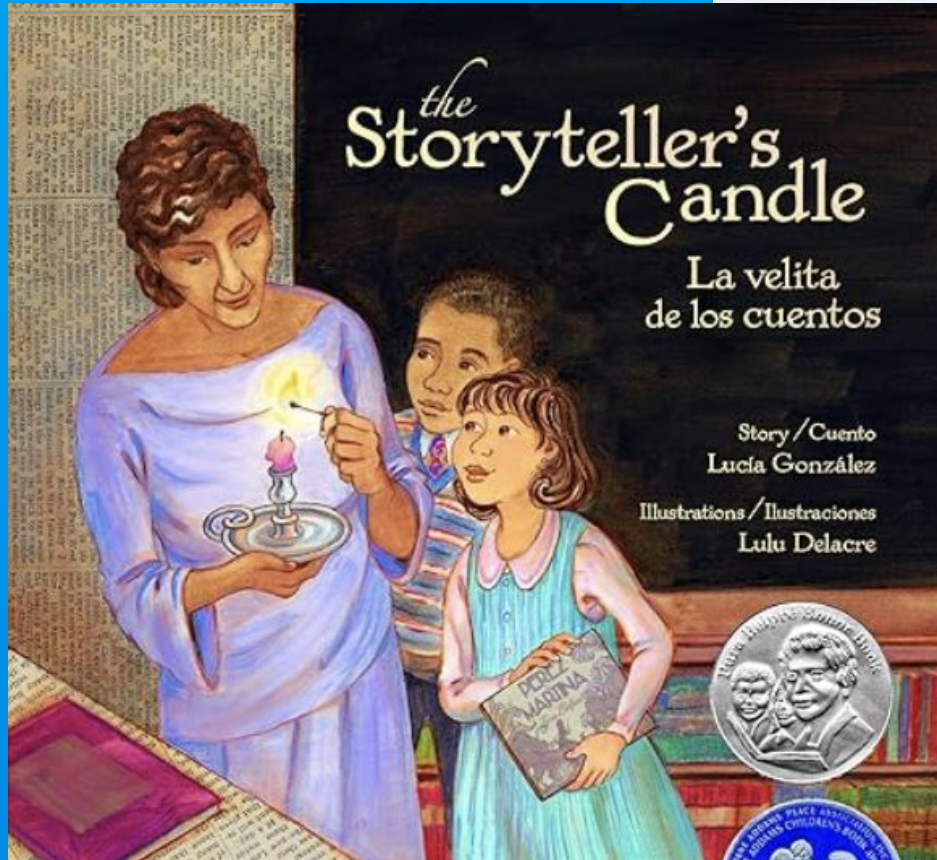
Today our third-grade class put on the play "The Dancing Zoo Animals." For weeks, we had daily rehearsals to learn our parts for the play. Mrs. Cooper, our teacher, made an announcement before the play began: "Remember, we've rehearsed this many times. You are well prepared for the performance!"

But all of us were 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. Sofie's costume was the tallest of all. That's because she was a giraffe.

Finally, the gym was full of our families and friends. The music started. 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.

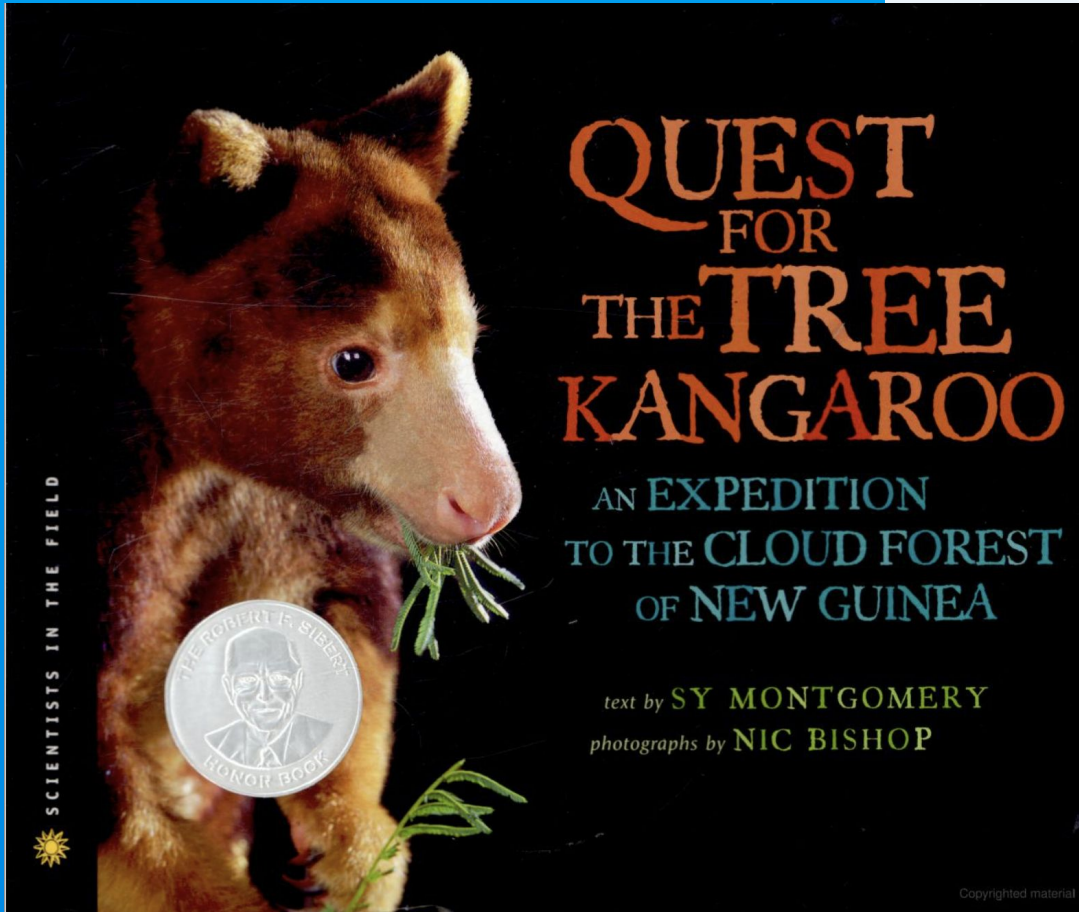
At the end of the show, everyone in the audience applauded. Some people in the audience even stood up to give us more applause! Mrs. Cooper made one last announcement: "You were great in rehearsals but your performance this afternoon was even greater."

# 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                       |

# Additional Opportunities with Critical Vocabulary



| Word       | #Times in Text |
|------------|----------------|
| agile      | 0              |
| elusive    | 1              |
| transmit   | 1              |
| frequency  | 1              |
| anesthesia | 5              |
| sedated    | 0              |



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).





## 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.



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

## 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.





## 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.





## 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.

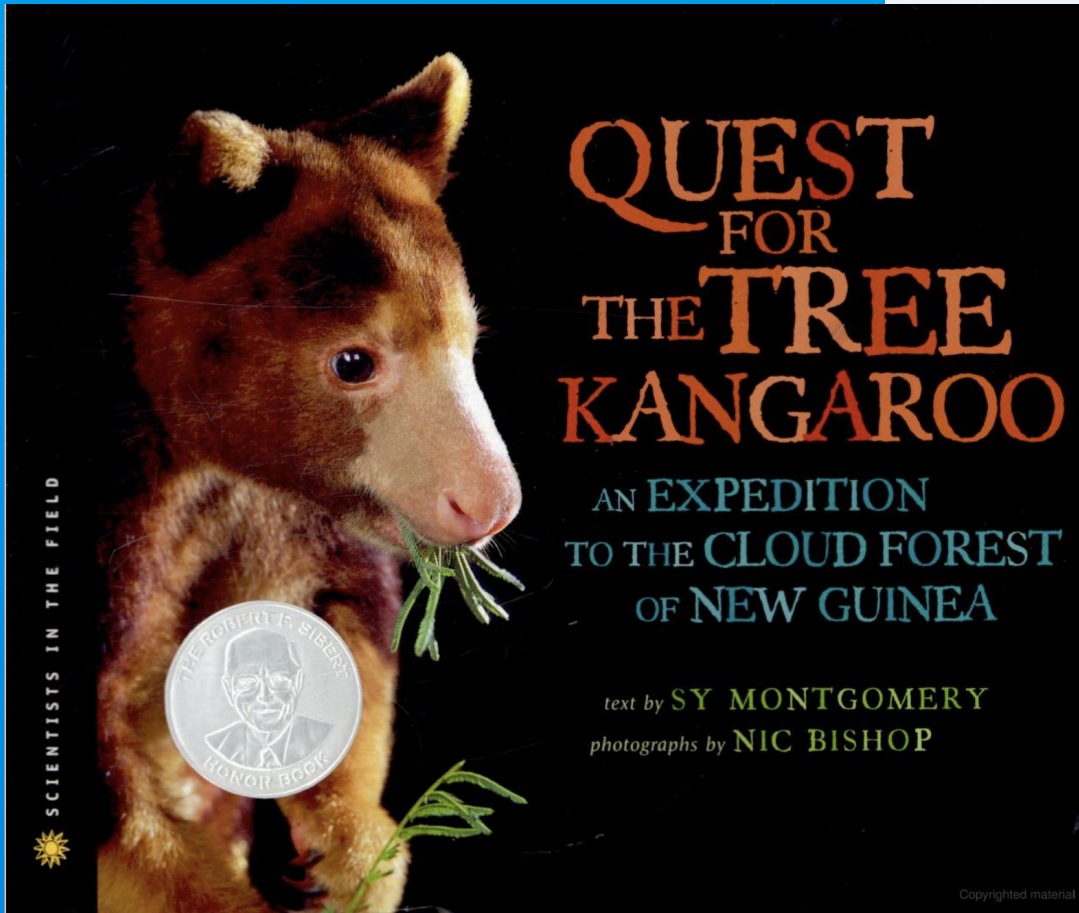
Tree kangaroos live in the rainforests. They are good at climbing. Their legs are short but their front paws are strong for grabbing tree branches. Their tails help keep them balanced as they climb high in the trees.

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.



# 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                        |

## Activity 2a: Generating Semantic Gradients

- 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?

# Semantic Gradients: *Storyteller's Candle*

blaze

flash

sparkled

gleam

flickering

shine

twinkle

glow

shout\*

proclaim

broadcast

announce

notify

tell\*

say\*



# Semantic Gradients: *Tree Kangaroo*

## Intensity of "Hard to Catch/Find"

Secretive

Mysterious

Elusive

Slippery

Evasive

Fugitive

## Intensity of "Moving Skillfully"

Steady

Flexible

Quick

Agile

Athletic

Nimble

Acrobatic

# Activity 2b: Adding 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

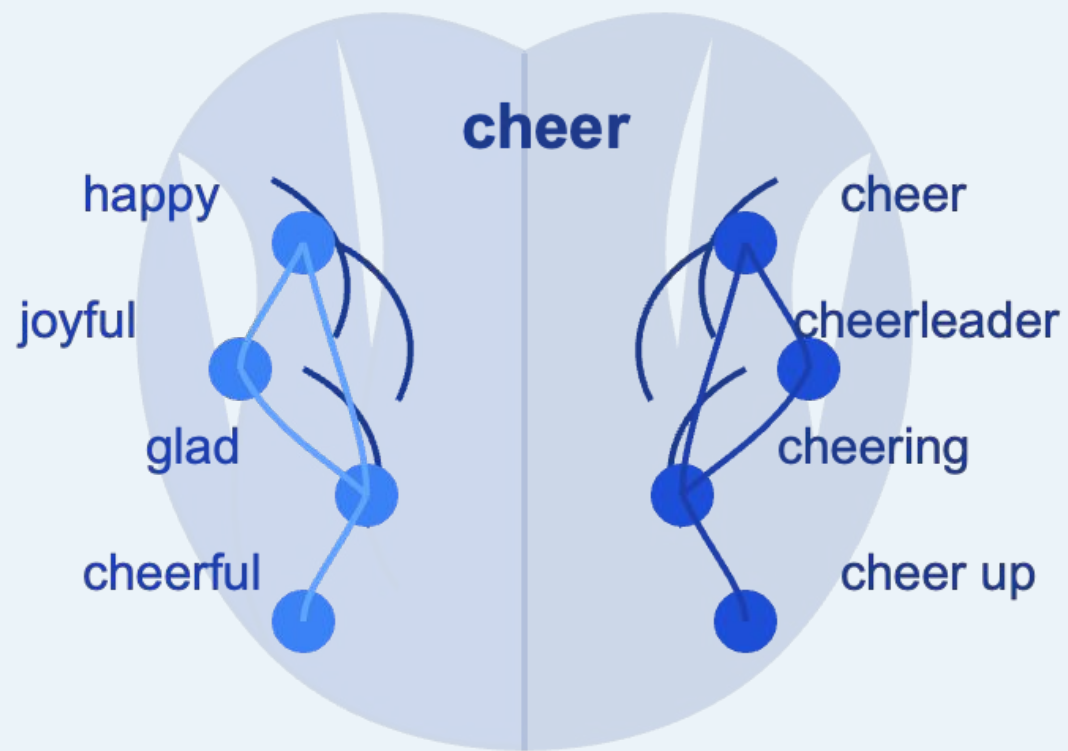
## Pre- Forms

preannounce  
preannounced  
preannouncing  
preannouncement

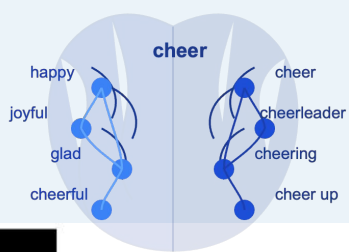
## Un- Form

unannounced

# My Neural Neighborhoods







# My Neural Neighborhood: *The Storyteller's Candle*

## broadcast

### Verb Forms

broadcasts  
broadcasted  
broadcasting

### Noun Forms

broadcaster  
broadcasters  
broadcast  
broadcasts

### Re- Forms

rebroadcast  
rebroadcasts  
rebroadcasted  
rebroadcasting

shout\*

proclaim

broadcast

announce

notify

tell\*

say\*

## proclaim

### Verb Forms

proclaims  
proclaimed  
proclaiming

### Noun Forms

proclaimer  
proclaimers  
proclamation  
proclamations

### Ex- Forms

exclaim  
exclaimed  
exclaiming  
exclamation  
exclamations

## 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

## notify

### Verb Forms

notifies  
notified  
notifying

### Noun Forms

notifier  
notifiers  
notification  
notifications

### Pre- Forms

prenotify  
prenotified  
prenotifying  
prenotification

# Morphological Families:

## *Quest for Tree Kangaroos*

**transmit**

**transmitter**

**transmitted**

**transmission**

**sedate**

**sedated**

**sedation**

**sedative**

**anesthetic**

**anesthesia**

**anesthetize**

**anesthetized**

**respire**

**respiration**

**respiratory**

## 2. Teaching words

Ideas?



# Assess: Vocabulary and Automaticity



**FH** 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 word 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).

# Maze Assessment

# Target Vocabulary

fiesta

applause

donated

rehearsed

celebrated

costumes

decorations

announcement

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

# Semantic Family Members

Fill in the blank with the best word.

Words to choose from:

|           |        |          |       |
|-----------|--------|----------|-------|
| broadcast | notify | announce | shout |
| proclaim  | say    | tell     |       |

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

# Morphological Family Members

Fill in the blank with the correct word.

Words to choose from:

|           |              |             |
|-----------|--------------|-------------|
| announced | announcement | announced   |
| announces | announcer    | unannounced |

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



## 2. Assessing words

Ideas?



# Using AI to:

**Select**

Target Words and  
Texts

**Teach**

Words Explicitly

**Assess**

Vocabulary &  
Automaticity

# 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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## Grades K-1

[DecodableReads](#) and [TopicReads - Primary](#) make up TextProject's [Decoding + Knowledge Program](#).

[BeginningReads](#) texts connect student's oral language knowledge with written language, and are accompanied by lessons & teaching resources.

### Decodable Reads™



### TopicReads - Primary™



### BeginningReads™



[Enhancing Opportunities for Decoding and Knowledge Building through Beginning Texts](#)

## Grades 2-5

In order to develop automaticity in reading, students need to be exposed to lots of text. TextProject's text sets for grades 2-5 expand the classroom reading repertoire. [FYI for Kids](#) is a collection of engaging and high-quality magazine articles; [Talking Points for Kids](#) is a collection of thought-provoking texts that can be used as a springboard for classroom discussion. And [SummerReads](#) provides enough texts for an entire summer of reading, to prevent the summer reading slump.

### FYI for Kids!



### Talking Points for Kids



### SummerReads™



# Open-Access Texts @TextProject

## Multi-Grade



## Middle School

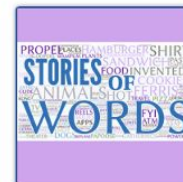
Our text collections for middle school support vocabulary, background knowledge, and comprehension.

[Stories of Words](#) aims to develop students' interest in words and word networks. [TopicReads - Middle School](#) are available as online flipbooks or printable booklets, and are accompanied by [student exercises](#), [assessments](#), and an [instructor guide](#).

### TopicReads - Middle School



### Stories of Words



## High School

We offer high interest, accessible texts for high school students. The [Heroes!](#) series features inspirational stories of amazing real-life heroes. [TeenReads](#) are magazine-format texts that dive into fascinating topics that capture teens' interests while introducing them to core English vocabulary and ideas used in everyday life.

### Heroes!



### TeenReads™





# Weather in Art



TextModels  
AI-curated texts

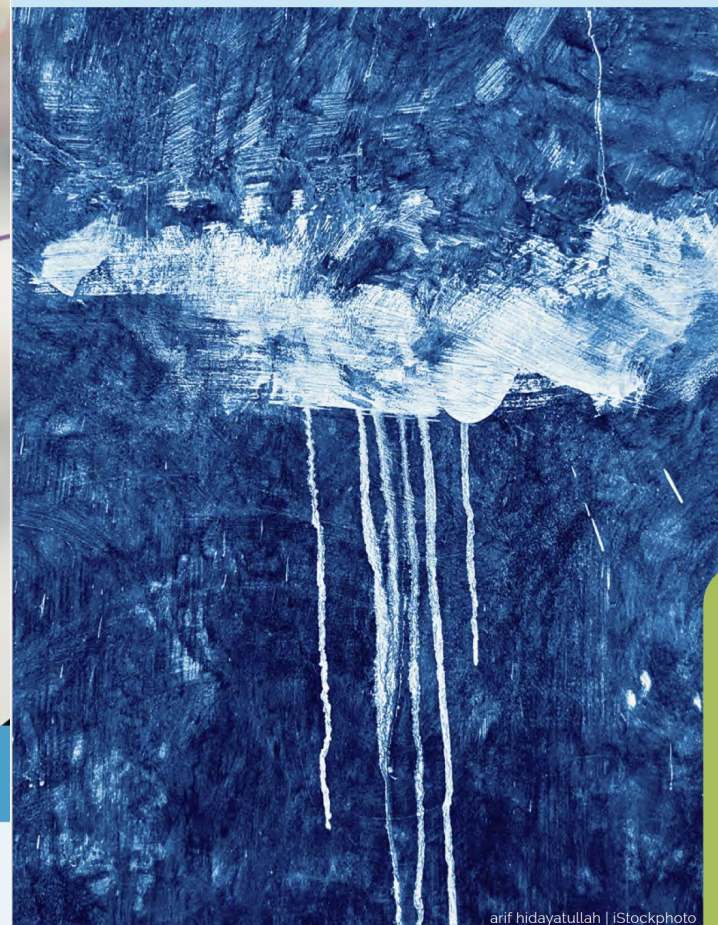
TextModels  
AI-curated texts

TextModels  
AI-curated texts

TextModels  
AI-curated texts

TextModels  
AI-curated texts

TextModels  
AI-curated texts



arif hidayatullah | iStockphoto

Paint drips can look rain.

## Rain Patterns

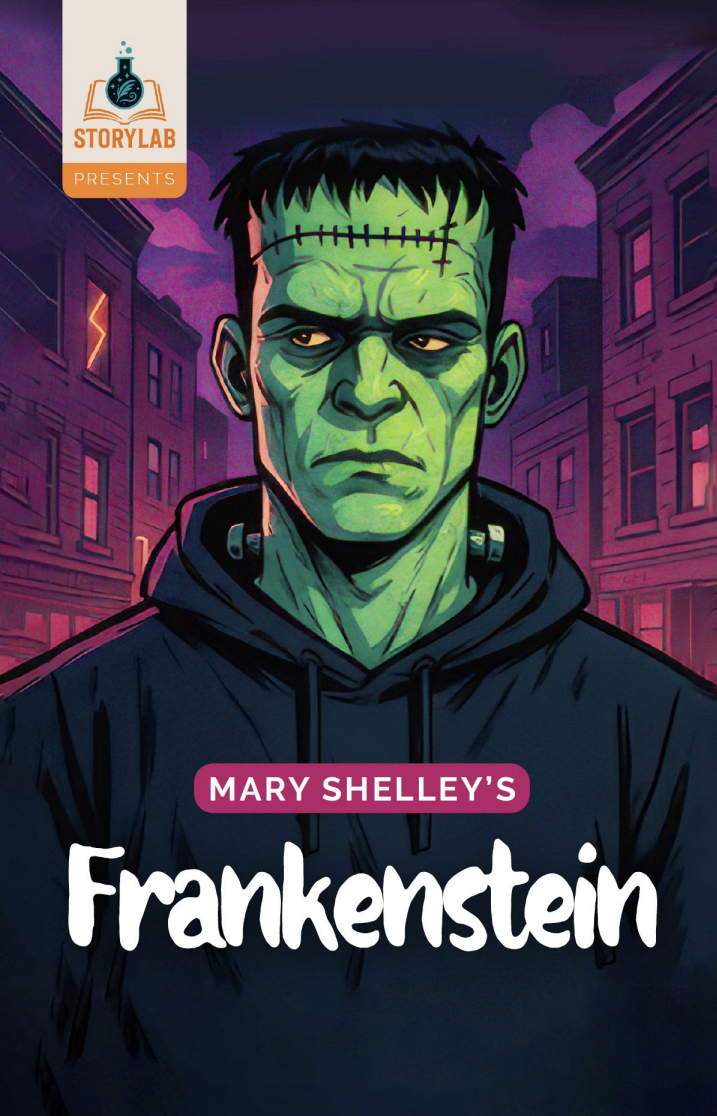
Look out a window when it rains. Drops of rain fall on the window. Each drop starts small and round. Some drops seem to race each other down the glass. When they meet, the drops join and slide down the window together.

When you are outside in the rain, watch as a puddle of water forms. When a drop of rain hits the puddle, it makes rings in the water. The rings get big and fade away. More drops make more rings and the puddle gets bigger.

## Make Your Own Rain Art

- You can make a picture that looks like rain. First, put on an old shirt so you do not get paint on you
- Get blue paper, white paint, a big brush, and water. Mix the white paint with water to make it runny.
- Hold your brush high over the paper. Let the paint drip down.
- Some drops of paint will run fast, some slow. Some drops will meet and mix up. Your rain painting looks just like the rain outside.





MARY SHELLEY'S

# Frankenstein

## WHAT YOU NEED TO KNOW Mary Shelley's *Frankenstein*

corpses. Working alone in his lab, Victor stitches together body parts from different corpses.

### A DETAILING FROM *FRANKENSTEIN*

#### ABOUT THE AUTHOR TEXT REFLECTION

### Are Modern Scientists Like Victor Frankenstein?

When people compare cloning and artificial intelligence to Victor Frankenstein's experiment, they're asking an important question. Are today's scientists making the same dangerous mistakes as Mary Shelley's fictional character?

The similarities are obvious. Victor Frankenstein created artificial life from dead tissue. Today, scientists clone animals by copying their genes. Tech companies build AI systems that can learn like humans. In both cases, humans are trying to create something that acts alive or intelligent.

But the differences are big. Frankenstein worked alone in secret, driven by his obsession. He never considered the results of his actions or what his creature might need.



Computers might be able to mimic human behavior. But they do not have feelings like Frankenstein's creation.

In contrast, modern scientists follow strict safety rules. They work in teams and publish their research. They think about the rights and wrongs of their work.

Furthermore, real cloning isn't about bringing dead things back to life. Scientists use cloning to help endangered species survive, develop medical treatments, and understand diseases. Cloned animals are born naturally and live normal lives. There's no stitching together of body parts!

Artificial intelligence is also different from Frankenstein's creation. AI systems are computer programs, not physical creatures. Frankenstein's creature experienced emotions, while today's computers only mimic human emotions.

However, the comparison isn't completely unfair. Like Victor Frankenstein, some modern scientists worry about losing control of their creations. AI researchers debate whether super-intelligent machines could become dangerous. These concerns echo Shelley's warning about the dangers of unchecked power.

The real lesson from Frankenstein is not that we should stop scientific progress. It's that we need to be responsible in how we use our power to create. Victor's biggest mistakes were in failing to consider the consequences of his creation while obsessively pursuing it and, then, abandoning what he had created. Modern scientists understand that with great power comes great responsibility. That's what separates real science from horror stories.





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

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- Revolutionizing Vocabulary Learning: AI's Contributions to Word Selection in Education <https://textproject.org/vocabulary-learning-and-ai/>
- The Science of Word Zones: How Big Data is Building Better Readers <https://textproject.org/word-zones-science/>
- Using Story Structure for Comprehension and Enhancing Vocabulary <https://textproject.org/story-structure-and-vocabulary/>
- Terminology, Texts and Teachers in an AI World: Possibilities and Problems <https://textproject.org/terminology-texts-teachers-ai/>

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



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