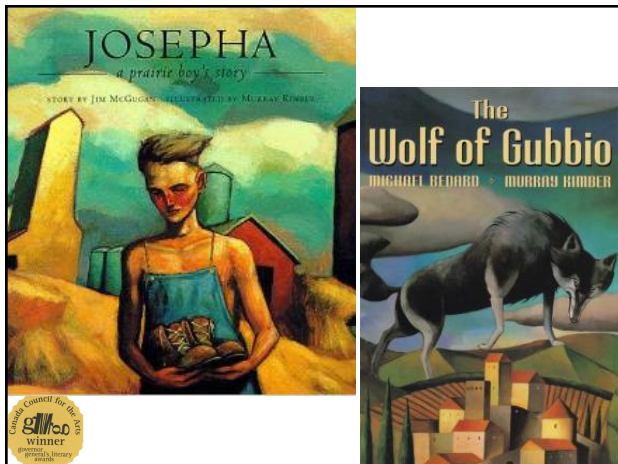
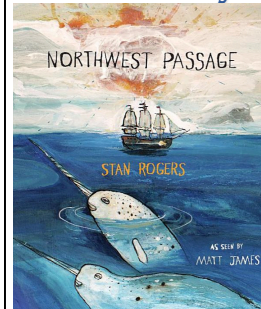


Vocabulary Learning and Instruction Within the Literate Classroom

Elfrieda H. Hiebert
TextProject &
University of California, Santa Cruz

Why We're Here



Complex Text & Vocabulary

The Birchbark House

Startled, **Omakayas** slipped and spun her arms in wheels. She **teetered**, but somehow kept her balance. Two big, skipping hops, another leap, and she was on dry land. She stepped over **spongy** leaves and moss, into the woods where the **sparrows** sang nesting songs in delicate **relays**.

"Where are you?" **Nokomis** yelled again. "I found the tree!"

Volcanoes

The mountain seemed much the same as it had been for the past month. Suddenly, at 8:32 a.m., Mount St. Helens **erupted** with **incredible** force. The energy released in the **eruption** was equal to ten million tons of **dynamite**.

The **eruption** of Mount St. Helens was the most **destructive** in the history of the United States.

Word Fact #1:
Knowledge is
"stored" in
texts,



and texts
typically have
more rare
words than
conversations/
oral language.

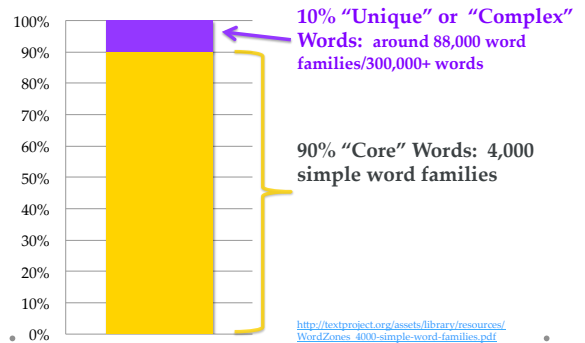


Word Fact#2:
English has a
vast repository
of words,
making it
impossible to
teach all
words.



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**Word Fact 3: A small group of words
does the heavy lifting in text.**



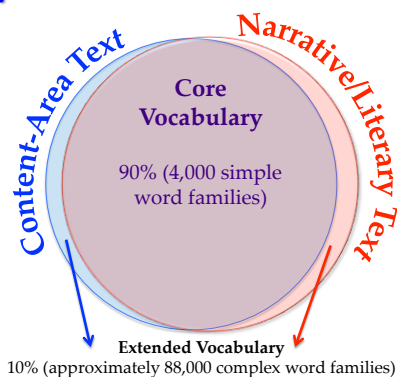
Core Vocabulary in Common Core Exemplars

Grade	Narrative	Informational
2-3	.93	.92
4-5	.92	.91
6-8	.93	.87
9-10	.89	.91
11-CCR	.89	.87

Word Fact 4: Words are part of families.

- relate
- related
- relates
- relating
- relation
- relations
- relatedness
- interrelated
- interrelation
- correlate
- correlation
- relationship
- interrelationship
- age-related

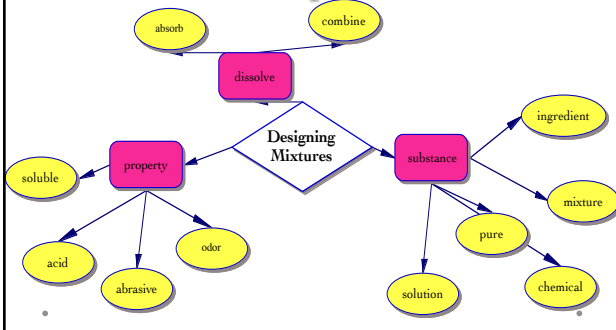
Word Fact 5:
Words are
parts of
networks.



**The networks
in narrative
texts are
synonyms
related to
story
elements
(e.g., traits,
actions, and
emotions of
characters).**

Story Word	Beyond Story
amazed	enchanted enthralled
fascinated	spellbound captivated
marveled	transfixed
baffled	confused mystified
bewildered	perplexed confounded
stumped	

Word Fact #6: The networks in informational texts are topical with interrelated concept clusters.



Word Fact #7:
Concrete
words are
learned and
retained
more readily
than abstract
words.

Mineral
(min-er-al)



The Foundation: Core Vocabulary

Primary—Narrative

Owl's house had an upstairs and a downstairs. There were twenty steps on the . Some of the time Owl was upstairs in his bedroom. At other times Owl was downstairs in his living room.

When Owl was downstairs he said, I wonder how my upstairs is? When Owl was upstairs he said, I wonder how my downstairs is getting along?

Primary—Informational

When he was very young, George kept a garden where he spent hours each day caring for his plants. If they weren't growing well, he found out why. Soon they were healthy and . In winter he covered his plants to protect them. In spring he planted new seeds.

Middle Grades—Narrative

The Fish- began by producing from under his arm a great letter, nearly as large as himself, and this he handed over to the other, saying, in a tone, 'For the An from the Queen to play .' The Frog- repeated, in the same tone, only changing the order of the words a little, 'From the Queen. An for the to play .'

Middle Grades—Informational

Throughout history, people have told stories about volcanoes. The early Romans believed in _____, their god of fire. They thought that _____ worked at a hot _____, striking _____ as he made swords and _____ for the other gods. It is from the Roman god _____ that we get the word volcano.

Middle School—Narrative

Meanwhile, _____ was urging on the on the front-fighters of his war-host to cross the _____ but the _____ horses checked on the _____ of it, _____ in fear, for it was deep and broad and set with sharpened _____. And between ditch and wall, where the back-driven Greeks were massing, there would be no space to _____ and fight.

Middle School—Informational

That much-_____ known as the American _____ lane would be an even greater exercise in _____ were it not for several _____ advances. The Universal Product Code and the _____, introduced in 1974, tally a shopper's groceries far more quickly and accurately than the old method of _____ each purchase manually into a cash register.

High School—Narrative

One morning, when _____ woke from _____ troubled dreams, he found himself _____ in his bed into a horrible _____. He lay on his _____-like back, and if he lifted his head a little he could see his brown belly, slightly _____ and divided by _____ into stiff sections.

High School—Informational

If a cod fisherman of _____ day could have returned to work in the year 1900, he would have been _____ by the new inventions on shore, but once he went to sea his job would have seemed familiar. When John _____ voyage opened up North American waters to Europeans, the nature of cod fishing changed _____.

Most words are in the core vocabulary because they are versatile. They are versatile in:

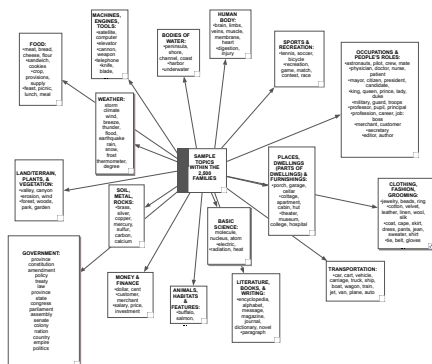
- Meaning
- Part of speech
- Use in idioms (literary)
- Use in complex phrases (content areas)

4.2	Meanings	Compound words	Complex phrase	Collocations	U	D
active	adjective ◦ always doing things ◦ involved in an organization/ activity by doing things for it ◦ working in the expected way noun ◦ the active (voice)		• active volcano • active verb	• active member of the Republican Party • active in the Democratic party • active seniors	56	0.90
atmosphere	noun ◦ feeling that an event/place gives you ◦ physics: mixture of gases that surrounds Earth or another planet ◦ the air in a room		• atmospheric pressure	• a (smoky, hostile) atmosphere	50	0.64
battle	noun ◦ a fight between two armies or groups ◦ situation where people compete/argue with each other ◦ an attempt to stop something verb ◦ to try hard to achieve something	• battlefield • battleground	• legal battle • chain of events • chain of command • chain reaction • chain letter • chain store	• in battle • the battle for (control of the Senate) • losing battle • battle against (cancer)	53	0.74
chain	noun ◦ series of metal rings ◦ group of stores, hotels owned by same company ◦ series of related events ◦ series of similar things in a line verb ◦ use a chain to fasten one thing to another	• chainsaw • chain-smoke	• bicycle chain • chain of events • mountain chain • chain of command • chain reaction • chain letter • chain store	• a chain of (islands, mountain) • chained to (a fence)	47	0.86

CORE ACADEMIC VOCABULARY (522 words—21%)

abandoned	act	aim	associated
above	actual	alternative	assume
absence	adapted	analysis	attached
absolute	address	ancestors	attempt
abundant	adequate	apparent	attend
academic	admit	apply	attitude
accept	adopted	approach	author
access	adult	appropriate	available
according	advance	approximately	axis
account	affect	argue	
accurate	agriculture	article	
achieve	aid	aspect	
acquire		assembly	
		assigned	
		assist	

49% are concrete words, most of which fit into categories



a
able
about
add
after
again
against
age
ago
all
almost
along
also
always
Among

amount
an
ancient
and
answer
any
are
as
ask
at
away

THE GLUE WORDS:

Approximately 310 words:

- * not on Core Academic List
- * abstract
- * occur 100+ times per million
- * 55% have four letters or less

- The vast majority of students can recognize most of the words in a grade-level text....eventually.



DIBELS Data For 4th Graders

Percentile	Rate	Accuracy	Comprehension
10	80	95	21
30	109	97	32
50	128	98	41
70	147	99	50
90	176	100	67
99	212	100	94

Proficient reading results from substantial amounts of reading.

- 1,200 hours of school time per year: In some classrooms, 4th graders read about 2% of this time



After one day of school (one penny = 500 words of reading)



After one week of school

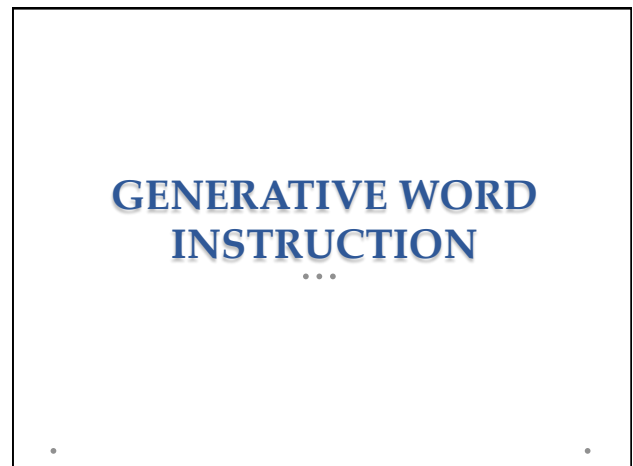
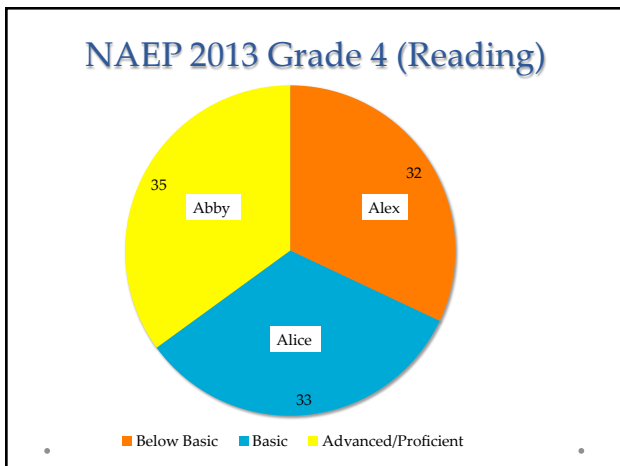
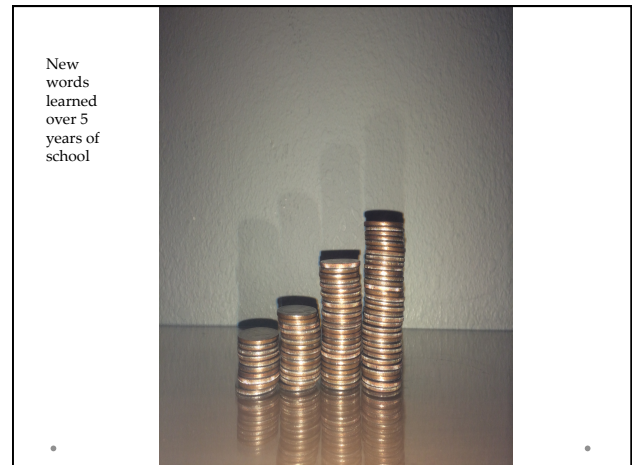
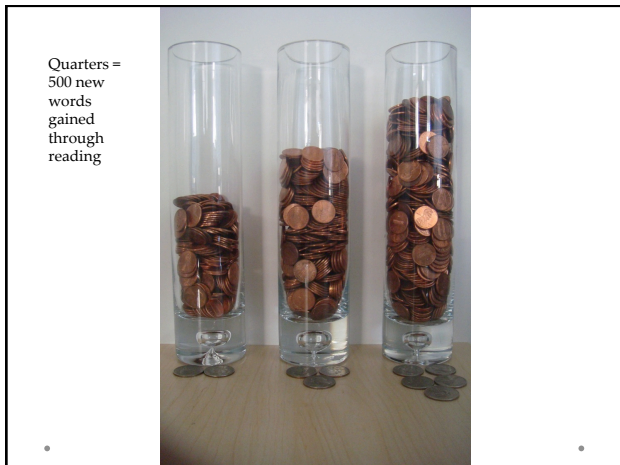


After one month of school



After one year of school




~~| "Watch the Goat" Vocabulary Words | |
|-----------------------------------|-----------------------------------|
| Blanketed | Thickly covered |
| Blizzard | Heavy snowstorm |
| Cuddled | Hold someone closely in your arms |
| Dense | Crowded or thick |
| Experienced | Lived through something |
| Flakes | Thin, small pieces of something |
| Mighty | Having great strength or force |
| Mild | Not too harsh |
| Accustomed | Used to something |
| Bleating | Crying by a goat or a sheep |
| Consisted | Made up of |
| Frequently | often |
| Hesitation | To pause before doing something |
| Regained | Got back; recovered |
| Resist | Refused to accept; go against |
| Satisfaction | Feeling of being content |
| Confirm | Support or show to be correct |
| Involve | To include |
| Influence | Sway or affect in some other way |
| Investigate | To examine thoroughly |~~

- ### Generative Word Strategy #1:
- Teach students to anticipate that complex texts will have many new words *and* that their generative word knowledge will assist them in figuring out new words.

Making Challenge Explicit

When 10-year old **Amelia Mary Earhart** saw her first plane at a state fair, she was not impressed. "It was a thing of **rusty** wire and wood and looked not at all interesting," she said. It wasn't until **Earhart** attended a **stunt** flying **exhibition**, almost a decade later, that she became seriously interested in **aviation**.

Generative Word Strategy #2

- Expose students to many new topics and the vocabulary associated with those topics, including "stories" about how words work and their histories.

Bird Nests



Most birds build nests, but all nests are not alike. The most common bird nest is the kind made by robins. Robins build nests that look like cups. They make a frame of twigs and sticks and cover it with mud. When this is done, robins line their nest with fine moss, feathers, and hair they find on the ground.

Barn swallows build nests of mud. They make them in barns, close to the roof where it is safe. Sometimes several swallows build nests near one another.

Some birds build their nests in unusual ways. All birds use their beaks to help make their nests, but Tailorbirds use their beak as a needle to sew leaves together. Tailorbirds use threads they gather from the cotton in cotton plants.

Some birds don't build nests at all. Some lay their eggs right on the ground or on a rocky cliff. Auks are birds that lay their eggs on rocky cliffs near the sea.

Auks' eggs are pointed at one end. This shape lets the eggs roll in a circle if another animal tries to move them or if the wind blows hard. Because the eggs can roll in a circle, they do not roll off the cliff.

King penguins also do not build nests. Instead, they tuck their eggs into the folds of skin on their lower belly. The eggs rest on their feet and stay warm in the cold arctic winds.

Some bird species also lay their eggs in the nests of other birds. Cuckoos get other birds to keep their eggs safe and to feed their babies.

Most birds build a new nest each year. Some use the same nest for several years but clean the nest a little each year. Eagles build huge platform nests that they use for several years. However different they are, though, birds build nests that are just right for their families.



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FYI
for
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Putting Two Words Together



they are great with spaghetti.

Eyeballs help in playing sports. But there isn't a sport called eyeball where teams throw and catch eyeballs. You wouldn't want to be in a game that uses fireballs. If you would ever see a fireball, you should get as far away as fast as you can. Then call 911 right away. You should also watch out if a cannonball is going to be fired. It is round but you don't want to play with a cannonball. You especially do not want to catch a cannonball!

There are some words, though, that have ball in them but it has nothing to do with round. Ballpoint pens make

A lot of sports that people play use balls. In basketball, players try to get a ball through a hoop. In baseball, players use a bat to hit a ball. In football, players throw a ball to get it close to the goal.

There are other words with "ball" that describe things that are round. But they are not balls with which you play a game. Meatballs are not used in any sport. But

writing a lot easier. It's easy to see how the "point" got into ballpoint pen. But why the ball? That part is in the name because of the tip of a pen is round. There are also rooms that are called ballrooms. People hold balls in ballrooms but they aren't the round kind.

Other words with ball have nothing to do with round. In these words, the "ball" part of the word is not even said the same as ball in baseball or meatball. Ballerina is not ball with "rina." Ballerinas are dancers and the word has nothing to do with ball. A ballot is used by people to vote but it is not round. You don't even say "ball" when you say the word ballot.

Whenever you see ball as part of a word, look carefully. Usually, the word has something to do with games and sports. But remember eyeballs, fireballs, and cannonballs. These balls may be round but they aren't used in sports! Ballerina and ballot show that some words with "ball" have nothing to do with being round.



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A Birthday Wish: Rachel Beckwith



charitywater.org, a charity that builds wells for towns in Africa. The wells provide people with clean water. Without wells, people often have to walk many miles to find water, then carry it home in buckets. Often, the water is not clean.

Instead of presents for her ninth birthday, Rachel asked her family and friends to donate \$9 for clean water in Africa to charitywater.org. If she could raise \$300, 15 people could get clean drinking water.

By the time her birthday came, Rachel had raised \$220. That meant that 11 people could get clean water.

In the summer of 2011, Rachel Beckwith had just finished third grade. She was looking forward to riding her bike and playing games like jump rope with her friends. Rachel also liked dancing.

Then she heard someone say that there were children in Africa who did not have clean water to drink. The person was from an organization called

She told her mom that she would try harder the next year to raise more money for the charity.

A month later, Rachel was critically injured in a car accident. On July 23, 2011, she was taken off life support. She died soon after.

When the news about Rachel's story and her birthday wish spread, people all around the world began to donate money in her name. Some gave \$9, some \$19, some more. A month later, 30,000 people had given more than \$1.2 million. Because of Rachel Beckwith, 60,000 people in more than 100 villages now have clean water to drink.

In her honor, one village put up a sign that reads,

"Rachel's great dream, kindness, and vision of a better world will live with and among us forever." Clearly, one person, even a child, can make a difference.

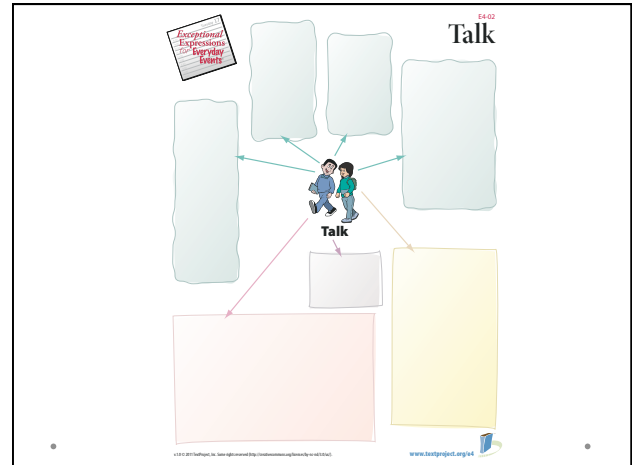
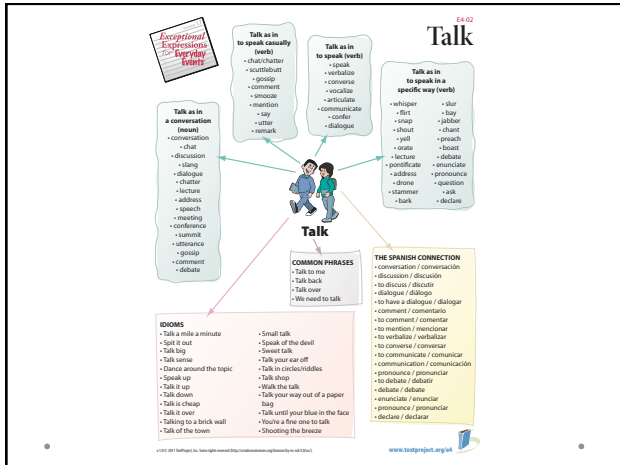


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Generative Word Strategy #3:

Teach students about the multiple uses of many words.

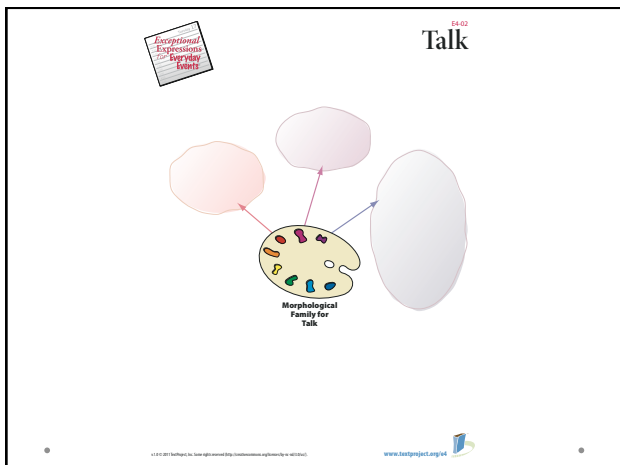
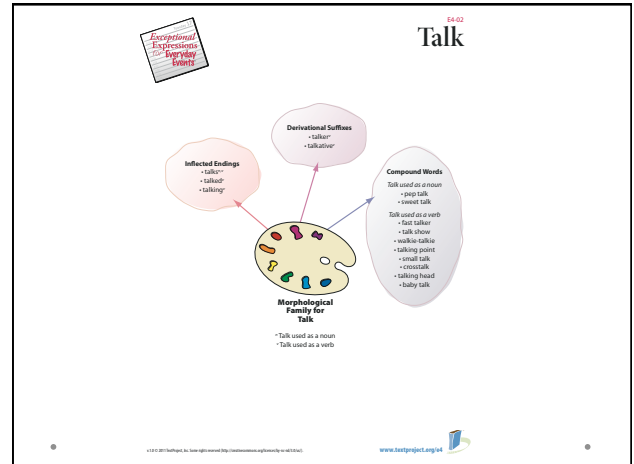
- Multiple meanings
- Multiple parts of speech
- Multiple uses in phrases and idioms



Generative Word Strategy #4:

Teach students words in families, not just single words.

- ♦ Attend to compounding as well as inflected endings (i.e., ed, ing, s, 's', er, est) and derivatives (i.e., prefixes and suffixes)



Exceptional Expressions Everyday Events

Listen

Exceptional Expressions for Everyday Events

An everyday event in classrooms revolves around listening—listening to peers, teachers, CDs, DVDs, announcements on the school sound system, and so on. Listening is an integral part of learning.

Listen is typically used as a verb. For example, teachers may ask students to listen carefully to a guest speaker. In this instance, **listen** is used as “to hear attentively.” Another use of the word **listen** can be exemplified by a student complaining to a friend or teacher that someone isn’t listening to what is being said. In this instance, **listen** is used to describe the act of paying attention. This second use of **listen** is as a command as when someone says, “Listen! It’s important to hear the announcement.”

Although **listen** is commonly used as a verb, **listen** can also be used as a noun. A person can ask that someone give an idea or a song a listen. In this case, **listen** is used to describe trying something out by listening to it.

Follow-Ups

- How is listening different from hearing?
- How might vigorous listening differ from observant listening? Listening circumspectly and listening respectfully?
- What are some things we can do to help others listen to our ideas?

The Spanish Connection

Listen comes from an Old English word that was spoken in the northern region of the British Isles—*lyssan*. The Spanish word that means to listen is *escuchar*. *Lyssan* and *escuchar* are not cognates. None of the cognates for **listen** have Spanish cognates.

Word Changes

- The idiom “lend me your ears” comes from Shakespeare’s *JULIUS CAESAR*. The meaning of the idiom is to ask people to listen to what is about to be said. The idea is that the speaker wants the listener’s undivided attention and is asking for the listener’s metaphorical ears.

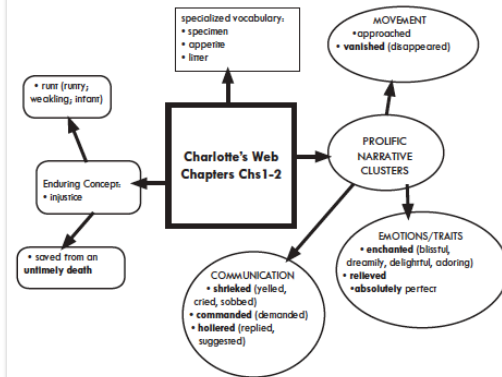
32 lessons available for free download

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Generative Word Strategy #5

- Teach students about the rich networks of similar-meaning words from which authors of narratives choose words for traits/attributes, emotions, motion, and communication.

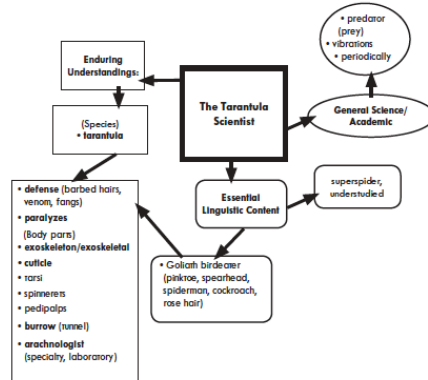
Word Map for Chapters 1-2 of *Charlotte's Web*



Generative Word Strategy #6

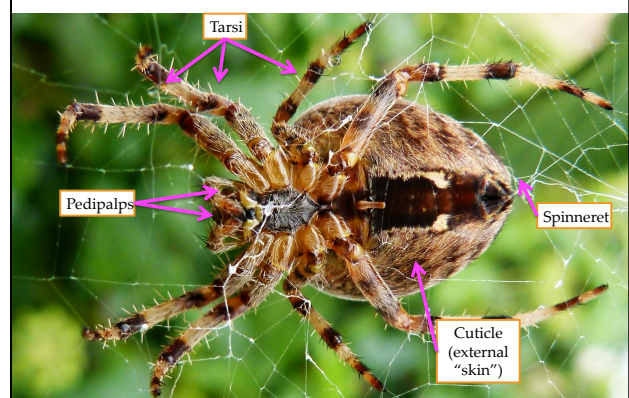
- With the vocabulary of informational texts, teach students about relationships among concepts of critical topics

Word Map for Chapters 1-2 of *The Tarantula Scientist*



Generative Word Strategy #7

- When appropriate, introduce new concepts with pictures and illustrations.



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Children, like adults, learn concrete words more readily than abstract words. A way to close the vocabulary gap for students (especially English Learners and students of poverty) is to support them in connecting written words and the concrete objects these words represent. TextProject Word Pictures provides a vault of carefully chosen pictures to assist educators in making such connections.

Here are the TextProject Word Pictures titles, organized by usage.

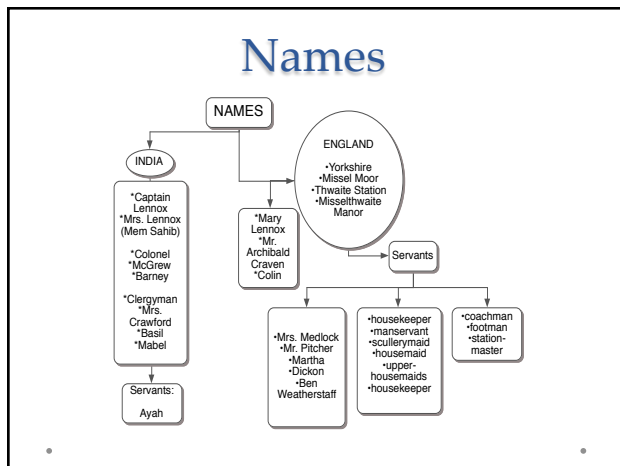
Core Vocabulary
The core vocabulary consists of the 4,100 simple word families which account for 90% of the words in written English. Function words (e.g., the, of) and general academic words (e.g., compare, related) are prominent in the core vocabulary but there are also many concept words which can be pictured.

Literature Words
Many of important concepts in literature can be easily explained using pictures. This set of TextProject Word Pictures provide pictures of concepts that are critical to particular literary texts.

QuickReads
Originally designed to supplement QuickReads print edition, TextProject Word Pictures helps English Language Learners connect key words to concepts they may already know.

Content Area
Vocabulary in content area can represent key ideas. For example, vocabulary from a study of plant may include photosynthesis, roots, and leaves. Without the understanding of these key vocabulary, a student's understanding of a topic may be deficient. This set of TextProject Word Pictures provides pictures of tangible concepts that are critical to particular content areas.

Finally: Vocabulary in the context of culture



Dialect & Words from Other Languages

- "Well enow. Th' carriage is waitin' outside for thee." (*The Secret Garden*)
- "Booni!" Nokomis scolded. "Leave it alone!" (*The Birchbark House*—Ojibwa language)
- In the evening, Aaron, Miriam, and Anna played dreidel. Zlateh sat near the stove watching the children and the flickering of the Hanukkah candles. (*Zlateh the Goat*)

The Stories of Words: Food

Learning About Words

Every word in a language has a story. Some of the stories of a word's origin are very interesting. In English, there are many words that come from other languages. That is especially the case when it comes to words that are the names of foods. The U.S. has been a place where people from many different countries have come. In most of these countries, a language other than English was spoken. Most of these countries also had foods that were different than those that English settlers had brought with them to the U.S.

Some of the favorite foods in the U.S. have kept the names that they were called in other languages. Often, what's in the food may be a little different than when the food was originally made, such as pizza. For other foods, the names have changed over the years.

2. NOODLES



Thousands of years ago, people in different parts of the world figured out that a mixture of ground-up grains and water could be dried and stored. When food was needed, these dried materials could be boiled and safely eaten. In some countries, the flour is made from rice. In other countries, the flour is made from wheat. But the idea is the same. Flour is mixed with a liquid, usually dried, and later boiled in water.

The English word *noodle* came from the German word *Nudel*. But many of the noodles that we eat in the United States are called by the Italian word for noodles—*pasta*. Pasta comes in many different shapes, sizes, and lengths. Some kinds of pasta are smooth and others have ridges on them. Some have a filling, while others are hollow.

Italian Noodles

When you hear a word like spaghetti, you probably think of noodles. Spaghetti with meatballs has become a favorite of many Americans. The word in Italian, however, is also used to describe thin strings or cords. Most kinds of pasta got their Italian names because of what they look like.

Name for pasta	What the pasta looks like	Italian word and its meaning
farfalle	bow ties (or butterflies)	farfalla: butterfly
linguini	flat, narrow strips	linguini: little tongues
penne	Middle-size tubers	penne: feathers, quills
spaghetti	long, rod-like strands	spago: thin string or cord
vermicelli	Long, very thin strands	vermicelli: little worms

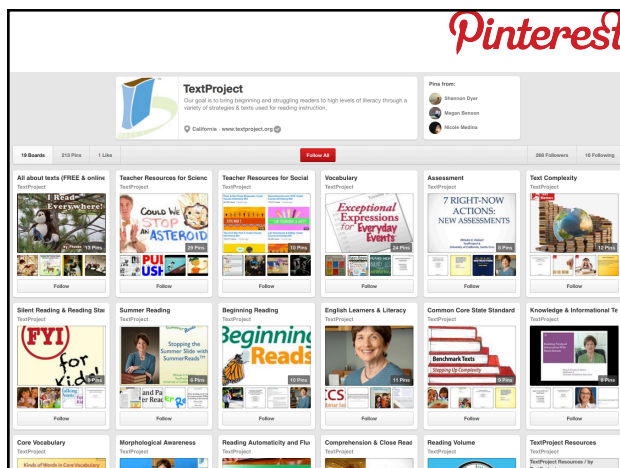


Chinese Noodles



Noodles have long been part of the diet in China. The oldest known noodles were found in 2005 in northwest China. Scientists believe that the dried noodles had been made 4,000 years ago.

Like Italian pasta, Asian noodles can be thick or thin. Unlike Italian pasta, which can be long or short, Asian noodles are often served long. In China, long noodles are a sign of a long life. The Chinese call noodles made from wheat main. When this kind of noodle is combined with other food, it has names like chow mein. When the noodle is made of rice, it is called fen or even Fan.

To learn more, read *Generative Vocabulary Instruction* by E.H. Hiebert & P. D. Pearson:

<http://textproject.org/library/research-digest/generative-vocabulary-instruction/>

...

Questions & Queries:
info@textproject.org

SUMMARY	
Word Facts	Generative Word Strategies
1. More rare words in texts than talk.	1. Teach students to expect new words in texts.
2. Many more English words than school time.	2. Expose students to many topics & use of context
3. Small group of words does heavy lifting in text.	3. Teach multiple uses of words.
4. Words are part of families.	4. Teach words in families.
5. Networks in narratives are sets of synonyms.	5. Teach networks of similar-meaning words in stories.
6. Networks in informational texts are topical.	6. Teach networks of concepts in topics.
7. Concrete words are learned faster than abstract ones.	7. When possible, teach new concepts with pictures.