## WHY READING VOLUME MATTERS

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

# **Knowledge** 2016 ${\bf Elfrieda~H.~Hiebert--www.text project.org}$

## Knowledge is "stored" in texts and...



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# texts typically have more rare words than conversations.





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



## After one week of school



## After one month of school



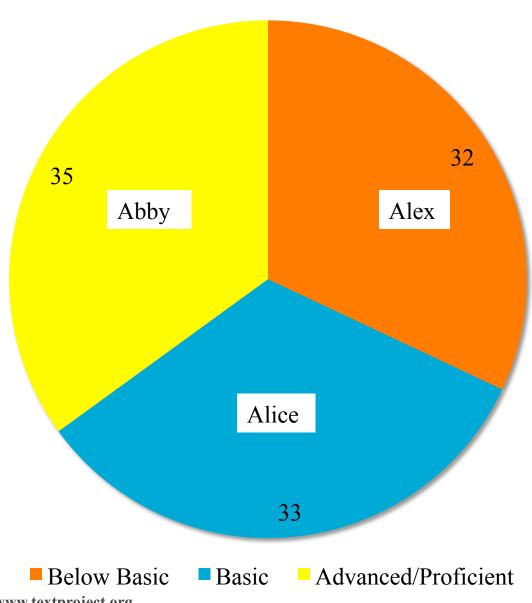
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## After one year of school



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### NAEP 2015 Grade 4 (Reading)



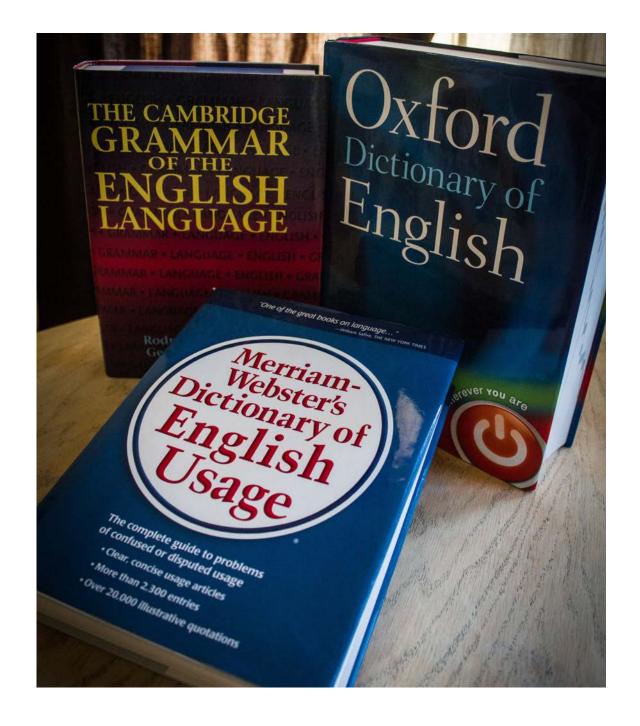
Quarters
= 500
new
words
gained
through
reading



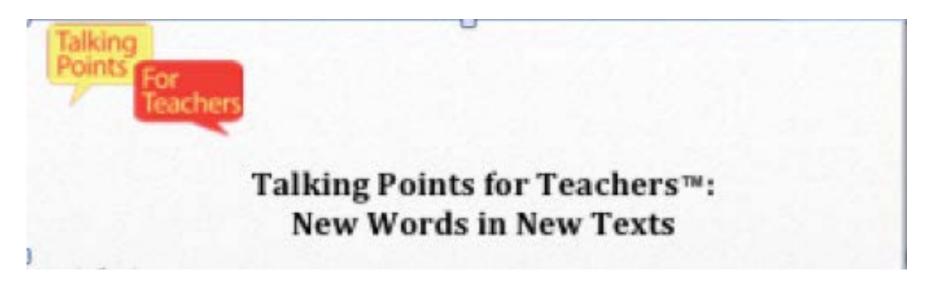
### After 5 years



**Idea 1: The** number of words in **English far** outnumbers **opportunities** to teach each individually.







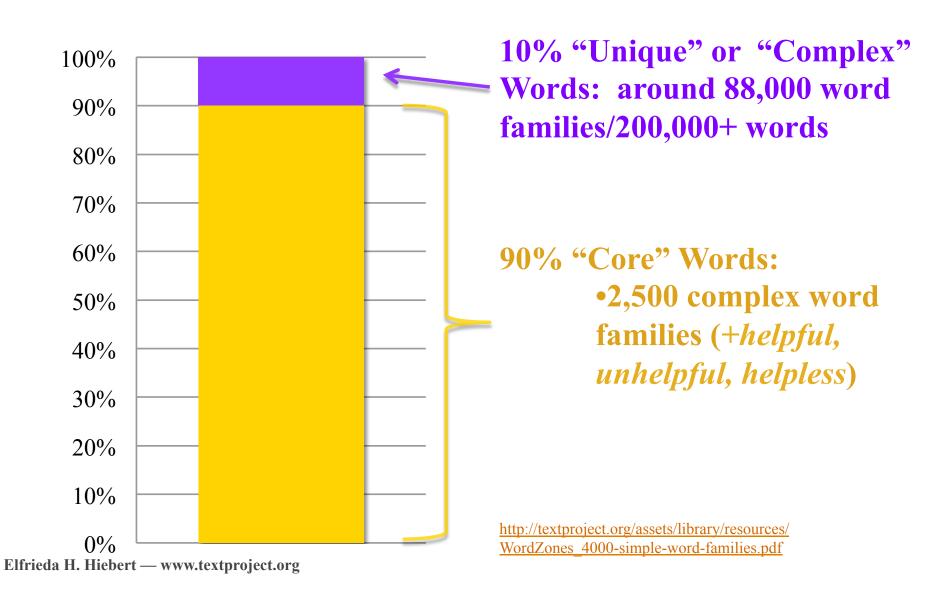
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 ACTION #1: Conduct conversations where students learn to expect a critical group of unknown words in new texts

Idea	Action	Open-Access Resource
1. English has more words than can be taught.	1. Teach students to expect new words in texts.	1. Talking Points for Teachers: New Words in New Texts
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## Idea 2: A small group of words does the heavy lifting in English.

#### The distribution of words in written English



## **Examples of the Words in the Core Vocabulary**

1st 100 words	the, by, no, through, must	
101-300	long, great, put, last, family	
301-1,000	power, north, story, strong, answer	
1,001-1,500	valley, imagine, motion, nearby, importance	
1,501-2,000	character, responsible, design, presence, trail	
2001-2,500	mixture, discovery, civilization, attitude, assume	

Nearly every day last summer my nephew Keith and I went crabbing in a creek on the New Jersey coast. We used a wire trap baited with scraps of fish and meat. Each time a crab entered the trap to eat, we pulled the doors closed. We cooked and ate the crabs we caught.

Blue crabs are very strong. Their big claws can make a painful pinch. When cornered, the crabs boldly defend themselves. They wave their outstretched claws and are fast and ready to fight. Keith and I had to be very careful to avoid having our fingers pinched.

Spider was a hungry one, he always wanted to eat. Everybody in Ashanti knew about his appetite. He was greedy, too, and always wanted more than his share of things. So people steered clear of Spider.

But one day a stranger came to Spider's habitation out in the back country. His name was Turtle. Turtle was a long way from his home. He had been walking all day in the hot sun and he was tired and hungry. So Spider had to invite Turtle into his house and offer him something to eat. He hated to do it

• Increase the amount of text that students read and ensure that at least some of the texts give students opportunities to increase exposure to core (i.e., 2,500 complex word families) and rare vocabulary.

## Action 2: INCREASE VOLUME OF READING

#### **Putting Two Words Together**



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

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

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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 "erina." 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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#### **Putting Two Words Together**





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### A Birthday Wish: Rachel Beckwith



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

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.

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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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#### Young Heroes: Rachel Beckwith





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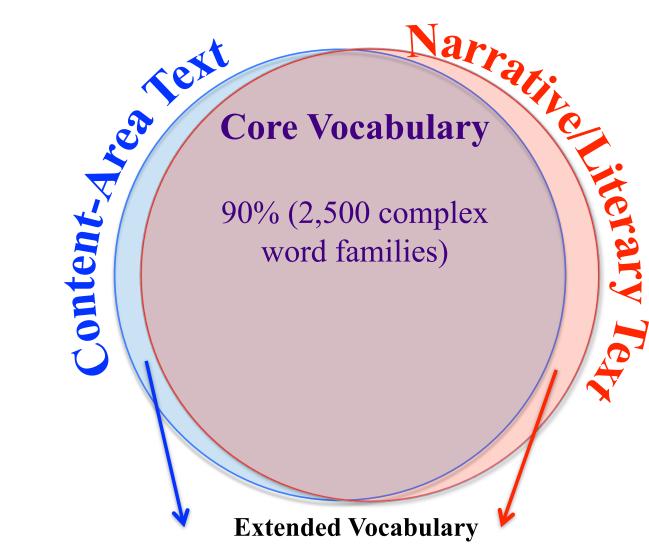


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## Readworks.org has approximately 2,500 free passages for Grades 1-early high school

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1. English has more words than can be taught.	1. Teach students to expect new words in texts.	1. Talking Points for Teachers: New Words in New Texts
2. A small group of words does the heavy lifting in English.	2. Increase volume of reading	2. •FYI for Kids •ReadWorks.org
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Idea 3: Rare words are part of networks: (a) narrative texts: synonym networks, (b) informational texts: topical networks.



10%/approximately 88,000 complex word families

The month of picking heartberries went by. Little Pinch jumped off a low branch and made a huge gash just over his eye. Blood came pouring down and he seemed both proud of himself and sorry for himself, and he selfishly hogged attention for his injury to the point where Omakayas could hardly bear it. Mama was constantly preoccupied with him. Of course, that left Neewo more and more to Omakayas's hands, and she didn't mind that.

Embryological studies show that each batch of four is the result of a single fertilized egg, which divides twice. Each of the four resulting cells develops into a miniature armadillo which is born in early spring some six months after the adults have mated. All members of a young brood are of the same sex. Young armadillos have their shell covering complete, but it remains soft until they become adults, thus allowing for growth.

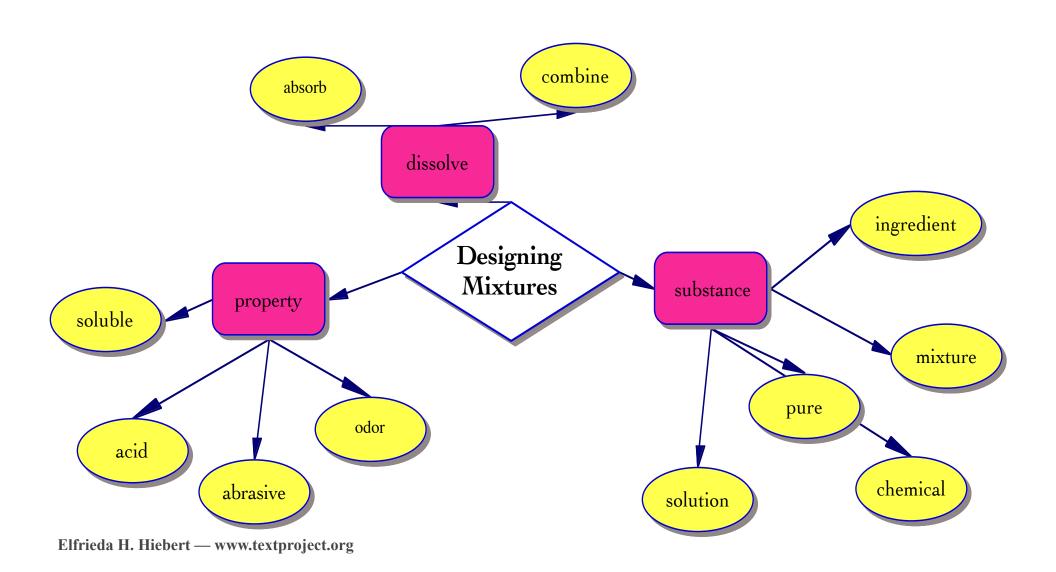
Even with eyes protected by the green spectacles, Dorothy and her friends were at first dazzled by the brilliancy of the wonderful City. The streets were lined with beautiful houses all built of green marble and studded everywhere with sparkling emeralds. They walked over a pavement of the same green marble, and where the blocks were joined together were rows of emeralds, set closely, and glittering in the brightness of the sun. The window panes were of green glass; even the sky above the City had a green tint, and the rays of the sun were green.

### (a) Networks in narratives are **synonyms** related to **story** elements.

Story Word	Other Possibilities
dazzled	hypnotized awed
brilliancy	effulgence luminosity
glittering	shimmering radiance

# (b) The rare words in informational texts belong to topical networks.

### **An Example of a Topical Network**



## Action 3a: TEACH STUDENTS PROLIFIC SYNONYM NETWORKS



## **Synonym Networks in Narrative Texts**

## Prolific Groups of Synonyms

Communication /Internal Processes (verbs)	Emotions (adjectives)	Movement (verbs)	Traits (adjectives)
think	glad	go	funny
argue	sad	send	smart
observe	mad	start	brave
guess	selfish	stop	selfish
say	fear	stay	shy



## Guess as in to give an unsure reply (verb):

- suppose
- reckon
- judge
- gauge
- approximate

## Guess as in to give an unsure reply (verb):

- · theorize
- estimate
- surmise
- speculate

## Guess as in a response that is based on opinion, not fact (noun):

- assumption
- · opinion
- conjecture
- speculation
- supposition
- surmise

??

Guess

## COMMON PHRASES

- Keep them guessing
- · Guess what
- Anyone's guess
- Take a guess
- Educated Guess

## SPANISH CONNECTIONS

- theorize / teorizar
- estimate / estimar
- speculate / especular
- · conjecture / conjetura

### IDIOMS

- · Take a stab in the dark
- Wild guess
- Take a gander

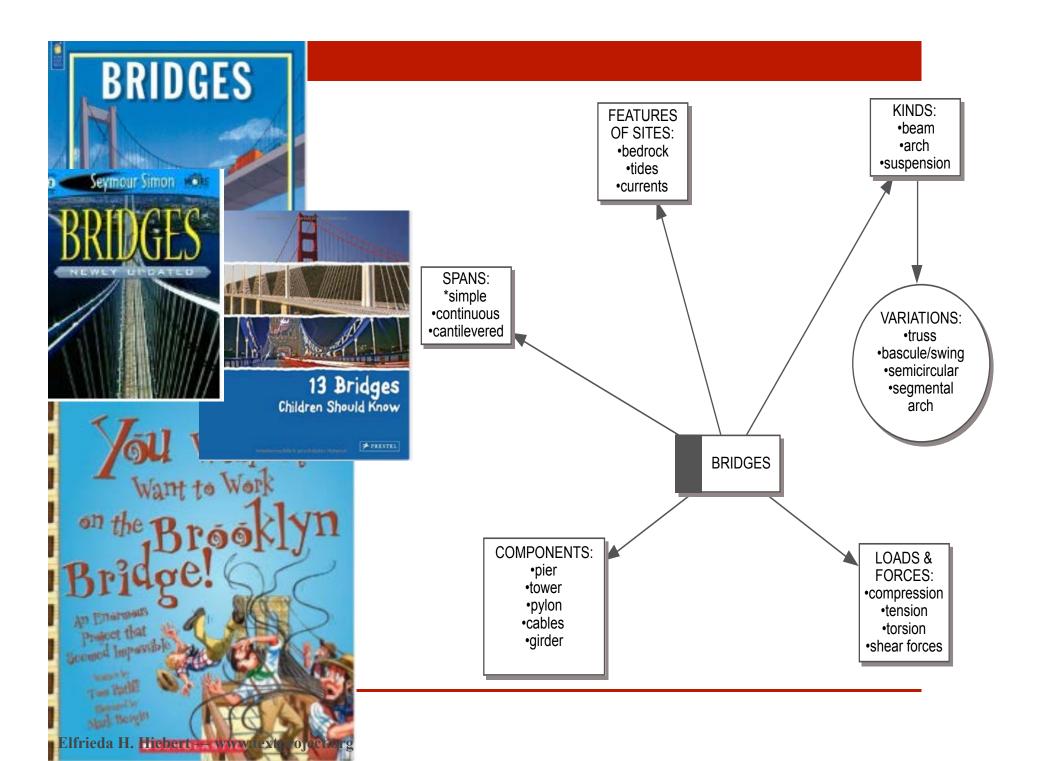
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- theorize
- estimate
- surmise
- speculate

## SPANISH CONNECTIONS

- theorize / teorizar
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## ACTION 3b. Organize rare words in informational texts into topical networks.



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**Idea 4: Teach** vocabulary in the service of developing bodies of knowledge.



# Correlation between Background Knowledge & Comprehension = .94

Reading for Understanding Network Study of Comprehension in Grades 7-12 Slide is from the presentation of David Francis (April 19, 2013). CCSS Assessments and Students with Disabilities and English Language Learners. Plenary session at Institute on Assessment in the Era of the Common Core State Standards, International Reading Association.

Blue crabs are very strong. Their big claws can make a painful pinch. When cornered, the crabs boldly defend themselves. They wave their outstretched claws and are fast and ready to fight. Keith and I had to be very careful to avoid having our fingers pinched.

Crabs are arthropods, a very large group of animals that have an external skeleton and jointed legs.

Spider was a hungry one, he always wanted to eat. Everybody in Ashanti knew about his appetite. He was greedy, too, and always wanted more than his share of things. So people steered clear of Spider.

But one day a stranger came to Spider's habitation out in the back country.

## Action 4: Develop bodies of knowledge in English/Language Arts instruction

## 1. Build Knowledge through Word Pictures



## Fashion and Design—

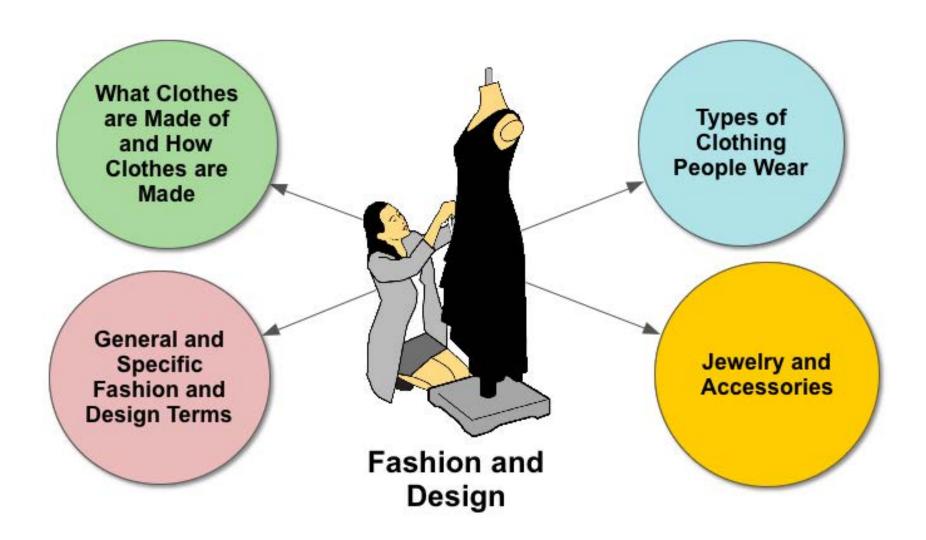
General and Specific Fashion and Design Terms

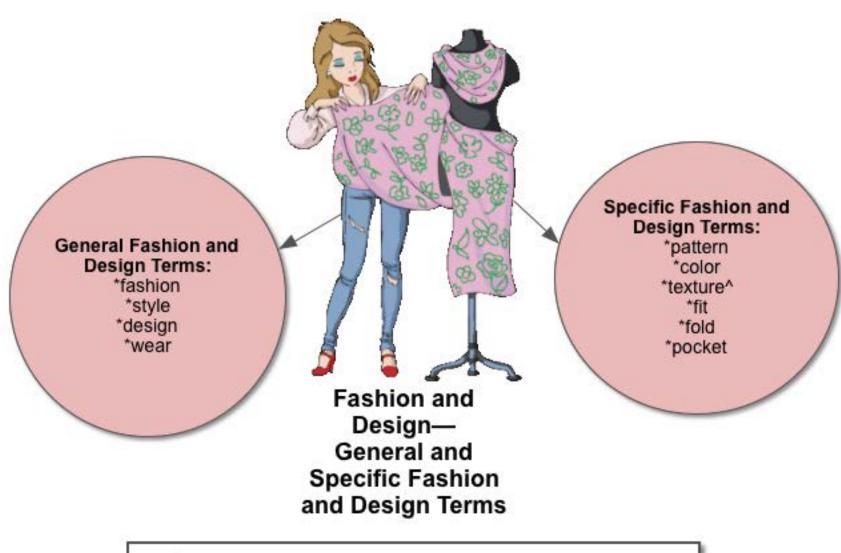




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^ non core vocabulary words added to supplement concept

## style (style)

A *style* is a way of expressing oneself. Different styles have clothing that looks a certain way.



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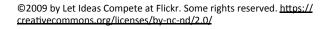
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## texture

(tex·ture)

*Texture* is the structure, feel, and appearance of something. The fabrics clothes are made of have different textures.







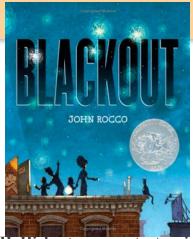
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## **An Intentional Read-Aloud Curriculum**

Communities are places where people learn to know one another

People discover that "old" ways of being together can be enjoyable and create a sense of community.

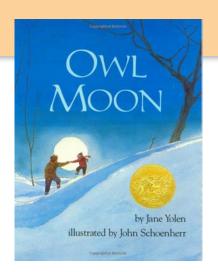
Blackout (Rocco, 2011)



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Older people in our communities can teach us interesting things

Owl Moon (Yolen, 1987)



New members of a community may look and speak differently, but are like us in many ways.

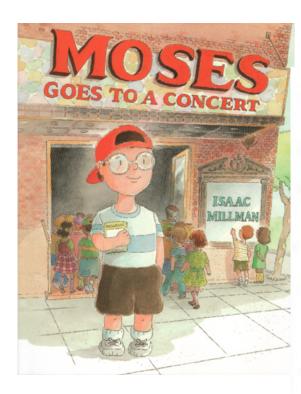
One Green Apple (Bunting, 2006); The Other Side Woodson, 2001)

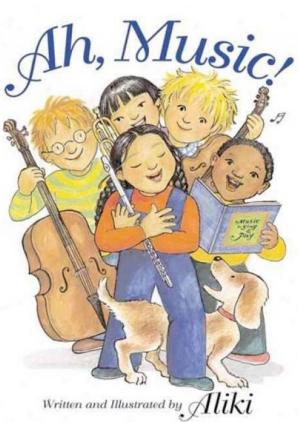


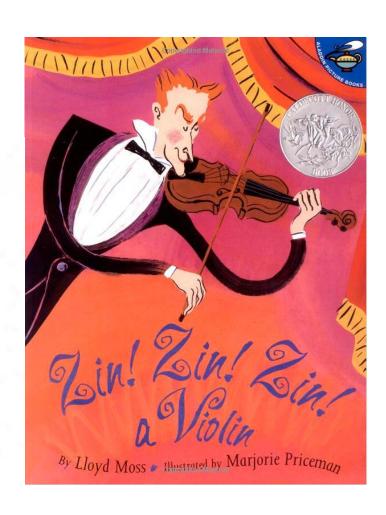


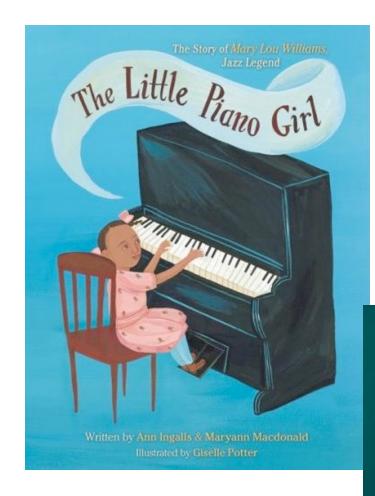
## +

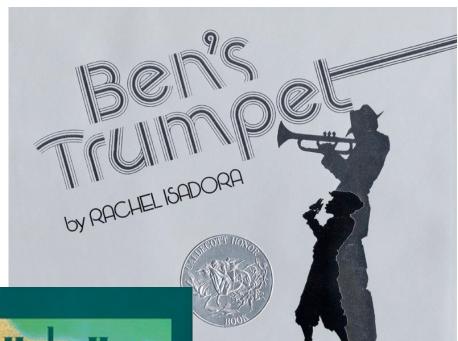
## **Read-Aloud Unit: Music**

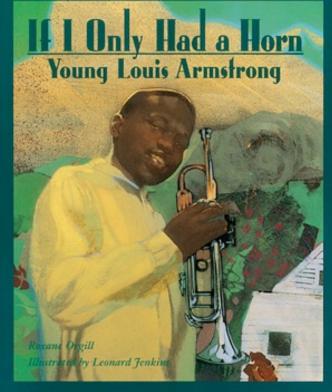














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4. Teach vocabulary in the service of developing bodies of knowledge.  Elfrieda H. Hiebert — www.textproject.org	4. Develop bodies of knowledge in ELA instruction.	4. •Intentional Read-Aloud Curriculum •ReadWorks Lessons •Word Pictures















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