

UNLOCKING COMPLEX TEXT AND GENERATIVE VOCABULARY

Elfrieda H. Hiebert

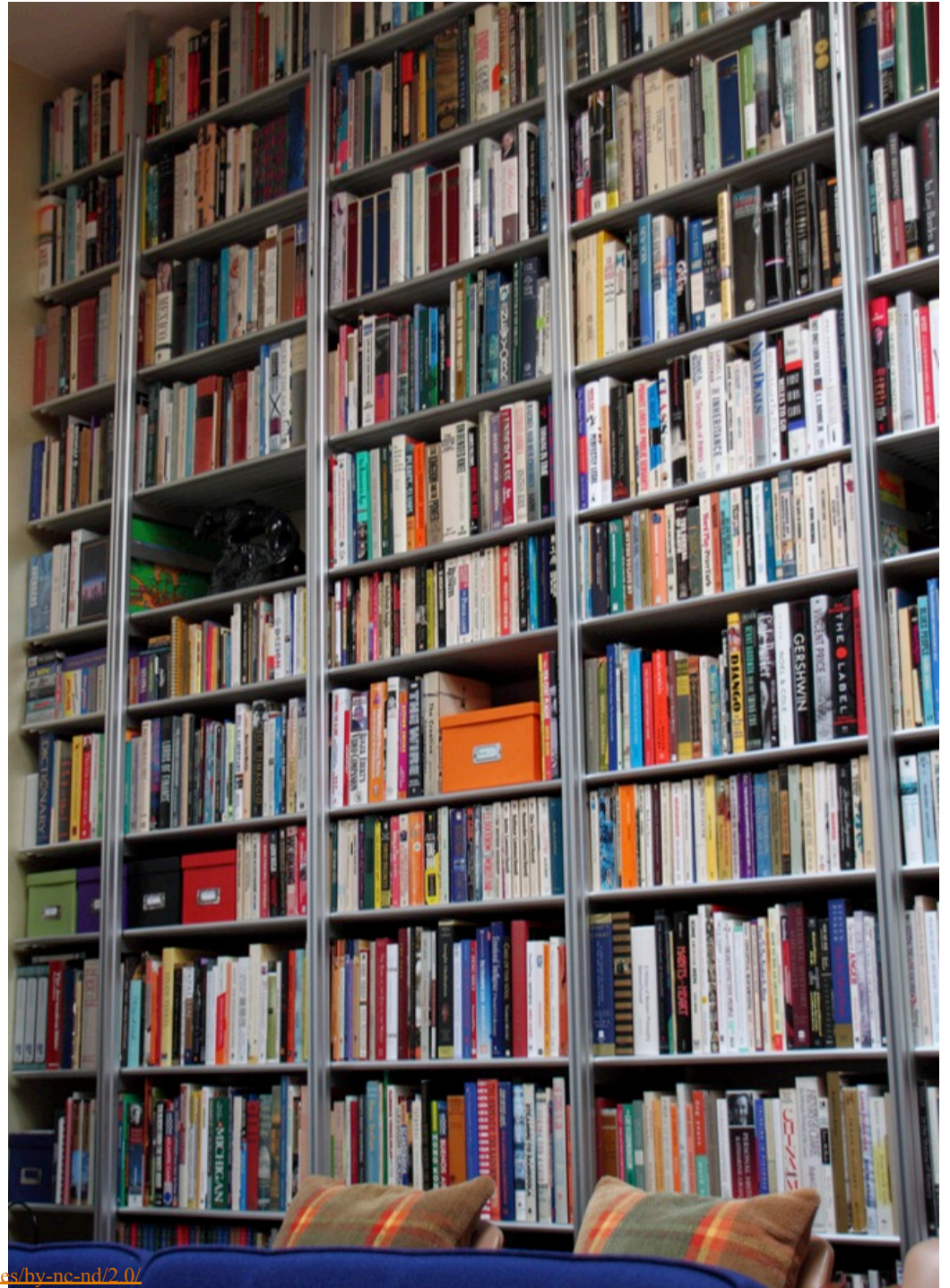
TextProject & University of California, Santa Cruz

Knowledge

1986 2007

2016

**Knowledge is
“stored” in
texts and...**



Elfrieda H. Hiebert
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**texts typically
have more rare
words than
conversations.**

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Alice

Abby

Alex

**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**

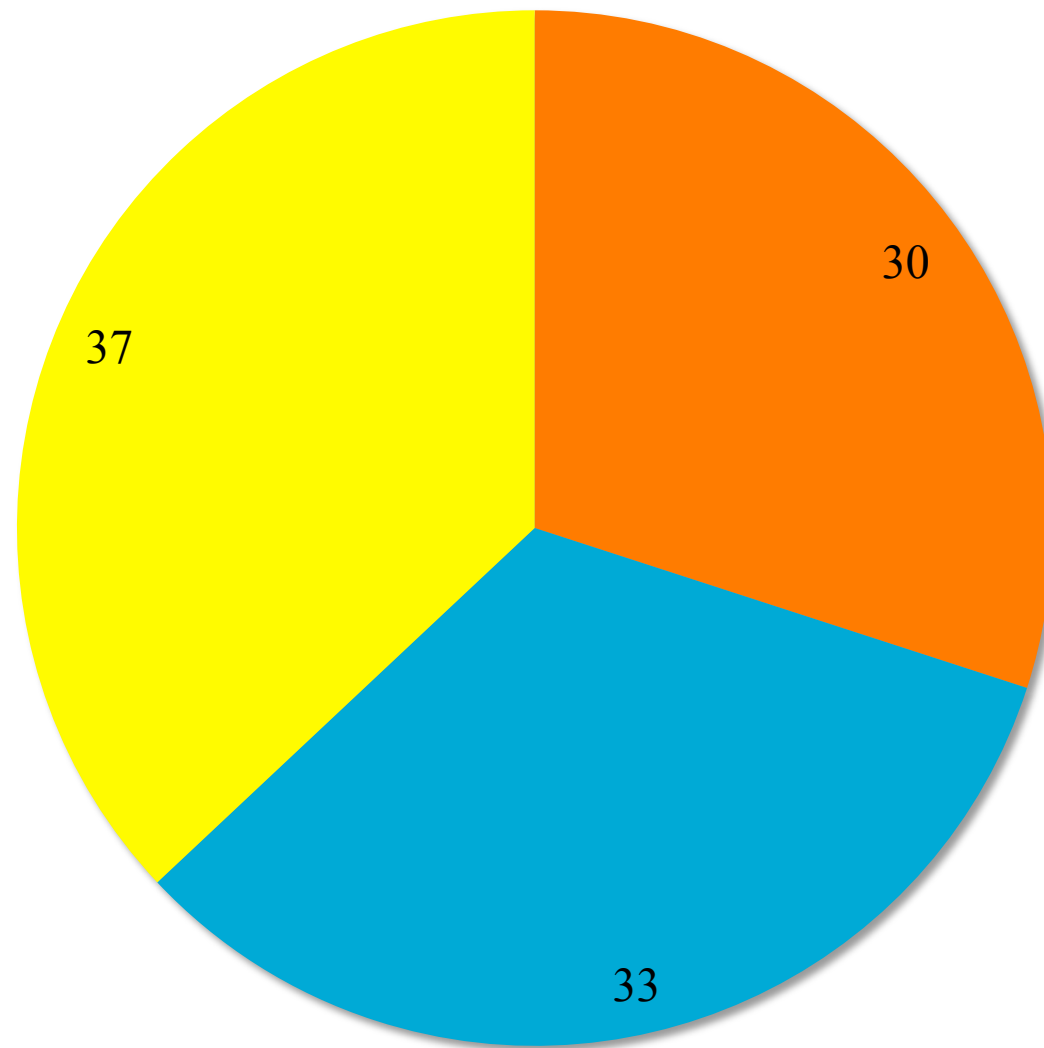


NAEP 2015 Grade 4 (Reading)



Below Basic Basic Advanced/Proficient

NAEP 2015 Grade 4 (Reading): Missouri



■ Below Basic ■ Basic ■ Advanced/Proficient

**Quarters
= 500
new
words
gained
through
reading**



After 5 years





Idea 1: The number of words in English far out-numbers opportunities to teach each individually.

ENGLISH HAS THREE DISTINCT MORPHOLOGICAL SYSTEMS.





ACTION 1: Have explicit conversations about rare vocabulary in ALL texts



Talking Points for Teachers™: New Words in New Texts

Why?

- Develop the understanding that every complex text has new, challenging vocabulary. Vocabulary instruction gives students the means for figuring out new words in text, not instruction in every single word that might appear in new texts.

When?

- Talks about the vocabulary of new texts need to occur across a school year (with extra doses prior to assessment periods).

textproject.org

How?

- Take a portion of the text (25 or 50 words is enough). Use a highlighter to mark the words in the 1,000-2,000 most-frequent words (list on textproject.org)
- Mark the words that are potentially challenging with a different colored highlighter. (List of 4,000 simple word families at: <http://textproject.org/classroom-materials/lists-and-forms/lists/word-zones-for-5-586-most-frequent-words/>)

--An example of a snippet of text for a board/projection is the following, which comes from a sample assessment for Grade 7
[http://www.parconline.org/samples/english-language-artsliteracy/grade-7-reading-informational-text-\(Amelia-Earhart-2\)](http://www.parconline.org/samples/english-language-artsliteracy/grade-7-reading-informational-text-(Amelia-Earhart-2))

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.

What?

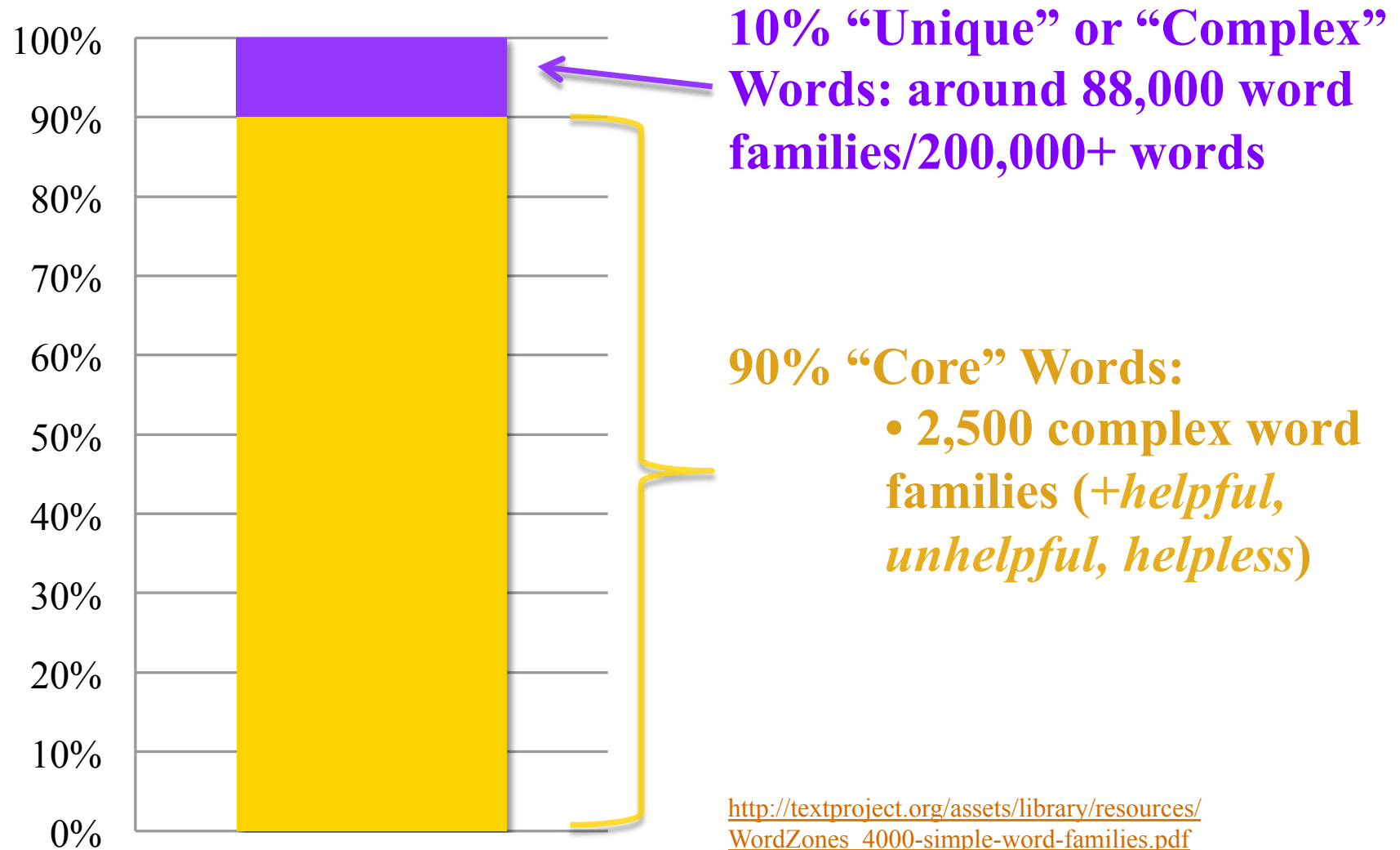
- Here are some of the talking points for a conversation between teachers and middle-school students about new vocabulary in complex texts:
 - *“One of your goals as middle schoolers is to understand that any new text likely has words that you haven’t seen before.”*
 - *“This is a text from one of the sample assessments for the new state test. This text might look like it is hard and it may even be on the first read. But I’ve studied the text and I know that all of you know most of the words. Even most of the words that you don’t know (point to rusty and stunt) can be figured out with the word skills you have.”*
 - *“Also remember that words that are capitalized inside sentences are usually names. The strategy with names is to do the best you can, knowing that names are often pronounced in unusual ways because they may come from different languages. In this case, the person’s last name is one that you can figure out with your knowledge of words (demonstrate with Ear hart).”*
 - *“That leaves two words that are multisyllabic in the text and that you might not be able to read (point to exhibition and aviation). I want you to read this paragraph and see if you can figure out these words.”*

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
2. A small group of words does the heavy lifting in English.	2. Increase volume of reading	2. •FYI for Kids •ReadWorks.org
3. Rare words in narrative texts belong to synonym networks.	3. Teach students prolific synonym networks	3. •Super Synonym Sets for Stories (S4) •Exceptional Expressions in Everyday Events (E4)
4. Rare words in informational texts belong to topical networks.	4. Teach words in informational texts in topical networks.	4. •Word maps
5. Knowledge matters in proficient reading	5. Develop bodies of knowledge in ELA instruction	5. •Word Pictures •ReadWorks Lessons



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

	words
1st 100	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.



Action 2: INCREASE VOLUME OF READING

Putting Two Words Together

volume 3
issue 2



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

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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A Birthday Wish: Rachel Beckwith

volume 5
issue 1



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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

volume 5
issue 1



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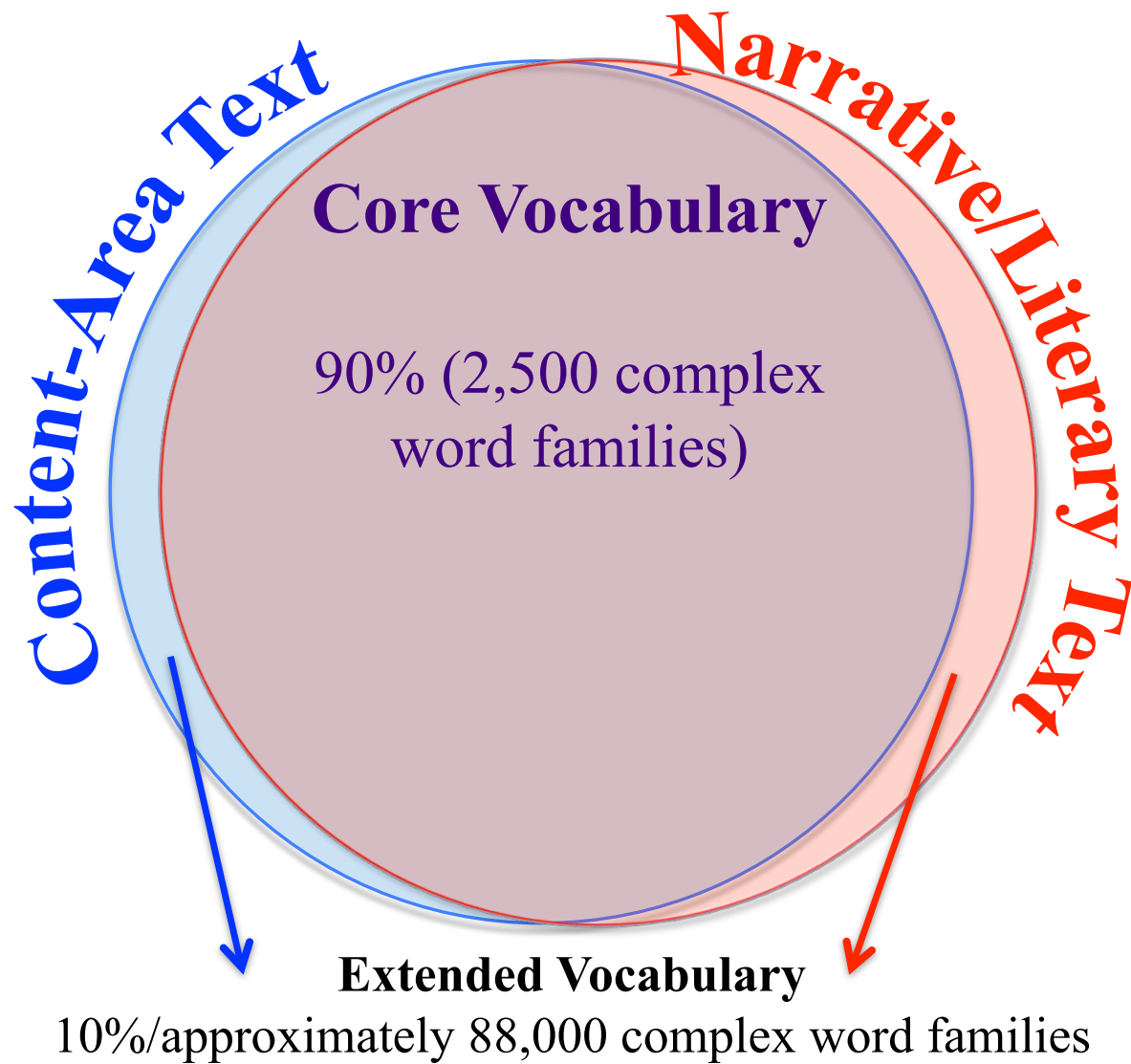
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**Readworks.org has approximately
2,500 free passages for Grades 1-
early high school**

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Idea 3: Rare words are part of networks



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.

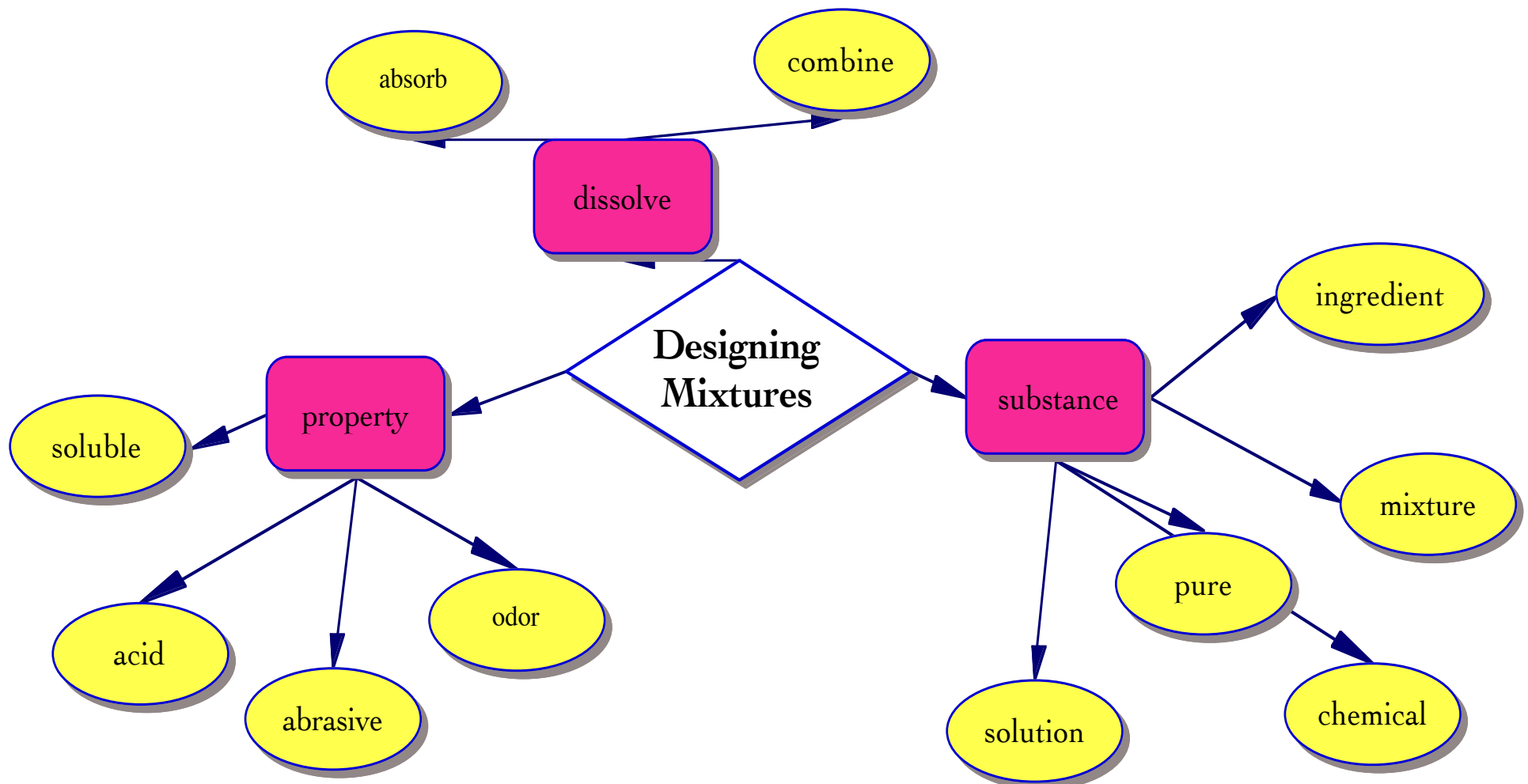
From *The Wonderful Wizard of Oz* (Chapter 11), Frank Baum

**(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



A close-up photograph of a young child with blonde hair and blue eyes, looking directly at the camera. The child's face is the central focus, with their hair framing their eyes. The background is blurred, showing hints of a blue shirt and a yellow object.

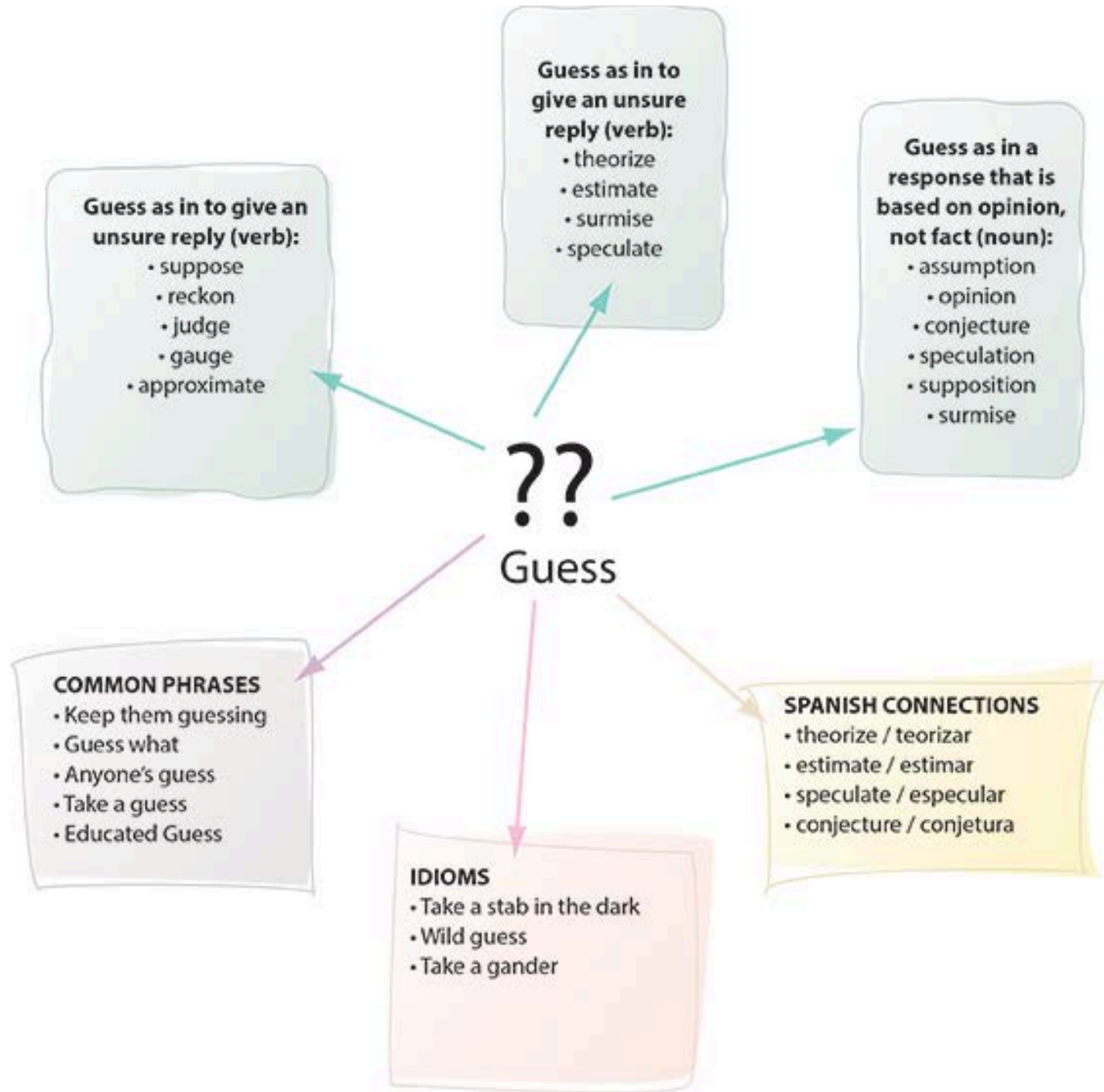
Action 3a: TEACH STUDENTS PROLIFIC SYNONYM NETWORKS



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)**

- theorize
- estimate
- surmise
- speculate



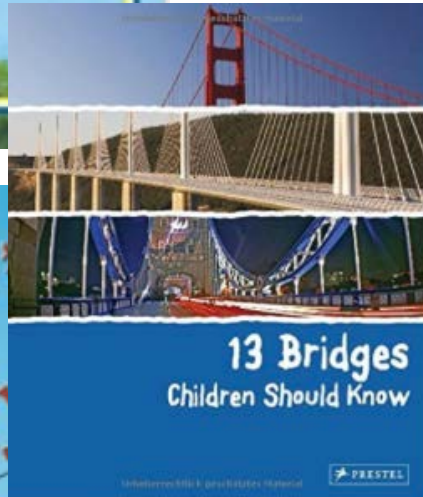
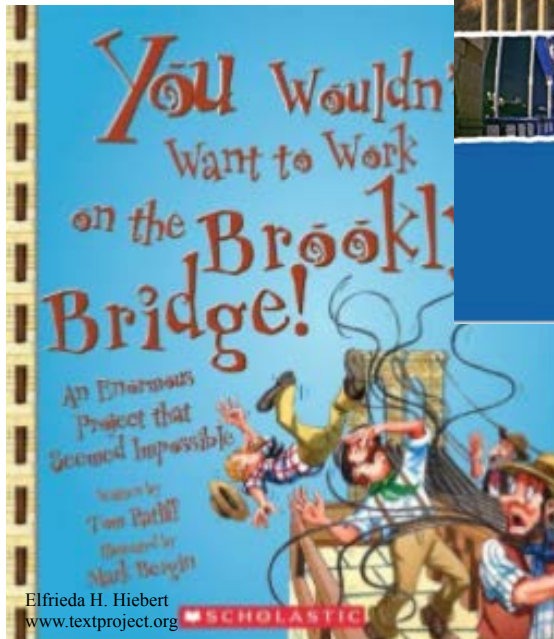
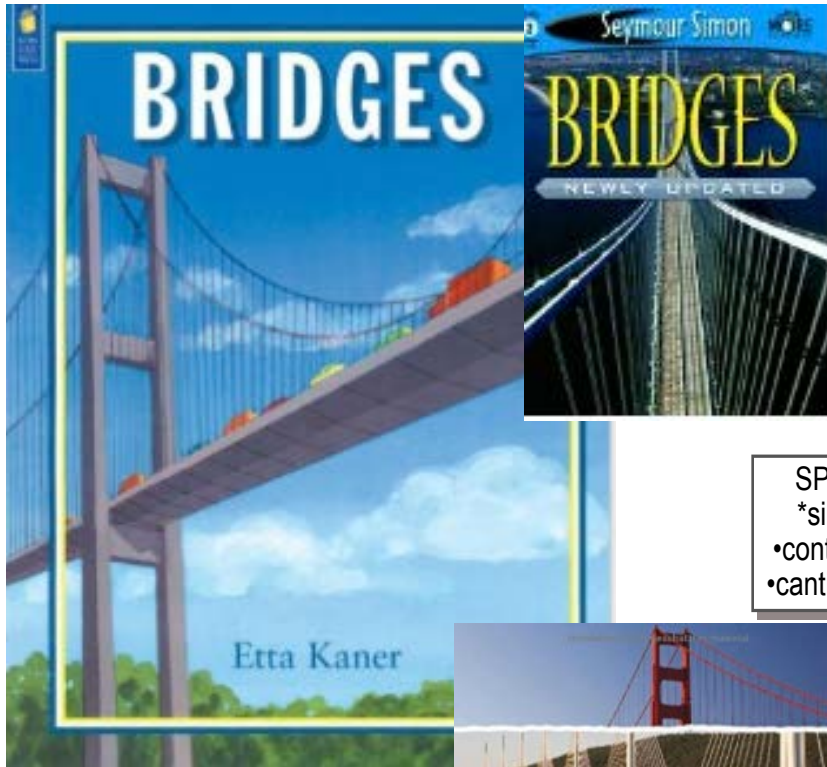


SPANISH CONNECTIONS

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



ACTION 3b. Teach students to organize rare words in informational texts into topical networks.



FEATURES
OF SITES:

- bedrock
- tides
- currents

SPANS:

- *simple
- continuous
- cantilevered

KINDS:

- beam
- arch
- suspension

VARIATIONS:

- truss
- bascule/swing
- semicircular
- segmental arch

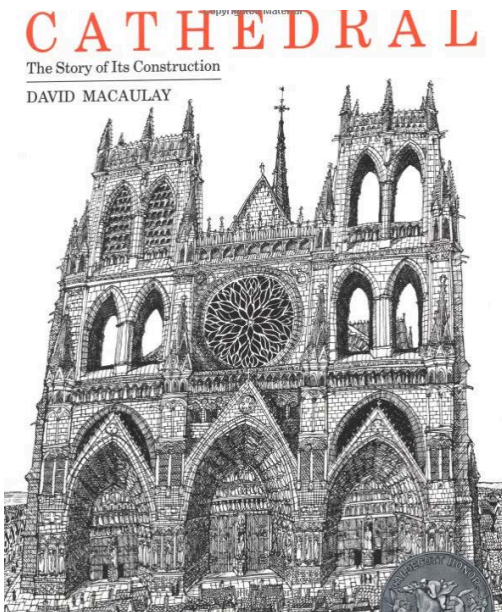
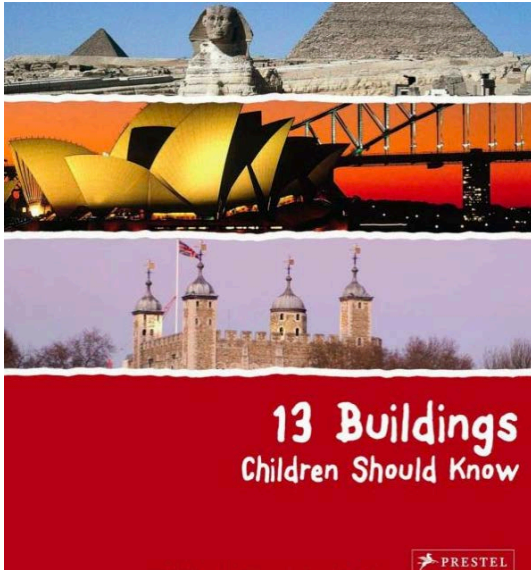
BRIDGES

COMPONENTS:

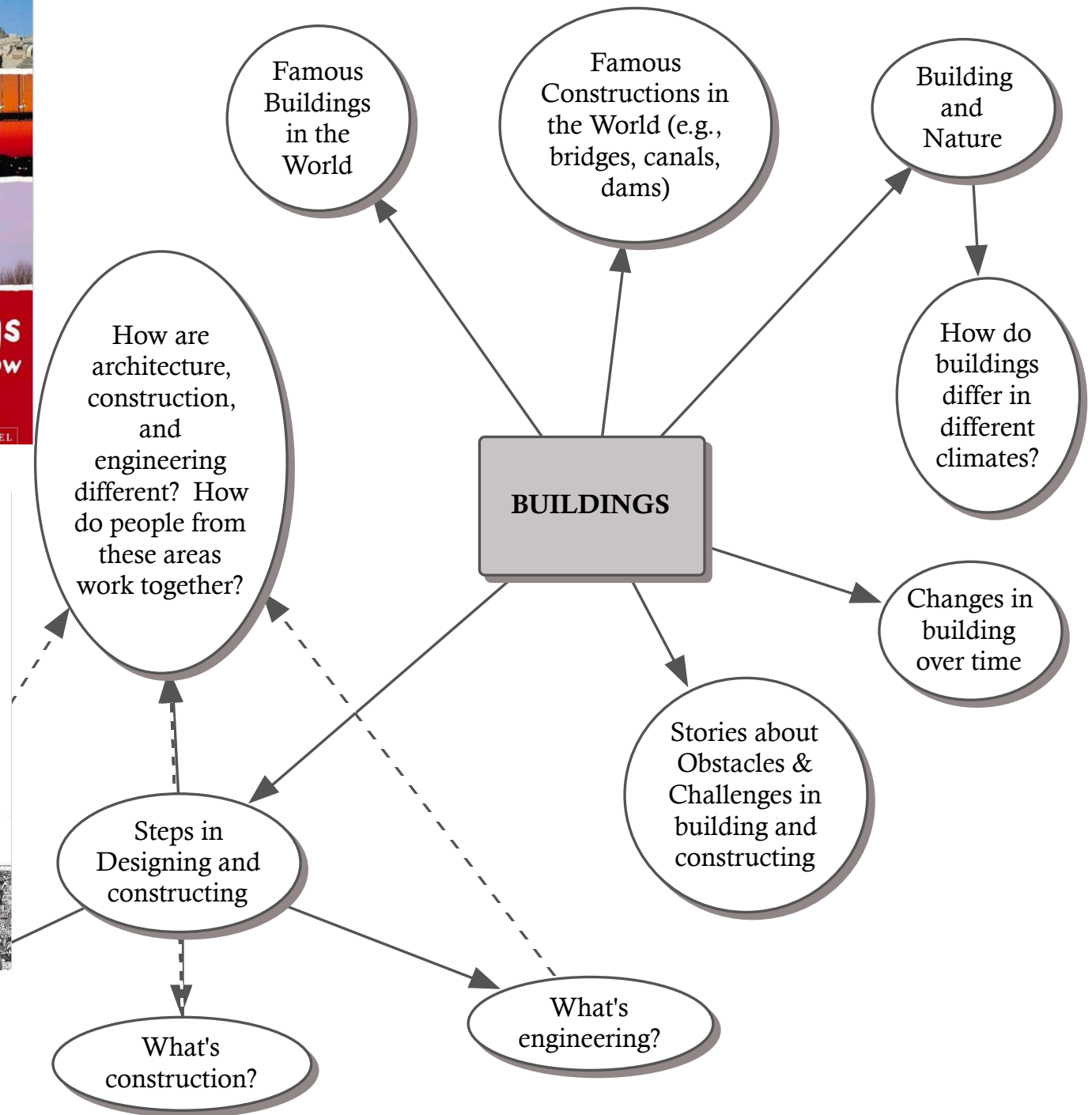
- pier
- tower
- pylon
- cables
- girder

LOADS &
FORCES:

- compression
- tension
- torsion
- shear forces



What's
architecture?
Elfrieda H. Hiebert

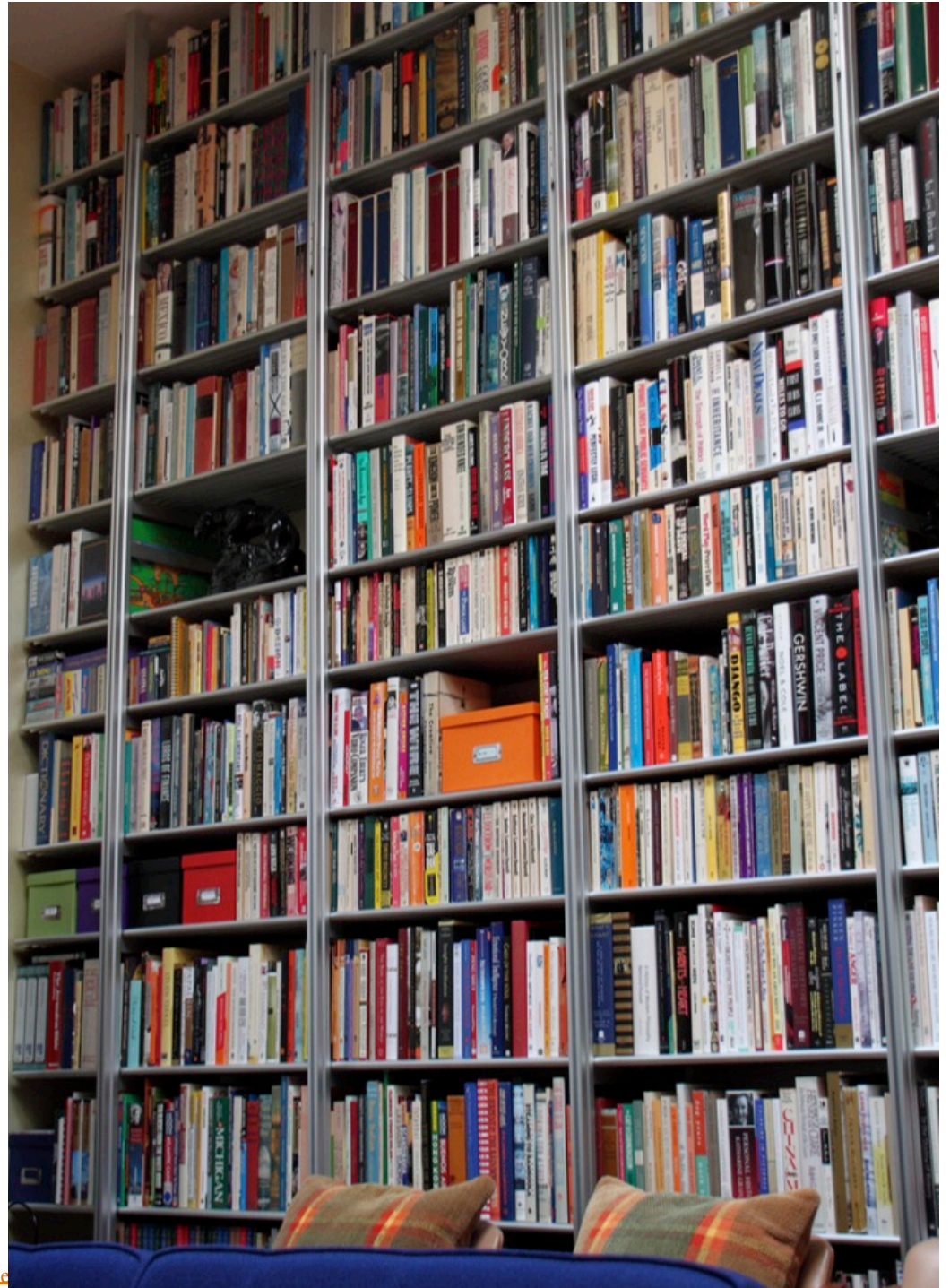


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Idea 4: Teach vocabulary in the service of developing bodies of knowledge.

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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.

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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.



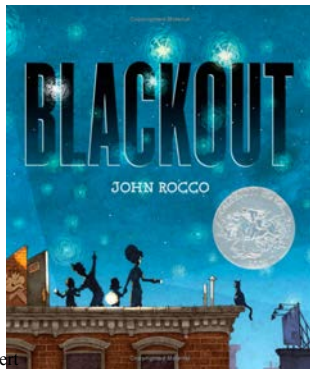
Action 4: Develop bodies of knowledge in English/Language Arts instruction

1. Intentional and Well-Designed Sets of Texts

Communities are places where people learn to know one another.

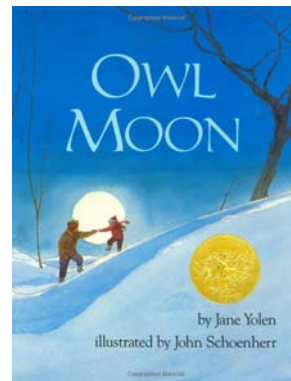
People discover that “old” ways of being together can be enjoyable and create a sense of community.

Blackout (Rocco, 2011)



Older people in our communities can teach us interesting things.

Owl Moon (Yolen, 1987)



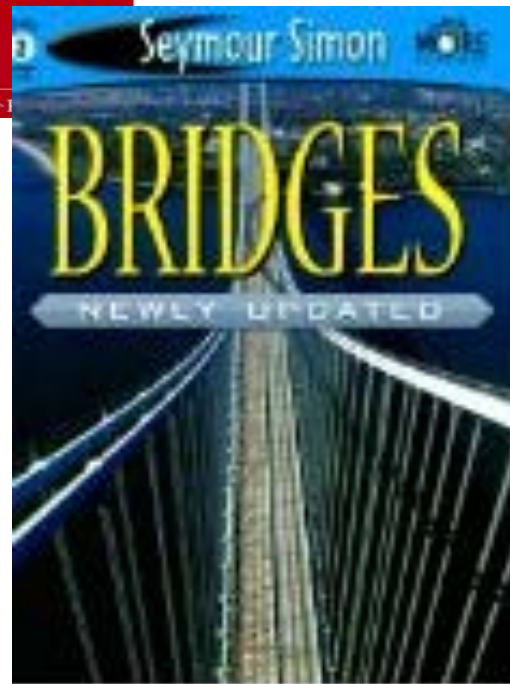
New members of a community may look and speak differently, but are like us in many ways.

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





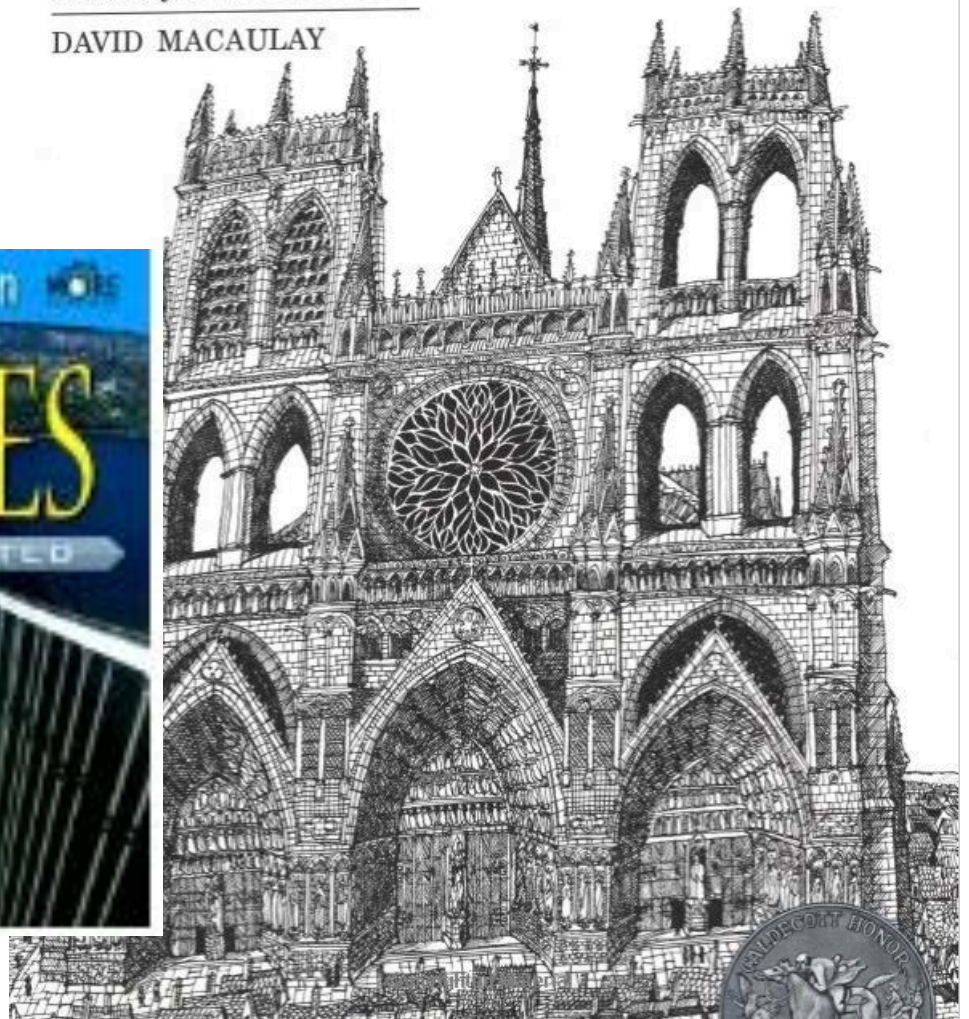
13 Buildings
Children Should Know



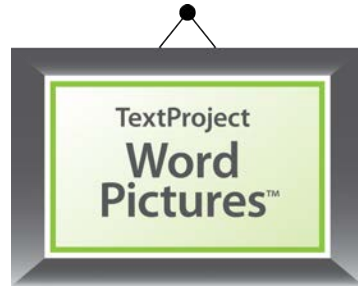
CATHEDRAL

The Story of Its Construction

DAVID MACAULAY



2. Build Knowledge through Word Pictures



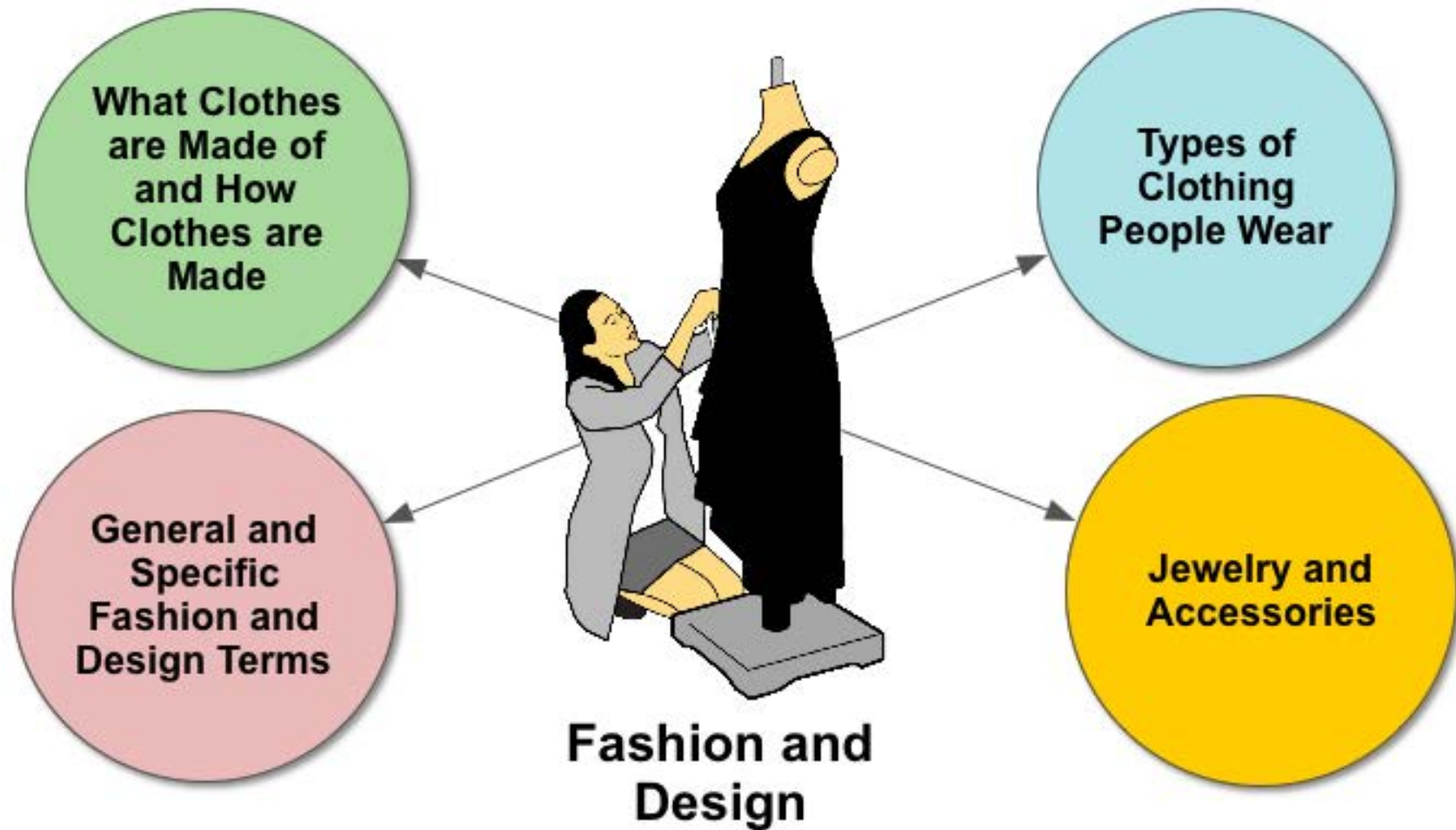
Fashion and Design—

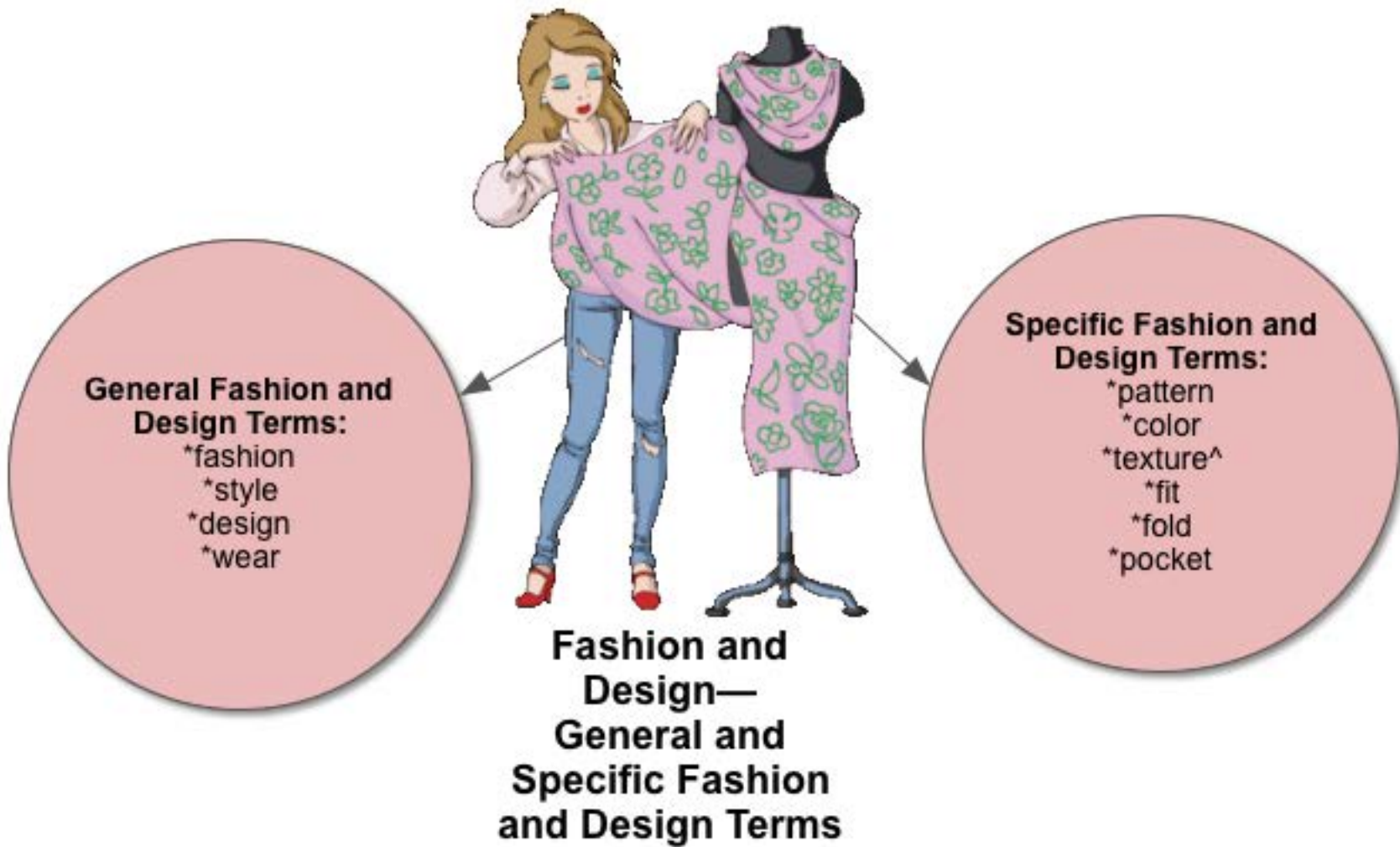
General and Specific Fashion and Design Terms



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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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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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TextProject



Strategies, tools, and texts to bring beginning readers and struggling readers to high levels of literacy

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