THE KNOWLEDGE BASE OF ENGLISH/LANGUAGE ARTS: VOCABULARY AS A SOURCE

Elfrieda H. Hiebert
TextProject

- Knowledge is central to comprehension (Ahmed, Francis, York, Fletcher, Barnes, & Kulesz, 2016).
  - *Theoretical models: Graesser, Singer, & Trabasso, 1994; Kintsch, 1998; van den Broek, Risden, Fletcher, & Thurlow, 1996*
  - *Empirical research: Anderson, Spiro, & Anderson, 1978; Goetz, Schallert, Reynolds, & Radin, 1983; Anderson, Reynolds, Schallert, & Goetz, 1977; Pearson, Hansen, & Gordon, 1979; Taft & Leslie, 1985; Reutzel & Morgan, 1990; Alexander, Kulikowich, & Schulze, 1994, Chiesi, Spilich, & Voss, 1979: and Gasparinatou & Grigoriadou, 2013)*

4-LS1 From Molecules to Organisms: Structures and Processes

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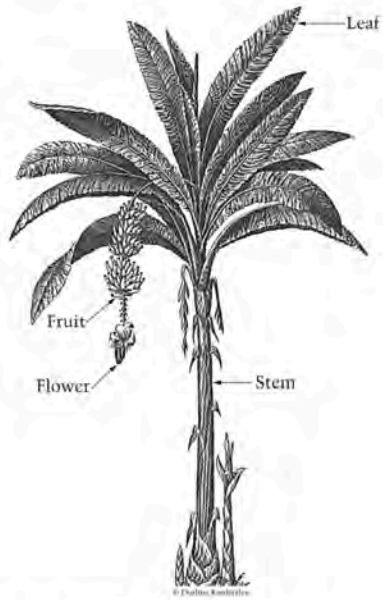
Students who demonstrate understanding can:

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.] [Assessment Boundary: Assessment is limited to macroscopic structures within plant and animal systems.]

3. Look at the banana plant shown below.



What part of this plant helps it get the most light?

- Ⓐ Green fruit
- Ⓑ A peeling, thick stem
- ● Wide, long leaves
- Ⓓ Brightly colored flowers

NAEP Question

Curriculum Materials

A leaf uses sunlight and air to help the plant make food. ..Broad leaves help the plant trap energy from sunlight. (HMH Science, Grade 4, p. A20)

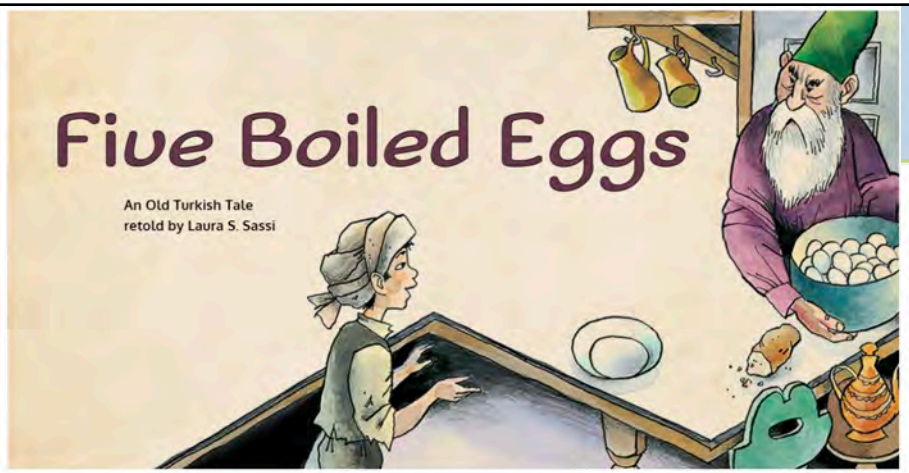
ELA Standards

Common Core State Standards for Reading

CCSS.ELA-LITERACY.RL.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

CCSS.ELA-LITERACY.RL.4.2 Determine a theme of a story, drama, or poem from details in the text; summarize the text.

CCSS.ELA-LITERACY.RL.4.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).



Five Boiled Eggs

An Old Turkish Tale
retold by Laura S. Sassi

Introduction: *Nasreddin Hodja, a character in this story, is familiar in many Turkish legends. "Hodja" means teacher.*

Long ago, a poor country boy left home to seek his fortune. Day and night he traveled, stopping to eat at inns along the way. Though he ate sparingly, his money quickly dwindled until, one day, no silver *akches** remained.

Still, the boy kept walking. Soon, however, his empty belly began to ache. Staggering up to the next inn he saw, he approached the innkeeper.

"Please feed me!" he said. "I don't have any money now, but I promise to pay you as soon as I can."

"I'll see what I can spare," the innkeeper

The famished lad gratefully gobbled every morsel. Then, repeating his promise to pay back the innkeeper, he journeyed on.

Revived by his five-egg breakfast, the boy soon reached a bustling seaport. Intent on finding his fortune, he set sail on the first ship that was leaving the harbor.

Years passed, and the lad prospered. As a sea merchant, he sailed far, stopping in many exotic ports. However, he never forgot his humble beginnings or the money he owed the innkeeper.

When he finally returned home, he stopped by the old roadside inn.

*An *akche* is a unit of Turkish money.

Five Boiled Eggs: Recognize paraphrase of explicit details about main character in a story

What did the boy do to become successful?

A ○	He raised hens from the eggs the innkeeper gave him.	⊖
B ○	He became a sea merchant and traveled to many places.	⊖
C ○	He learned from the innkeeper how to make his fortune.	⊖
D ○	He borrowed money to buy a new sailing ship.	⊖

Unwrapping the Past

By Natalie Smith

Solving mummy mysteries could help people today.

Mummies have been buried in Egypt for thousands of years. We have learned a lot about ancient Egypt from them. But they have also been quite a puzzle to scientists. A mummy is a dead body that has been preserved with special chemicals and wrapped in cloth (*see Making Mummies, p. 4*). It was only in the last 15 years that experts figured out how this process worked.

But now, with the help of high-tech tools, scientists are unraveling more secrets from these ancient remains. The details of their lives are coming to light like never before. But experts say they are not only learnin
the past. Mummies may also help ex
modern medical mysteries.

Tales of the Dead

In the past when scientists studied
cut through the body, or unwrap it. T
inside a mummy while it is whole.

Unwrapping Past: Recognize main topic of informational article

What is the article mainly about?

A ○	Why the ancient Egyptians made mummies	⊖
B ○	What the study of mummies can teach us	⊖
C ○	Where an ancient Egyptian mummy was found	⊖
D ○	How researchers unwrap mummies	⊖

Overlap between Topics/Vocabulary of NAEP Passages & a Gr. 4 Core Reading Program

Of the moderately frequent or rare words in either NAEP texts, only one appears in the 2,196 moderately frequent/rare words of a grade-four reading program: *stole*.

Narrative Topics

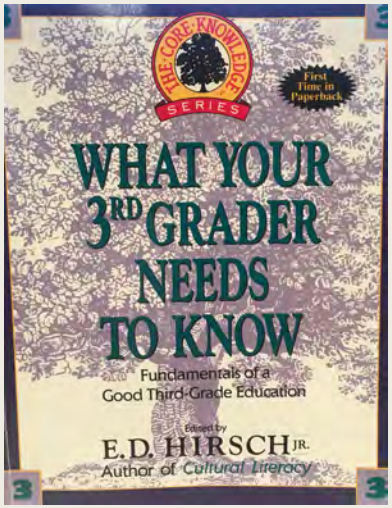
- A tall tale (*Heat Wave*)
- Realistic fiction of an immigrant boy getting access to the public library
- Chris Van Allsburg's *The Stranger*
- A Caribbean version of Cinderella
- Tale of Juan Verdades

Informational Topics

- Wildfires
- Finding the Titanic
- Biography of Gloria Estefan
- Salmon Summer: photo-essay about an Aleut boy at a fishing camp
- Donn Fendler's account of being lost in a mountain storm

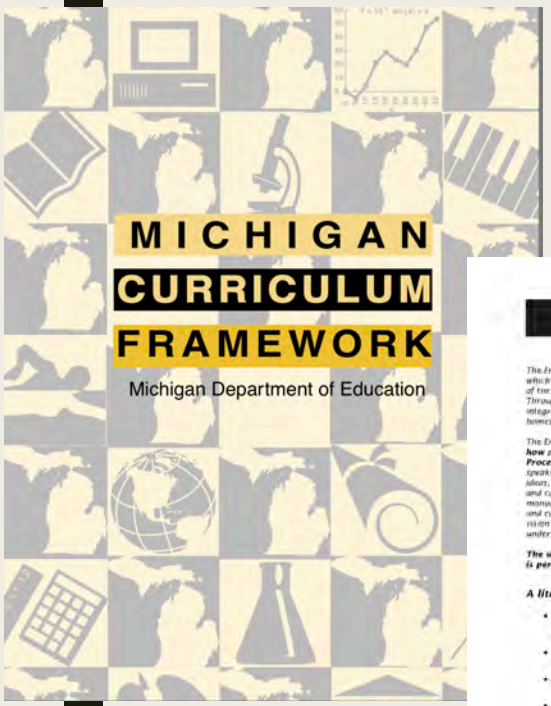
PROPOSALS FOR THE KNOWLEDGE BASE OF ELA

E.D. Hirsch, Jr. (*Cultural Literacy, 1988) & Core Knowledge Curriculum*



- CKLA Domain 1: Classic Tales—The Wind in the Willows
  Grade 3 • Language Arts • Listening & Learning
- CKLA Domain 2: Classification of Animals
  Grade 3 • Language Arts • Listening & Learning
- CKLA Domain 3: The Human Body—Systems and Senses
  Grade 3 • Language Arts • Listening & Learning
- CKLA Domain 4: The Ancient Roman Civilization
  Grade 3 • Language Arts • Listening & Learning
- CKLA Domain 5: Light and Sound
  Grade 3 • Language Arts • Listening & Learning
- CKLA Domain 6: The Viking Age
  Grade 3 • Language Arts • Listening & Learning
- CKLA Domain 7: Astronomy—Our Solar System and Beyond
  Grade 3 • Language Arts • Listening & Learning
- CKLA Domain 8: Native Americans—Regions and Cultures
  Grade 3 • Language Arts • Listening & Learning
- CKLA Domain 9: European Exploration of North America
  Grade 3 • Language Arts • Listening & Learning
- CKLA Domain 10: Colonial America
  Grade 3 • Language Arts • Listening & Learning
- CKLA Domain 11: Ecology
  Grade 3 • Language Arts • Listening & Learning
- CKLA Unit 1: Third Grade Skills—Classic Tales
  Grade 3 • Language Arts • Skills
- CKLA Unit 2: Third Grade Skills—Rattenborough's Guide to Animals
  Grade 3 • Language Arts • Skills
- CKLA Unit 3: Third Grade Skills—How Does Your Body Work?
  Grade 3 • Language Arts • Skills
- CKLA Unit 4: Third Grade Skills—Stories of Ancient Rome
  Grade 3 • Language Arts • Skills
- CKLA Unit 5: Third Grade Skills—Adventures in Light and Sound
  Grade 3 • Language Arts • Skills
- CKLA Unit 6: Third Grade Skills—Gods, Giants, and Dwarves
  Grade 3 • Language Arts • Skills
- CKLA Unit 7: Third Grade Skills—What's in Our Universe?
  Grade 3 • Language Arts • Skills
- CKLA Unit 8: Third Grade Skills—Native American Stories
  Grade 3 • Language Arts • Skills
- CKLA Unit 9: Third Grade Skills—The Age of Exploration
  Grade 3 • Language Arts • Skills
- CKLA Unit 10: Third Grade Skills—Living in Colonial America
  Grade 3 • Language Arts • Skills
- CKLA Unit 11: Third Grade Skills—Introduction to Ecology
  Grade 3 • Language Arts • Skills

Michigan English Language Arts Framework. [summarized in Wixson, Peters, Potter, 1996).



English Language Arts

Vision Statement

The English language arts are the vehicles of communication by which we live, work, share, and build ideas and understandings of the present, reflect on the past, and imagine the future. Through the English language arts, we learn to appreciate, integrate, and apply what is learned for real purposes in our homes, schools, communities, and workplaces.

The English language arts encompass process and content—**how** people communicate as well as **what** they communicate. **Process** includes skills and strategies used in listening, speaking, reading, writing, and viewing. **Content** includes the ideas, themes, issues, problems, and conflicts found in classical and contemporary literature and other texts, such as technical manuals, periodicals, speeches, and videos. Ideas, experiences, and cultural perspectives we discover in texts help us shape our vision of the world. The insights we gain enable us to understand our cultural, linguistic, and literary heritages.

The ultimate goal for all English language arts learners is personal, social, occupational, and civic literacy.

A literate individual:

- communicates skillfully and effectively through printed, visual, auditory, and technological media in the home, school, community, and workplace;
- thinks analytically and creatively about important themes, concepts, and ideas;
- uses the English language arts to identify and solve problems;
- uses the English language arts to understand and appreciate the commonalities and differences within social, cultural, and linguistic communities;
- understands and appreciates the aesthetic elements of oral, visual, and written texts;
- uses the English language arts to develop insights about human experience;
- uses the English language arts to develop the characteristics of lifelong learners and workers, such as curiosity, persistence, flexibility, and reflection; and
- summons knowledge from all curriculum areas to enhance understanding of the world.

CONTENT STANDARDS

	In grades K–12, the English language arts standards will ensure that all students have opportunities to engage successfully in discovering, creating, and analyzing spoken, written, electronic, and visual texts which reflect multiple perspectives and diverse communities. All students will:
Meaning and Communication	1. focus on meaning and communication as they listen, speak, view, read, and write in personal, social, occupational, and civic contexts;
Language	2. use the English language effectively in informal situations within schools, communities, and work-places by building upon an understanding of their own and other language patterns;
Literature	3. interact with a wide variety of classic and contempo-rary literature and other texts to seek information, ideas, enjoyment, and understanding of their individu-ality, our common humanity, and the rich diversity in our society;
Voice	4. view themselves as effective speakers and writers and demonstrate their expressive abilities by creating oral, written, and visual texts that engage their audiences;
Skills and Processes	5. demonstrate, monitor, and reflect upon the skills and processes used to communicate through listening, speaking, viewing, reading, and writing;
Genre and Craft of Language	6. explore and use the characteristics of different types of texts, aesthetic elements, and mechanics—including text structure, figurative and descriptive language, spelling, punctuation, and grammar—to construct and convey meaning;
Depth of Understanding	7. demonstrate understanding of the complexity of enduring issues and recurring problems by making connections and generating themes within and across texts;
Ideas in Action	8. apply knowledge, ideas, and issues drawn from texts to their lives and the lives of others;
Inquiry and Research	9. define and investigate important issues and problems using a variety of resources, including technology, to explore and create texts; and
Critical Standards	10. develop and apply personal, shared, and academic criteria for the enjoyment, appreciation, and evaluation of their own and others' oral, written, and visual texts.

“Interesting List” Approach
(e.g., Hiebert, 2020)

Child-Friendly Title	Content Area
Making Beautiful Things: Art, Fashion, & Movies	Fine Arts
Blast from the Past	History
Designing & Inventing: Engineering & Architecture	Physical Science
Heroes and Famous People	History/Human Interest
How Things Work: On Earth & in Space	Physical Science & Astronomy
Learning About Myself, Friends, & Family	Social and Emotional Learning
Making and Celebrating Communities	Culture/Civics
Rhymes and Rhythm: Poetry & Music	Literature and Fine Arts
Health and Sports	Life Sciences
Stories We Tell: New & Old	Literature and Social/Emotional Learning
The Living World: Habitats, Animals, & Weather	Life Sciences
Travel and Places	Geography

Another View: Vocabulary as a Means for Developing Background Knowledge

- Use of vocabulary to measure knowledge

  O'Reilly , Wang, & Sabatini (*Psychological Science,* 2019) gave a background-knowledge test to 3,534 high school students before administering a reading-comprehension test on the topic of ecology. Below the threshold, the relationship between comprehension and knowledge was weak ($\beta = 0.18$), but above the threshold, a strong, positive relation emerged ($\beta = 0.81$).

  - Simply using students' performance on six words (e.g., ecosystem, habitat), they were able to correctly identify the great majority of students who were below the knowledge threshold.

Rationale for a Semantic Cluster Approach

- Wright & Cervetti (2017): “There is very limited evidence that direct teaching of word meanings, even long-term, multi-faceted interventions of large numbers of words, can improve generalized comprehension” (p. 203).
  - HOWEVER: two studies did find generalized comprehension effects: Beck, Perfetti, & McKeown (1982); Nelson & Stage (2007)
    - Over a 5-month period, Beck et al. taught 12 semantic clusters, each having to do with critical aspects of narratives: characters, movement, traits, and communication.
      - When 2 clusters were taught over a month-long period (with varying degrees of repetition), a generalized effect for comprehension was not found (McKeown et al., 1985)

A PROOF OF CONCEPT

RESEARCH QUESTIONS

- 1. What is the distribution of semantic clusters in:
  - *A. an archival database of words from elementary texts?*
  - *B. all words in Common-Core compliant core reading programs (Gr. 3)?*
  - *C. targeted vocabulary of core reading programs (Gr. 3)?*
- 2. Current instruction:
  - *2a: Does the vocabulary targeted for instruction within lessons represent the themes of the texts?*
  - *2b: How are teachers guided in teaching target vocabulary in relation to the theme(s) of text selections?*
- 3. What is the nature of the targeted vocabulary of texts within a core reading program when a semantic cluster approach is applied?

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METHOD

- Question 1a: Marzano & Marzano (1988) database of 7,230 words sorted into 61 superclusters and 12 megaclusters
- Question 1b & 1c: All of the words in texts as well as vocabulary targeted for instruction in three Grade 3, Common Core-compliant core reading programs:
  - *Houghton Mifflin Harcourt Journeys (HMH; Baumann et al., 2014),*
  - *McGraw-Hill Wonders (MH; August et al., 2014), and*
  - *Scott Foresman Reading Street (SF; Afflerbach et al., 2013).*
- Questions 2a and b: Texts selected from the middle of:
  - Houghton Mifflin Harcourt *Journeys* (HMH; Baumann et al., 2014),
  - Houghton Mifflin Harcourt Into Reading (Ada et al., 2020)
- Question 3: Marzano & Marzano (1988) database augmented with the addition of 7,410 words in the Word Zone Profiler.

Superclusters (Marzano & Marzano, 1988)	Vocabulary Megacluster (Hiebert, 2011)
Feelings/emotion; Attitudinals	EMOTIONS & ATTITUDES
Communication; Mental actions; Senses/perceptions	COMMUNICATION
Nonemotional traits; Physical traits of people; Ownership/possession; Popularity/knownness; Life/survival; Conforming/complexity	TRAITS & SOCIAL RELATIONSHIPS OF CHARACTERS
Occupations; Types of people; Types of groups	CHARACTERS
Action; Motion	ACTION & MOTION
Human body; Clothing	HUMAN BODY
Value/correctness; Similarity/dissimilarity; Cleanliness/uncleanliness; Difficulty/danger; Causality; Size/quantity; Time; Location/direction; Shapes/dimensions; Texture/durability; Color	FEATURES & PHYSICAL ATTRIBUTES OF THINGS/EVENTS/EXPERIENCES
Places where people live; Dwellings/shelter; Rooms, furnishings; Events	PLACES/EVENTS
Animals; Foods; Water/liquids; Land/terrain; Vegetation; Soil/metal/rock; Light; Weather; Mathematics; Temperature/fire; Chemicals; Electricity	NATURAL ENVIRONMENT
Machines/engines/tools; Transportation; Materials	MACHINES
Literature/writing; Money/finance; Sports/recreation; Language; Entertainment/arts	SOCIAL SYSTEMS
Pronouns; Contractions; Auxiliary/Helping verbs	FUNCTION WORDS

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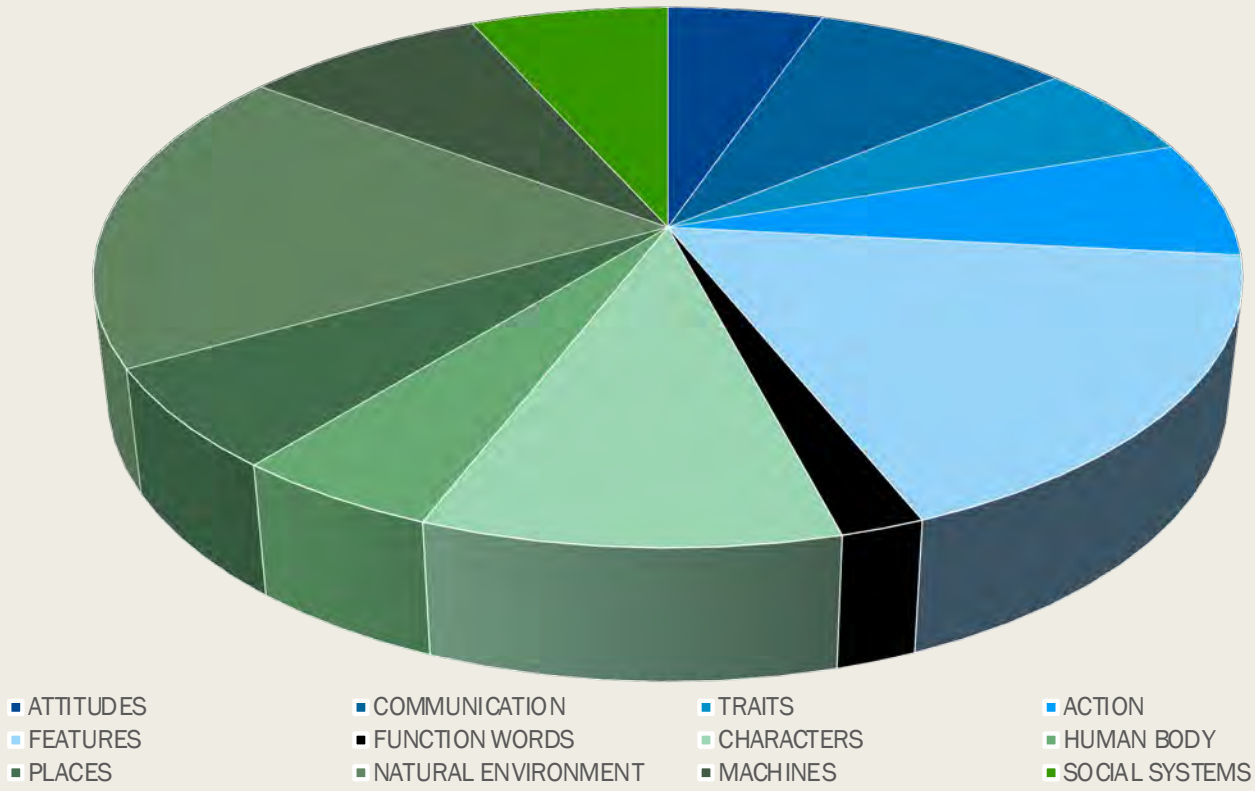
Q1a: Distribution of semantic clusters: Archival database of words in elementary texts (Marzano & Marzano, 1988)

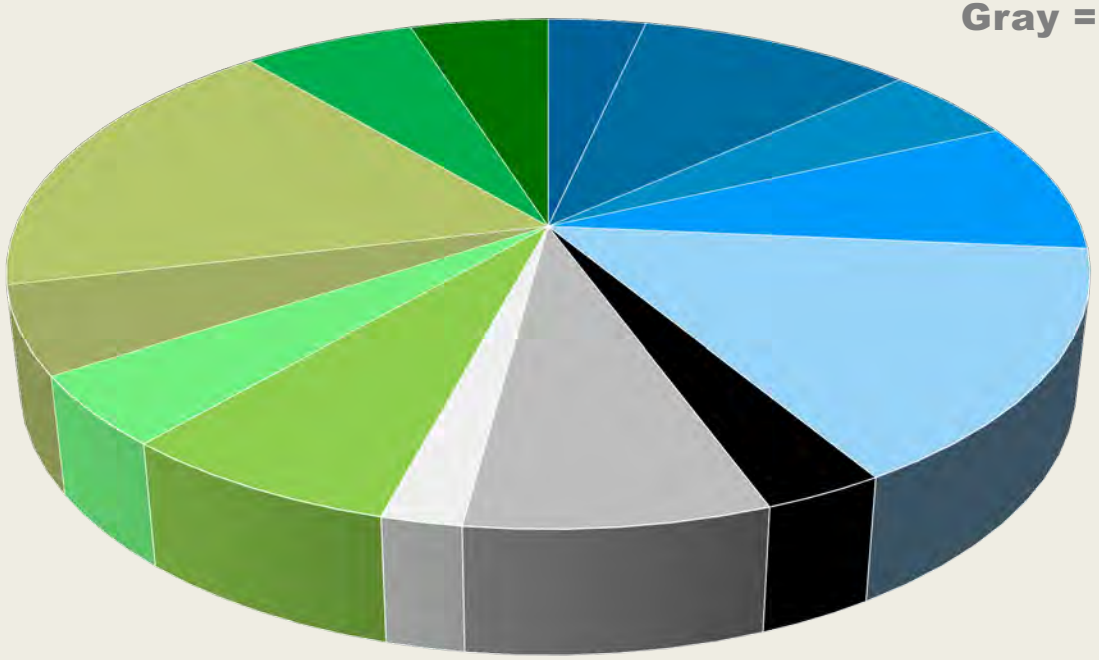
Green = concrete categories
Blue = abstract categories
Black = function words



- 54% of words fall into fairly "concrete" categories—characters, natural environment.
- 44% fall into fairly "abstract" categories—features, attitudes;
- 2% consist of function words

Q1b: Semantic Clusters in Common-Core compliant core reading programs (Grade 3)

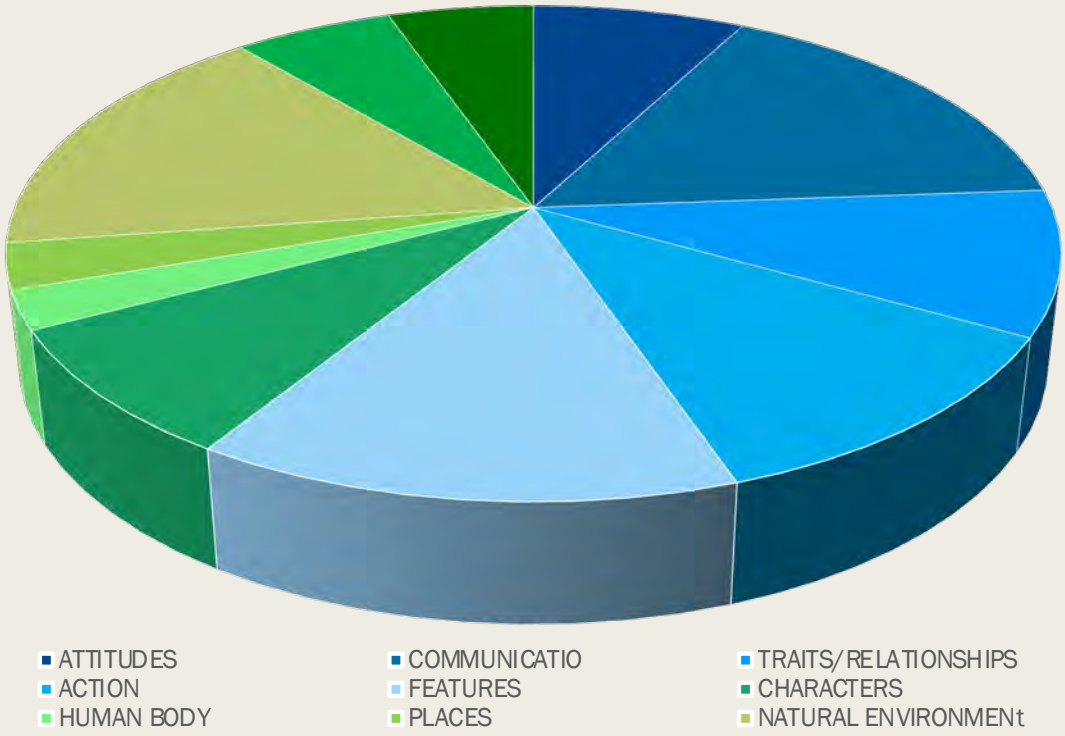
Green = concrete categories
Blue = abstract categories
Black = function words
Gray = proper names/variant words



- Ratio of concrete to abstract is fairly similar to original distribution
- Function words remain the same; however: proper names and variant words (e.g., onomatopoeia) account for 11% of words.

Q1c. Semantic clusters in instructional words in core reading programs

Green = concrete categories
Blue = abstract categories



- Substantially more abstract words than concrete words taught
- Within abstract categories, features continue to form the largest category but communication is also substantial

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Q2a: To what degree do targeted words in current core reading programs connect to key concepts? With one another?

Focus Vocabulary (Grade 3.3): HMH *Journeys—Common Core* (2014)

- examined
- peak
- fondly
- steep
- rugged
- mist
- pausing
- pleaded

- Theme: Why are stories from different cultures important?
- Target texts:
  - *Yonder Mountain: A Cherokee legend*
  - *The Trail of Tears*

Q2b: How are teachers guided in instructing target words?

Lesson 13

TARGET VOCABULARY

examined
peak
fondly
steep
rugged
mist
pausing
pleaded

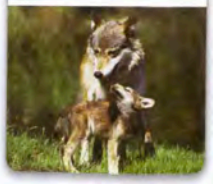
Vocabulary in Context

- Study each Context Card.
- Make up a new context sentence that uses two Vocabulary words.

1 examined
The hiker examined the tree and saw claw marks left by bears.

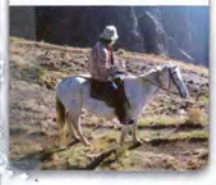
2 peak
This goat lives near the peak, or top, of a mountain. It likes high, rocky cliffs.

3 fondly
Wolf mothers treat their pups fondly. They are always kind and gentle.



4 steep
This mountain is steep. It reaches straight up into the sky!

5 rugged
Riders on rugged trails go slowly to avoid bumps, rocks, and holes.



6 mist
Most animals enjoy a gentle mist but look for shelter in pouring rain.

7 pausing
The buffalo in this stream is pausing, or stopping briefly, to drink.

8 pleaded
This hungry eaglet pleaded with, or begged, its mother for food.

Daily Vocabulary Boost

- Use the **Vocabulary in Context Cards** to briefly review the new Target Vocabulary and sentences with students.
- **Turn and Talk** Distribute each **Vocabulary in Context Card** to a small group, and have them discuss the *Talk It Over* activity on the back of the card. L.3.6

Target Vocabulary

examined
peak
fondly
steep
rugged
mist
pausing
pleaded

TARGET VOCABULARY >> Review

Review with students the **Vocabulary in Context Cards** on **Student Book pp. 466–467.** Call on students to read the context sentences and explain how the photograph demonstrates the meaning of the word.

MAKE CONNECTIONS Discuss all of the words using the items below to help students make connections between vocabulary words and their use. L.3.5b, L.3.6

- What would you do if someone **pleaded** for help?
- How would you describe a **mist** in the morning?
- Name some things that are **radiant**.
- What are some **traits** that you like in a friend?
- What things from second grade do you remember **fondly**?
- Name three things you are **capable** of doing.
- Have you ever climbed a **steep** hill? What was it like?
- What was the toughest test you have ever **endured**?
- When have you **examined** something closely?
- What does a **rugged** mountain **peak** look like?
- What are some reasons for **pausing** before walking across a bus street?

The Best Worst Day

Dr. Mary Fernandez would often think back **fondly** on the eventful day that set her on the path to becoming a doctor.

When Mary was a young girl, she and her friends had gone hiking. They left early, while a **mist** still covered the **peak** of the hill they hoped to climb. The trail was **rugged**, with many loose rocks and tree roots, but the girls were having a wonderful time.

After staying with the group for a long time, Mary and her friend Jamie started falling behind. They kept **pausing** to look at the amazing view that would unexpectedly open up between the dense pine trees. Jamie couldn't help but stop to snap pictures of the interesting things growing near the trail. After stopping to look at an enormous mushroom growing on a rotten log, they looked up and saw that the res of their friends were far ahead. The girls took off running, bu the trail was very **steep**. Suddenly, Jamie slipped and fell hard. She yelled in pain.

Mary **examined** Jamie's leg. Her foot was twisted at a funny angle, and Jamie **pleaded** with Mary not to move it. Luckily, their friends had missed them and came back to look for them. Since Jamie could not walk, they decided Mary would stay with her while the others went for help.

Daily Vocabulary Boost

- Ask students the following questions and discuss their answers. L.3.6

What would it be like to run on a rugged trail?

If you examined a painting, would you be likely to miss important details? Why or why not?

Describe an event that you remember fondly.

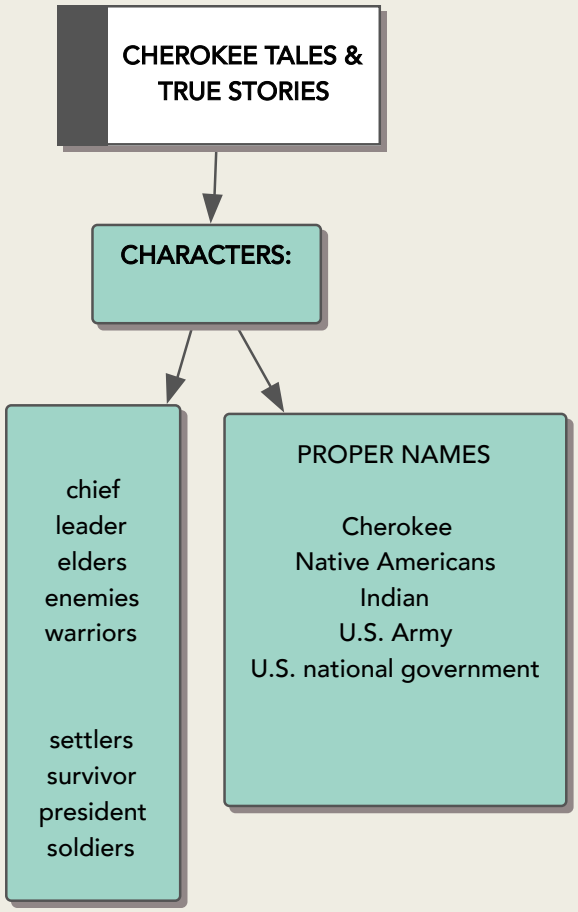
- Ask students to explain in their own words the meanings of *examined* and *fondly*.

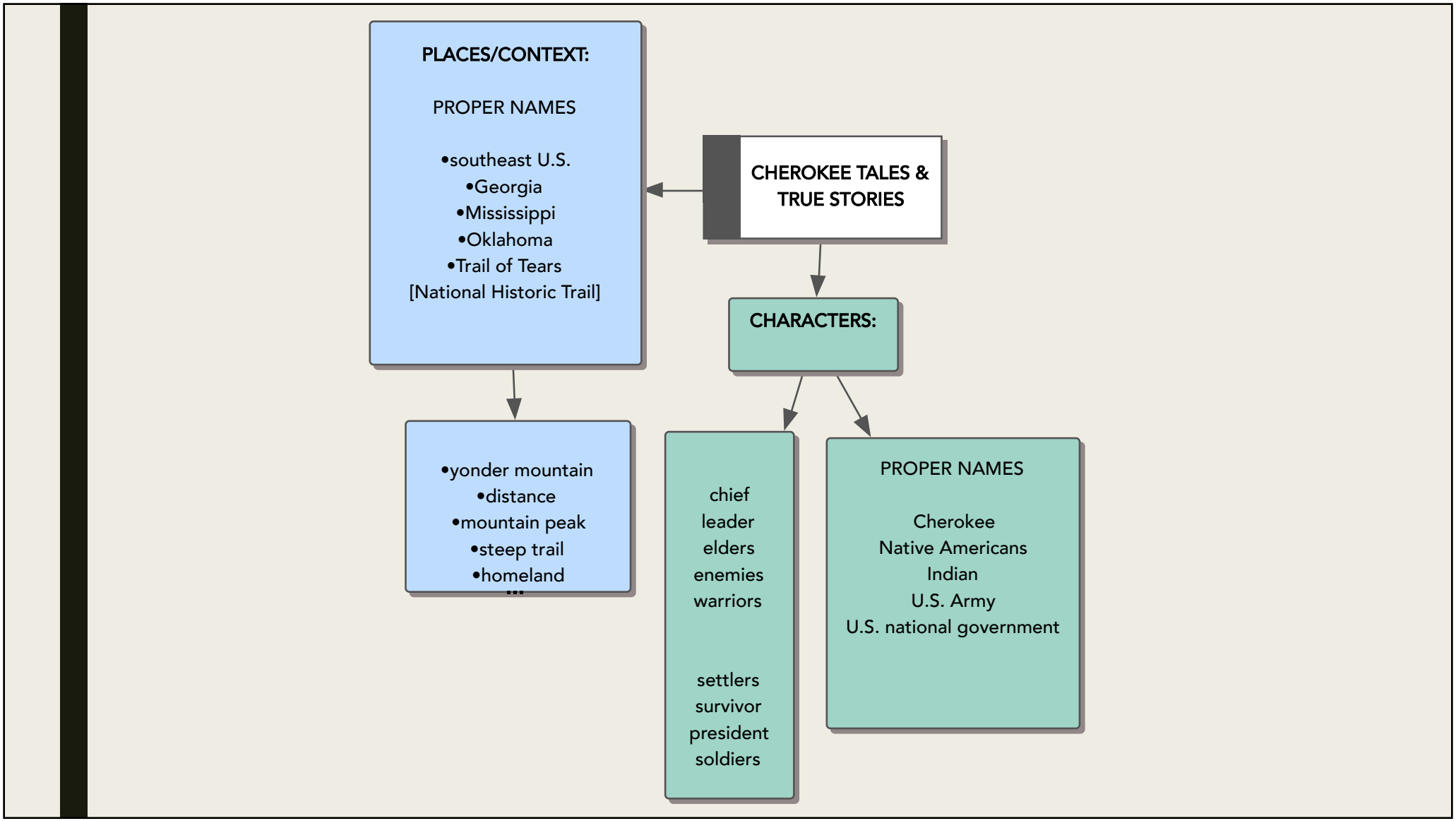
Target Vocabulary

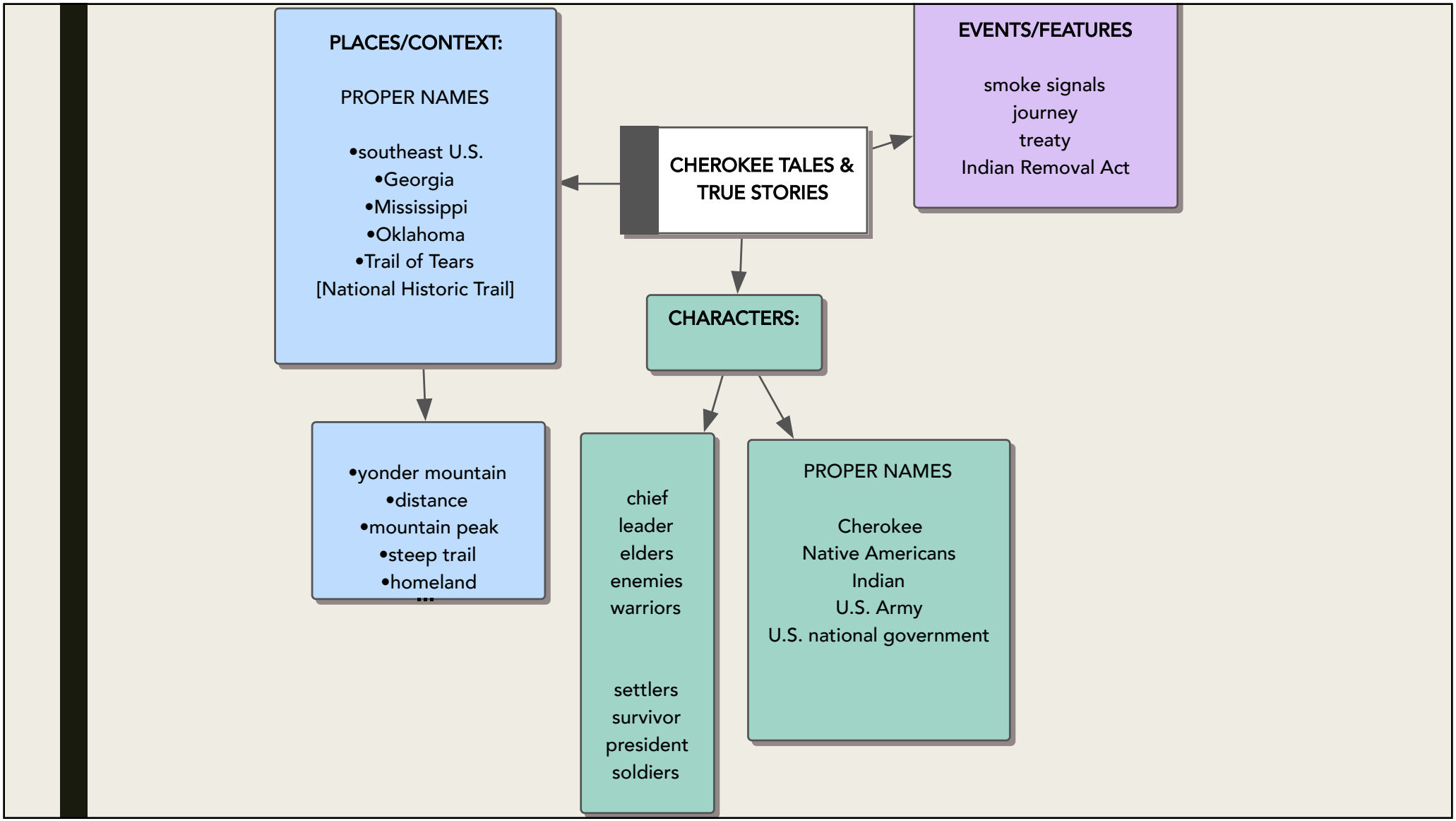
examined	rugged
peak	mist
fondly	pausing
steep	pleaded

Q3: What is the nature of the targeted vocabulary of texts within a core reading program when a semantic cluster approach is applied?

Narrative: *Yonder Mountain*
Informational: "The Trail of Tears"




CHEROKEE TALES & TRUE STORIES
PLACES/CONTEXT:
PROPER NAMES
•southeast U.S.
•Georgia
•Mississippi
•Oklahoma
•Trail of Tears
[National Historic Trail]
•yonder mountain
•distance
•mountain peak
•steep trail
•homeland
...
CHARACTERS:
chief
leader
elders
enemies
warriors
settlers
survivor
president
soldiers
PROPER NAMES
Cherokee
Native Americans
Indian
U.S. Army
U.S. national government


PLACES/CONTEXT:
PROPER NAMES
•southeast U.S.
•Georgia
•Mississippi
•Oklahoma
•Trail of Tears
[National Historic Trail]
EVENTS/FEATURES
smoke signals
journey
treaty
Indian Removal Act
CHEROKEE TALES & TRUE STORIES
CHARACTERS:
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•distance
•mountain peak
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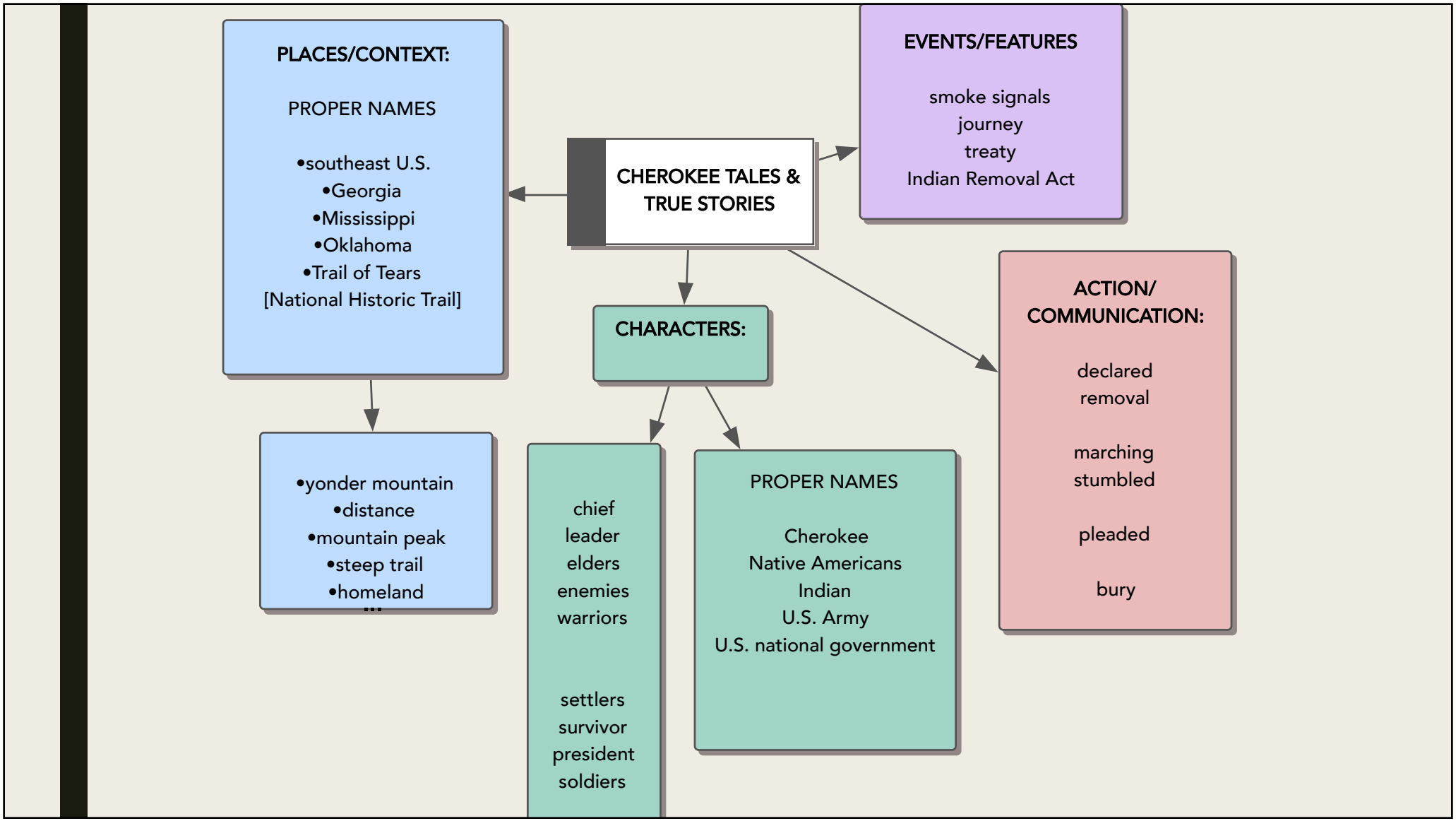
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[National Historic Trail]
EVENTS/FEATURES
smoke signals
journey
treaty
Indian Removal Act
CHARACTERS:
ACTION/ COMMUNICATION:
declared
removal
marching
stumbled
pleaded
bury
•yonder mountain
•distance
•mountain peak
•steep trail
•homeland
chief
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SUMMARY

- Q1a: The Marzano & Marzano framework captures primary semantic clusters of words in elementary texts.
- Q1b: The Marzano & Marzano framework does not address proper names and linguistic forms such as abbreviations and onomatopoeia.
- Q1c: The words targeted for instruction emphasize words from abstract categories more than from concrete categories (relative to all words in texts).
- Q2a: The targeted words do not appear to have been chosen to represent the primary themes/content of a passage. Q2b: Guidance to teachers supports instruction of each word individually and not in relation to one another or the underlying theme or content.
- Q3: There does appear to be sufficient grist within current core reading programs to teach vocabulary that develops at least some background knowledge.

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QUESTIONS & COMMENTS

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- 1. Can we ever expect vocabulary instruction/interventions to be reflected in higher levels of comprehension?
  - *Wright & Cervetti (2017): "Although this [Beck, Perfetti, & McKeown, 1982] is a promising finding, researchers who employed similar interventions in five more recent studies have not been able to replicate the significant, positive generalized comprehension effects.*

A Tale of Two Studies

Beck, Perfetti, & McKeown (1982)

- accomplice 9e.1
- rival 9g.3
- hermit 9g.4
- tyrant 9g.5
- virtuoso 9L.1
- novice 9L.1
- miser 9m.1
- philanthropist 9m.2

Apthorp, Randel, Cherasaro, Clark, McKeown, & Beck, (2012); similar vocabulary used in Apthorp (2006)

- anonymous 42h.2
- disbanded 33a.3
- crucial 26c.1
- tactic 2g.8
- ingenuity 12k.1
- lodged 2v.7.
- feverishly 5j.3
- formative 54b.4

- 2. If vocabulary instruction does transfer beyond knowledge of taught words and to generalized comprehension, what topics should be emphasized?
  - *What is known about the transfer of "knowing how to learn" through developing some areas of knowledge to other, less direct topics?*
- 3. Do any proper names fit into an ELA vocabulary program?
- 4. Can large numbers of concrete words be taught with pictures or descriptions?
  - *In core reading program: Abstract words (3.7 and lower on a 5-point scale) have an age of acquisition of 7.3, while concrete words have an average of acquisition of 6.5.*
- 5. O'Reilly et al. concluded that "The more predictive words were among the highest topically associated words as reflected by natural-language-processing-based statistics (Deane, 2012)." Would predictions with the concept vocabulary of narratives be as accurate?

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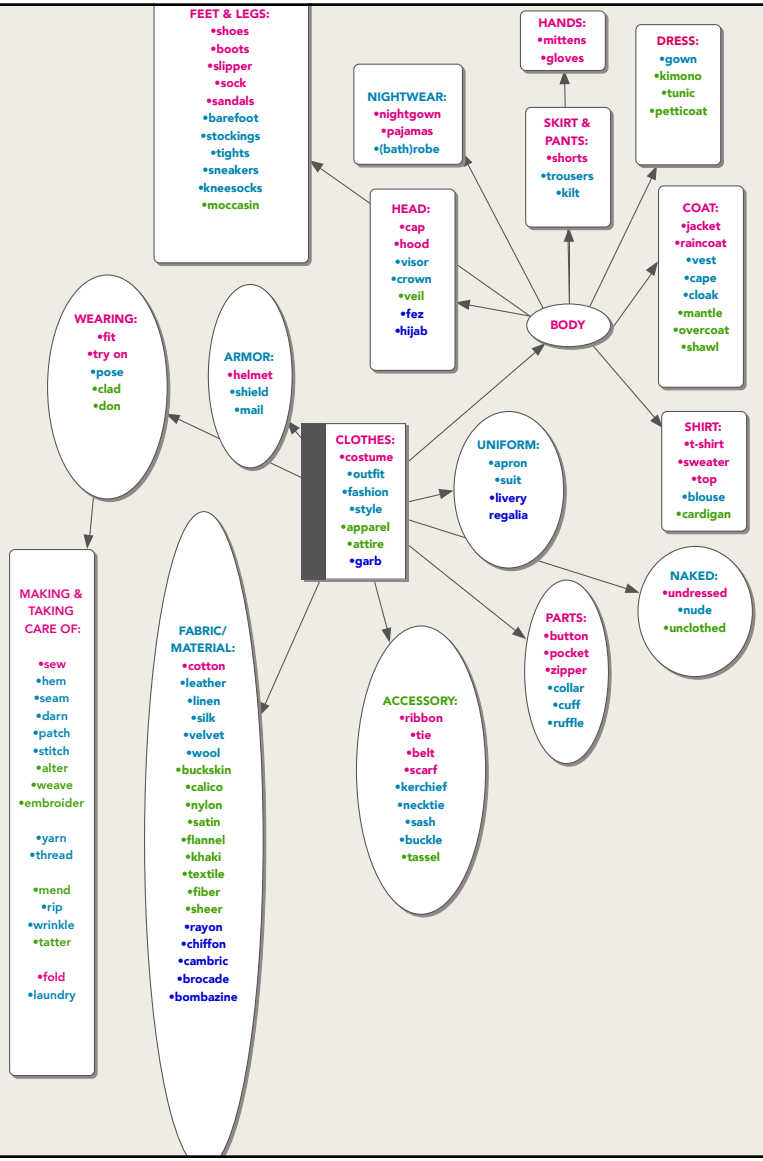
CLOTHES:
•costume
•outfit
•fashion
•style
•apparel
•attire
•garb
BODY
FEET & LEGS:
•shoes
•boots
•slipper
•sock
•sandals
•barefoot
•stockings
•tights
•sneakers
•kneesocks
•moccasin
NIGHTWEAR:
•nightgown
•pajamas
•(bath)robe
HANDS:
•mittens
•gloves
DRESS:
•gown
•kimono
•tunic
•petticoat
SKIRT & PANTS:
•shorts
•trousers
•kilt
HEAD:
•cap
•hood
•visor
•crown
•veil
•fez
•hijab
COAT:
•jacket
•raincoat
•vest
•cape
•cloak
•mantle
•overcoat
•shawl
WEARING:
•fit
•try on
•pose
•clad
•don
ARMOR:
•helmet
•shield
•mail
UNIFORM:
•apron
•suit
•livery
regalia
SHIRT:
•t-shirt
•sweater
•top
•blouse
•cardigan
NAKED:
•undressed
•nude
•unclothed
PARTS:
•button
•pocket
•zipper
•collar
•cuff
•ruffle
ACCESSORY:
•ribbon
•tie
•belt
•scarf
•kerchief
•necktie
•sash
•buckle
•tassel
FABRIC/ MATERIAL:
•cotton
•leather
•linen
•silk
•velvet
•wool
•buckskin
•calico
•nylon
•satin
•flannel
•khaki
•textile
•fiber
•sheer
•rayon
•chiffon
•cambric
•brocade
•bombazine
MAKING & TAKING CARE OF:
•sew
•hem
•seam
•darn
•patch
•stitch
•alter
•weave
•embroider
•yarn
•thread
•mend
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CONCLUDING COMMENT

- A knowledge-based vocabulary program, using the vocabulary in current texts, could be a first step in increasing the attention to knowledge in ELA periods.
- This approach is one that can be readily applied with current tools and frameworks.

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