



Using Quantitative Measures Of Text Complexity In Classroom Instruction: What's appropriate? What's not?

Elfrieda H. Hiebert

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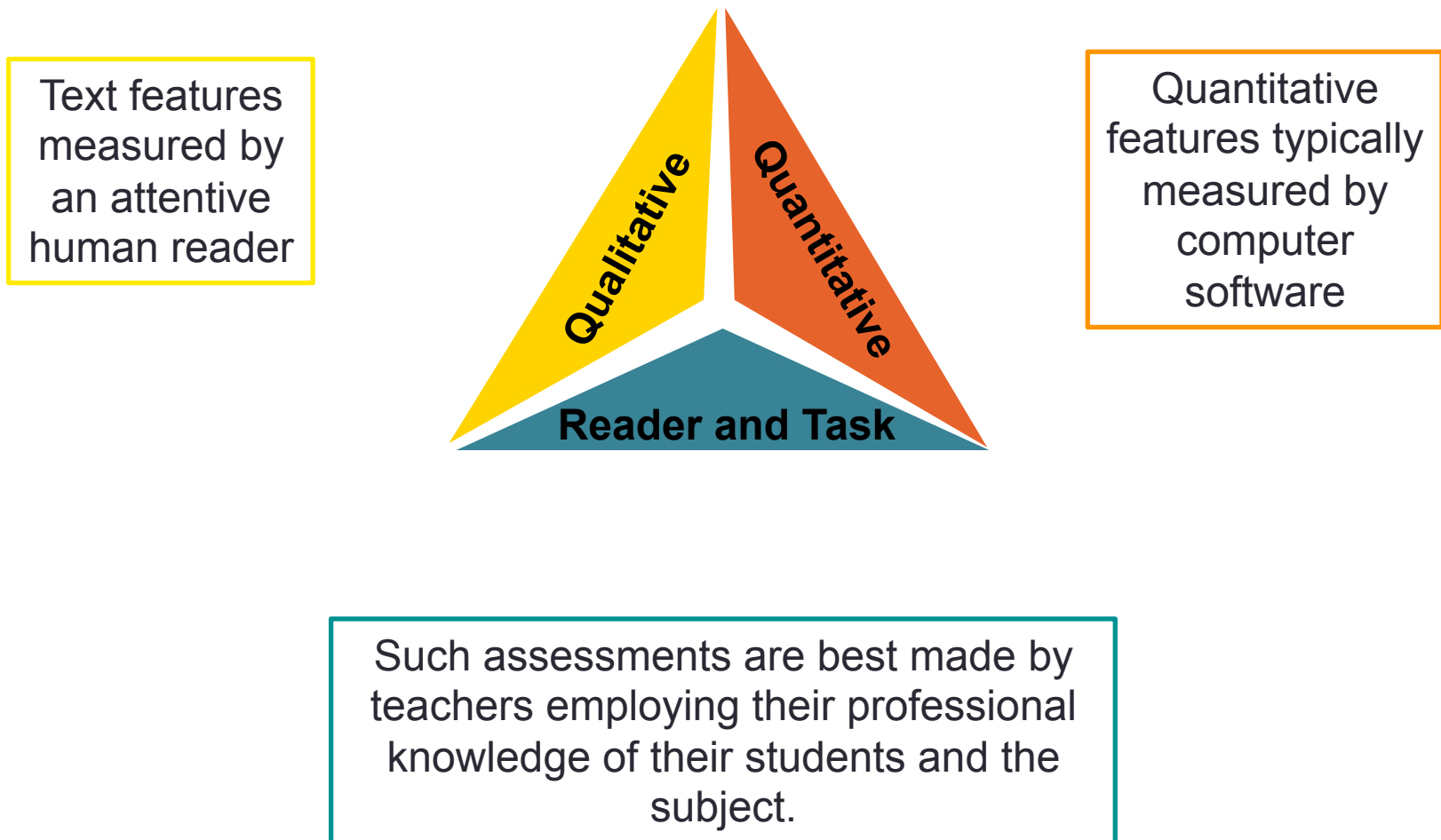
Standard 10: Range, Quality, & Complexity of Student Reading

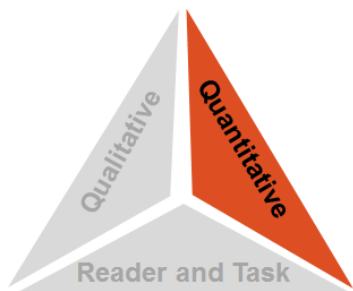
Grade 6 students:	Grade 7 students:	Grade 8 students:
Range of Reading and Level of Text Complexity		
10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6–8 text complexity band independently and proficiently.

Texts Illustrating the Complexity, Quality, and Range of Student Reading 6-12

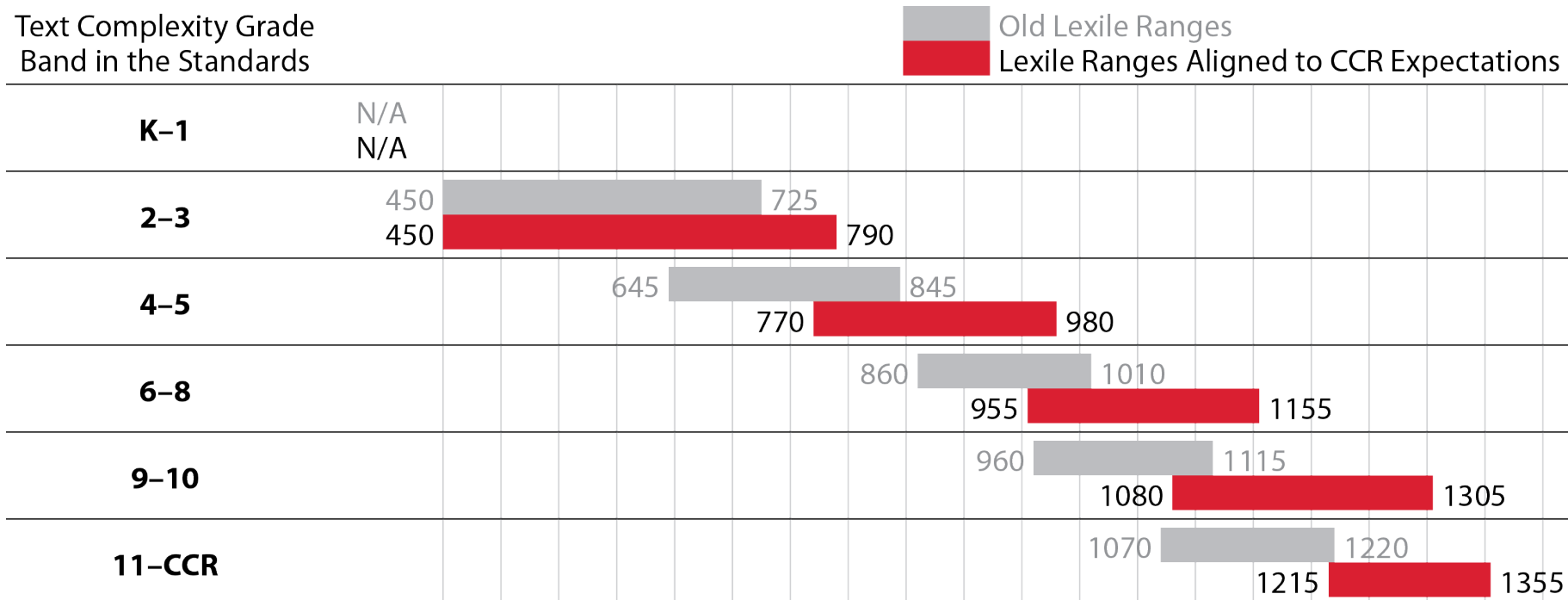
	Literature: Stories, Dramas, Poetry	Informational Texts: Literary Nonfiction
6-8	▪ <i>Little Women</i> by Louisa May Alcott (1869) ▪ <i>The Adventures of Tom Sawyer</i> by Mark Twain (1876) ▪ "The Road Not Taken" by Robert Frost (1915) ▪ <i>The Dark Is Rising</i> by Susan Cooper (1973) ▪ <i>Dragonwings</i> by Laurence Yep (1975) ▪ <i>Roll of Thunder, Hear My Cry</i> by Mildred Taylor (1976)	▪ "Letter on Thomas Jefferson" by John Adams (1776) ▪ <i>Narrative of the Life of Frederick Douglass, an American Slave</i> by Frederick Douglass (1845) ▪ "Blood, Toil, Tears and Sweat: Address to Parliament on May 13th, 1940" by Winston Churchill (1940) ▪ <i>Harriet Tubman: Conductor on the Underground Railroad</i> by Ann Petry (1955) ▪ <i>Travels with Charley: In Search of America</i> by John Steinbeck (1962)
9-10	▪ <i>The Tragedy of Macbeth</i> by William Shakespeare (1592) ▪ "Ozymandias" by Percy Bysshe Shelley (1817) ▪ "The Raven" by Edgar Allan Poe (1845) ▪ "The Gift of the Magi" by O. Henry (1906) ▪ <i>The Grapes of Wrath</i> by John Steinbeck (1939) ▪ <i>Fahrenheit 451</i> by Ray Bradbury (1953) ▪ <i>The Killer Angels</i> by Michael Shaara (1975)	▪ "Speech to the Second Virginia Convention" by Patrick Henry (1775) ▪ "Farewell Address" by George Washington (1796) ▪ "Gettysburg Address" by Abraham Lincoln (1863) ▪ "State of the Union Address" by Franklin Delano Roosevelt (1941) ▪ "Letter from Birmingham Jail" by Martin Luther King, Jr. (1964) ▪ "Hope, Despair and Memory" by Elie Wiesel (1997)
11-CCR	▪ "Ode on a Grecian Urn" by John Keats (1820) ▪ <i>Jane Eyre</i> by Charlotte Brontë (1848) ▪ "Because I Could Not Stop for Death" by Emily Dickinson (1890) ▪ <i>The Great Gatsby</i> by F. Scott Fitzgerald (1925) ▪ <i>Their Eyes Were Watching God</i> by Zora Neale Hurston (1937) ▪ <i>A Raisin in the Sun</i> by Lorraine Hansberry (1959) ▪ <i>The Namesake</i> by Jhumpa Lahiri (2003)	▪ <i>Common Sense</i> by Thomas Paine (1776) ▪ <i>Walden</i> by Henry David Thoreau (1854) ▪ "Society and Solitude" by Ralph Waldo Emerson (1857) ▪ "The Fallacy of Success" by G. K. Chesterton (1909) ▪ <i>Black Boy</i> by Richard Wright (1945) ▪ "Politics and the English Language" by George Orwell (1946) ▪ "Take the Tortillas Out of Your Poetry" by Rudolfo Anaya (1995)

Measuring Text Complexity





CCSS Staircase of Text Complexity (in Appendix A, 2010)



Supplement to Appendix A (2012)

Common Scale for Band Level Text Difficulty Ranges

Common Scale for Band	Text Analyzer Tools					
	ATOS	DRP	FK	Lexile	SR	RM
2nd–3rd	2.75–5.14	42–54	1.98–5.34	420–820	0.05–2.48	3.53–6.13
4th–5th	4.97–7.03	52–60	4.51–7.73	740–1010	0.84–5.75	5.42–7.92
6th–8th	7.00–9.98	57–67	6.51–10.34	925–1185	4.11–10.66	7.04–9.57
9th–10th	9.67–12.01	62–72	8.32–12.12	1050–1335	9.02–13.93	8.41–10.81
11th–CCR	11.20–14.10	67–74	10.34–14.20	1185–1385	12.30–14.50	9.57–12.00

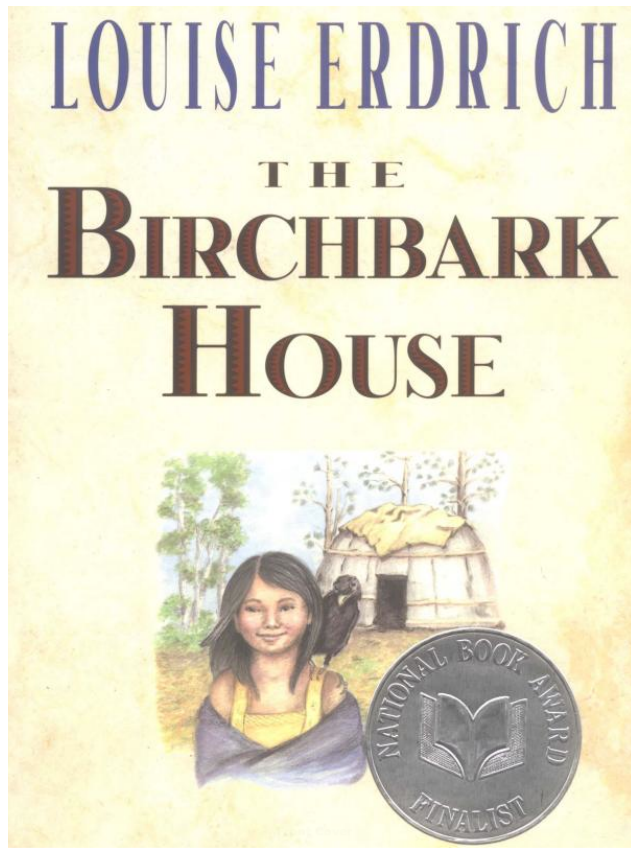
Key:

ATOS	ATOS® (Renaissance Learning)
DRP	Degrees of Reading Power® (Questar Assessment, Inc.)
FK	Flesch Kincaid® (public domain, no mass analyzer tool available)
Lexile	Lexile Framework® (MetaMetrics)
SR	Source Rater© (Educational Testing Service)
RM	Pearson Reading Maturity Metric© (Pearson Education)

Themes of the Presentation:

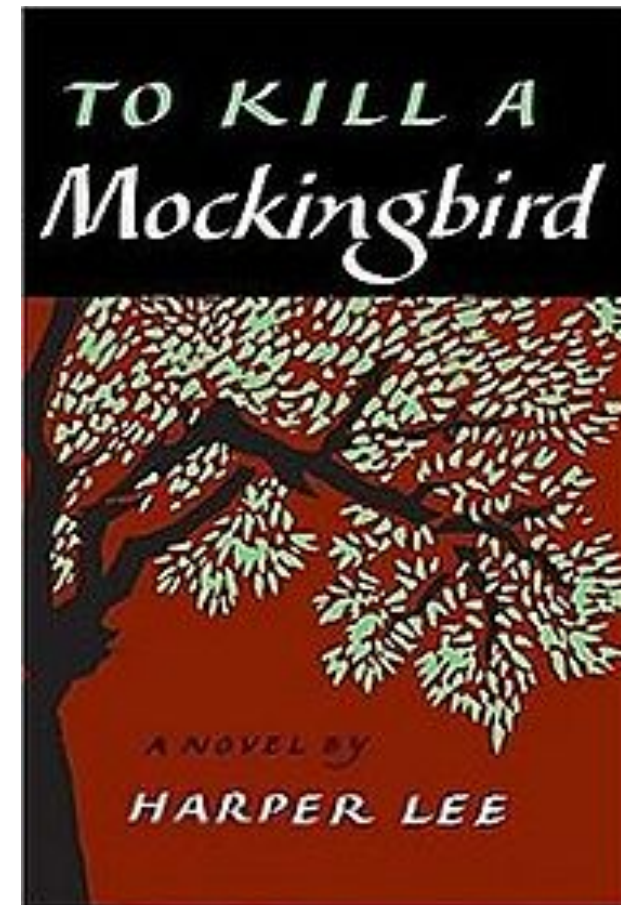
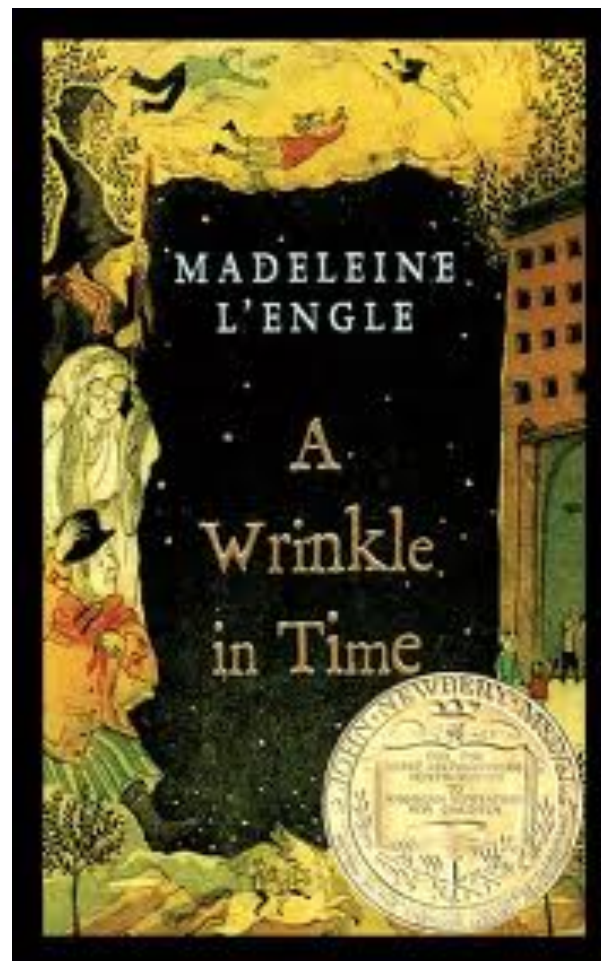
- I. Quantitative (or qualitative) assessments that give a single number or letter don't help teachers know *what* to teach or *how* to match students with texts that support their growth in reading.
- II. There is quantitative information that can aid teachers in choosing *what texts* to teach and *how* to assign appropriate texts to students.
 - a) In particular, information provided from large digital databases of texts means that vocabulary representing key concepts and potentially challenging for readers can be identified.
 - b) But there are other quantitative features of texts that matter a great deal in students' growth of reading capacity and also their ability to read texts independently.

I. Uses Of Omnibus Measures Of Text Complexity



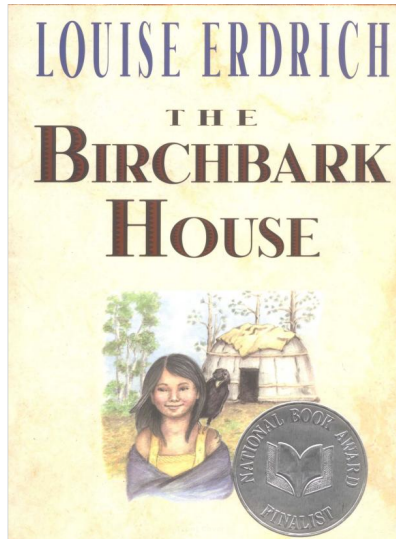
Grs. 4-5

Grs. 6-8



Grs. 9-10

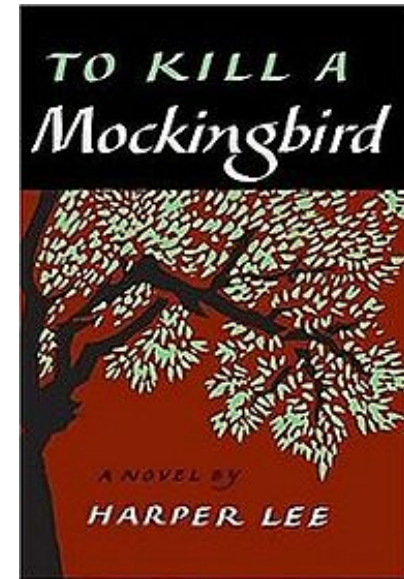
Model 1: A “Number” or a Grade Level Assigned for an Entire Text



860



740



870

Common Scale for Band	Text Analyzer Tools					
	ATOS	DRP	FR	Lexile	SR	RM
2nd–3rd	2.75–5.14	42–54	1.98–5.34	420–820	0.05–2.48	3.53–6.13
4th–5th	4.97–7.03	52–60	4.51–7.73	740–1010	0.84–5.75	5.42–7.92
6th–8th	7.00–9.98	57–67	6.51–10.34	925–1185	4.11–10.66	7.04–9.57
9th–10th	9.67–12.01	62–72	8.32–12.12	1050–1335	9.02–13.93	8.41–10.81
11th–CCR	11.20–14.10	67–74	10.34–14.20	1185–1385	12.30–14.50	9.57–12.00

Summary of Text Difficulty/Readability Systems

- Narrative: Typically Underestimated
- Informational: Typically Overestimated



Text Matters—
www.textproject.org

Readability and the Common Core's Staircase of Text Complexity

Elfrieda H. Hiebert
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For a long time, educators have asked questions about what makes a text complex. Why is it harder for students to read some books than others? How are we to help students select texts that will challenge them without frustrating them? What type of texts will increase their reading achievement most effectively?



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For more information about Text Matters, visit www.textproject.org/text-matters
© 2012 TextProject, Inc. Some rights reserved (<http://creativecommons.org/licenses/by-nc-nd/3.0/us/>).

By adding text complexity as a dimension of literacy, the Common Core State Standards for English Language Arts (CCSS/ELA; Common Core State Standards Initiative, 2010) bring these questions to the fore. To establish text complexity, the standards propose a three-pronged system:

1. qualitative analyses of features such as levels of meaning (e.g., readers need to make inferences to understand a character's motive);
2. reader-task variables such as readers' background knowledge of a text's topic and ways in which teachers and situations influence readers' interactions with a text (e.g., an audio of a book or the level of teacher guidance); and
3. quantitative indices such as information on the number of infrequent words and length of sentences (e.g., word indexes, sentence-length formulas, or automatic readability programs).

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2013, 66(6)

SUPPORTING STUDENTS' MOVEMENT UP THE STAIRCASE OF TEXT COMPLEXITY

Elfrieda H. Hiebert

The Common Core State Standards foreground text complexity. But what does this mean for a classroom teacher working with a specific text and a group of students?

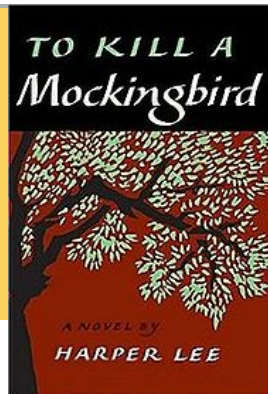
Why is it harder for students to read some books than others? How are we to help students select texts that will challenge them without frustrating them? What type of texts will increase their reading achievement most effectively? By adding text complexity as a dimension of literacy, the Common Core State Standards for English Language Arts (CCSS/ELA; National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010) bring these questions to the fore. The Text Complexity Multi-Index (TCMI) is a four-step process that teachers can use in matching texts and students. This article provides an overview of each step in the process along with the manner in which

Lauren (a pseudonym), a second-grade teacher, used the TCMI four-step process.

Lauren teaches in a state committed to the goals of the CCSS. CCSS writers have recommended a staircase of text complexity in Appendix A to ensure that high school seniors are able to read at college and career levels and have extended the ranges in a recent publication (Nelson, Perle, Liben, & Liben, 2012). As Lauren began planning a week of instruction in the third trimester of second grade, she chose to examine two texts, which were available

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Model 2: Qualitative/Quantitative/Reader-Text Systems



Kansas Common Core Standards
Quantitative Measures Ranges for Text Complexity Grade Bands

Text Complexity Grade Bands	Suggested Lexile Range	Suggested ATOS Book Level Range**
K-1	100L – 500L*	1.0 – 2.5
2-3	450L – 790L	2.0 – 4.0
4-5	770L – 980L	3.0 – 5.7
6-8	955L – 1155L	4.0 – 8.0
9-10	1080L – 1305L	4.6 – 10.0
11-CCR	1215L – 1355L	4.8 – 12.0

TEXT COMPLEXITY: QUALITATIVE MEASURES RUBRIC LITERARY TEXTS

LEVELS OF MEANING			
High ☐ Multiple Levels of Complex Meaning	Middle High ☒ Multiple Levels of Meaning	Middle Low ☐ Single Level of Complex Meaning	Low ☐ Single Level of Simple Meaning
STRUCTURE			
High ☐ Narrative Structure: complex, implicit, and unconventional ☐ Narration: many shifts in point of view ☐ Order of Events: not in chronological order ☐ Use of Graphics: sophisticated graphics, essential to understanding the text, may also provide information not otherwise conveyed in the text	Middle High ☒ Narrative Structure: some complexities, more implicit than explicit, some unconventional ☐ Narration: occasional shifts in point of view ☒ Order of Events: several major shifts in time, use of flashback ☐ Use of Graphics: some sophisticated graphics, may occasionally be essential to understanding the text	Middle Low ☐ Narrative Structure: largely simple structure, more explicit than implicit, largely conventional ☒ Narration: few, if any, shifts in point of view ☐ Order of Events: occasional use of flashback, no major shifts in time ☐ Use of Graphics: largely simple graphics, supplementary to understanding of the text	Low ☐ Narrative Structure: simple, explicit, conventional, no shifts in point of view ☐ Narration: no shifts in point of view ☐ Order of Events: chronological ☐ Use of Graphics: use of simple graphics, unnecessary to understand the text
LANGUAGE CONVENTIONALITY AND CLARITY			
High ☐ Meaning: implicit or inferred meaning, heavy use of figurative or ironic language, may be purposefully ambiguous or misleading at times ☐ Register: generally unfamiliar, archaic, domain-specific, or overly academic	Middle High ☒ Meaning: some implicit or inferred meaning, use of figurative or ironic language ☒ Register: occasionally unfamiliar, archaic, domain-specific, or overly academic	Middle Low ☐ Meaning: largely explicit and literal meaning, subtle use of figurative or ironic language ☐ Register: largely contemporary, familiar, conversational, rarely unfamiliar, archaic, domain-specific, or overly academic	Low ☐ Meaning: explicit and literal meaning, little or no use of figurative or ironic language ☐ Register: contemporary, familiar, conversational
KNOWLEDGE DEMANDS			
High ☐ Life Experiences: explores complex, sophisticated, multiple themes; experiences portrayed are not fantasy but are distinctly different from the common reader ☒ Cultural/Literary Knowledge: many references allusions to other texts (intertextuality) and cultural elements ☐ Subject Matter Knowledge: requires extensive, perhaps specialized content knowledge	Middle High ☒ Life Experiences: explores multiple themes of varying levels of complexity; experiences portrayed are not fantasy but are uncommon to most readers ☐ Cultural/Literary Knowledge: some references allusions to other texts (intertextuality) and cultural elements ☐ Subject Matter Knowledge: requires moderate levels of content knowledge	Middle Low ☐ Life Experiences: explores a single complex theme; experiences portrayed are common to many readers or are clearly fantasy ☐ Cultural/Literary Knowledge: few references allusions to other texts (intertextuality) and cultural elements ☒ Subject Matter Knowledge: requires some content knowledge	Low ☐ Life Experiences: explores a single theme; experiences portrayed are everyday and common or are clearly fantasy ☐ Cultural/Literary Knowledge: no references allusions to other texts (intertextuality) and cultural elements ☐ Subject Matter Knowledge: requires only everyday content knowledge



Kansas Common Core Standards Quantitative Measures Ranges for Text Complexity Grade Bands

Text Complexity Grade Bands	Suggested Lexile Range	Suggested ATOS Book Level Range**
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6-8	955L – 1155L	4.0 – 8.0
9-10	1080L – 1305L	4.6 – 10.0
11-CCR	1215L – 1355L	4.8 – 12.0

* The K-1 suggested Lexile range was not identified by the Common Core State Standards.

** Taken from Accelerated Reader and the Common Core State Standards, <http://doc.kenken.com/KMNet/R004572117GK46B.pdf>

Lexile: 870
ATOS: 5.6

Questions for Professional Reflection on Reader and Task Considerations

Cognitive Capabilities

- Does the reader possess the necessary **attention** to read and comprehend this specific text?
- Will the reader be able to **remember and make connections** among the various details presented in this specific text?
- Does the reader possess the necessary **critical/analytic thinking skills** to understand the relationships between the main idea, purpose, and/or theme of the text and the various details used to support that main idea, purpose, and/or theme?
- Will this specific text help to develop the **attention, memory, and critical/analytic thinking skills** necessary for future reading endeavors?

Reading Skills

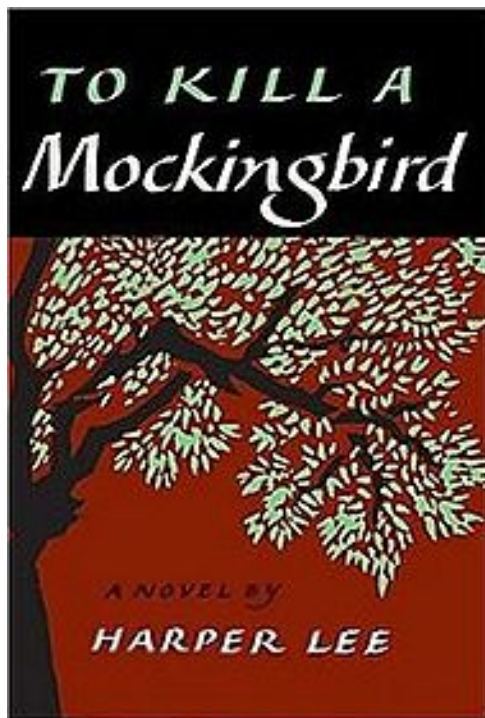
- Does the reader possess the necessary **inferencing skills** to "read between the lines" and make connections among elements that may not be explicit in this specific text?
- Does the reader possess the necessary **visualization skills** to imagine what is occurring or what is being described in this specific text?
- Does the reader possess the necessary **questioning skills** to challenge the ideas being presented in this text and consider those ideas from multiple points of view?
- Does the reader possess the necessary **comprehension strategies** to manage the material in this specific text?
- Will this specific text help to develop the **inferencing skills, visualization skills, questioning skills, and comprehension strategies** necessary for future reading endeavors?

Motivation and Engagement with Task and Text

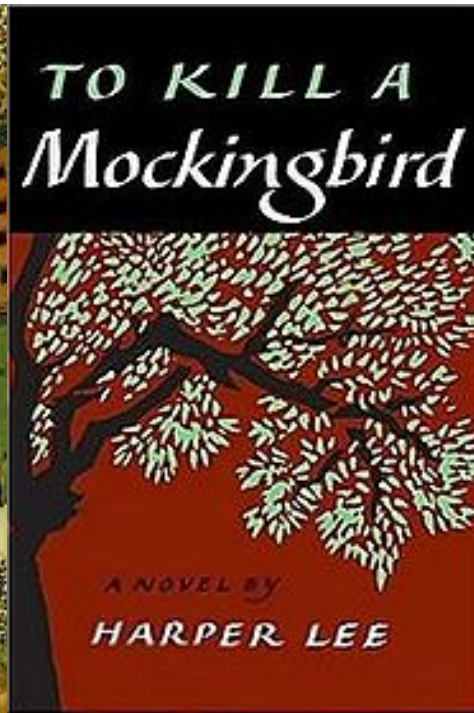
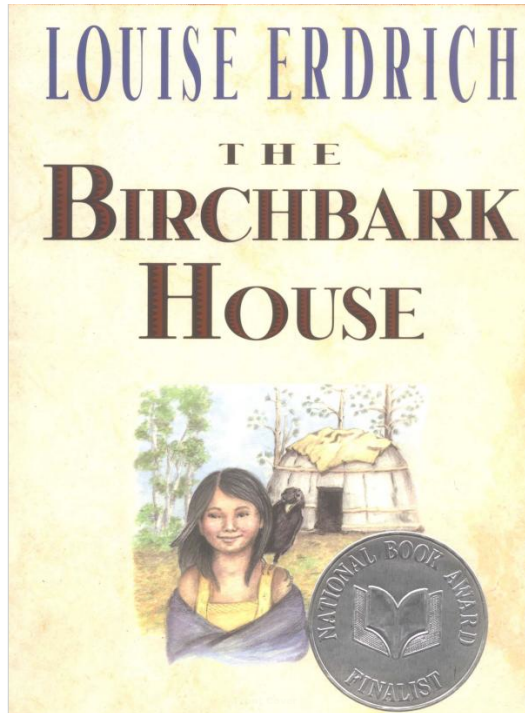
- Will the reader **understand the purpose**—which might shift over the course of the reading experience—for reading this specific text (i.e., skimming, studying to retain content, close reading for analysis, etc.)?
- Will the reader be **interested in the content** of this specific text?



Based upon all the information—all three legs of the model—the final recommendation for *To Kill a Mockingbird* is....



Text Complexity Grade Bands
K-1
2-3
4-5
6-8
9-10
11-CCR



F&P TEXT LEVEL GRADIENT™	
UNTAS & PINNELL LEVELS	GRADE LEVEL GOALS
A	Kindergarten
B	
C	
D	
E	Grade One
F	
G	
H	
I	Grade Two
J	
K	
L	
M	Grade Three
N	
O	
P	
Q	Grade Four
R	
S	
T	
U	Grade Five
V	
W	
X	
Y	Grade Six
Z	
Z+	Grades Seven & Eight +
	High School/Adult

T

W

Z

Model 3: Guided Reading Levels assigned for entire text

T	W	Z
Informational texts, more complex fantasy, realistic fiction, traditional literature (folktales), biographies, autobiographies, memoirs, mysteries, historical fiction, short stories, genre combinations (hybrids), diaries	[verbatim from T]	[verbatim from T & W]
Themes focusing on the problems of preadolescents, human problems (war, hardship, economic issues); themes evoke alternative interpretations	Mature societal issues, especially those important to adolescents; wide range of challenging themes that build social awareness and reveal insight into the human condition	[verbatim from W]
Some words from languages other than English; words used in regional or historical dialects; Many words with affixes; multisyllable proper nouns that are difficult to decode	Words that offer decoding challenges because they are archaic come from regional dialect or from languages other than English	[verbatim from W]

II. Quantitative Information That Can Guide Instruction: Grades 2 & Beyond

Purpose & Types of Information

For what purpose do we need information on a text's complexity?

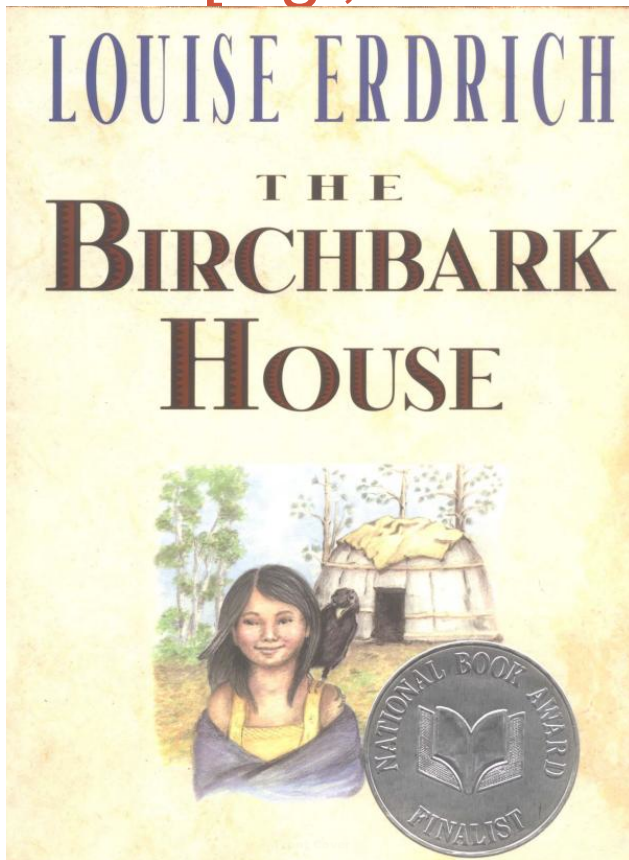
A. Assessment

B. Instruction

- **Lessons:** Ensuring the right texts so that students can be guided in acquiring new proficiencies—thus, growing their capacity.
- **Student-text fit:** Ensuring the right texts for lessons which give them appropriate deliberate practice.

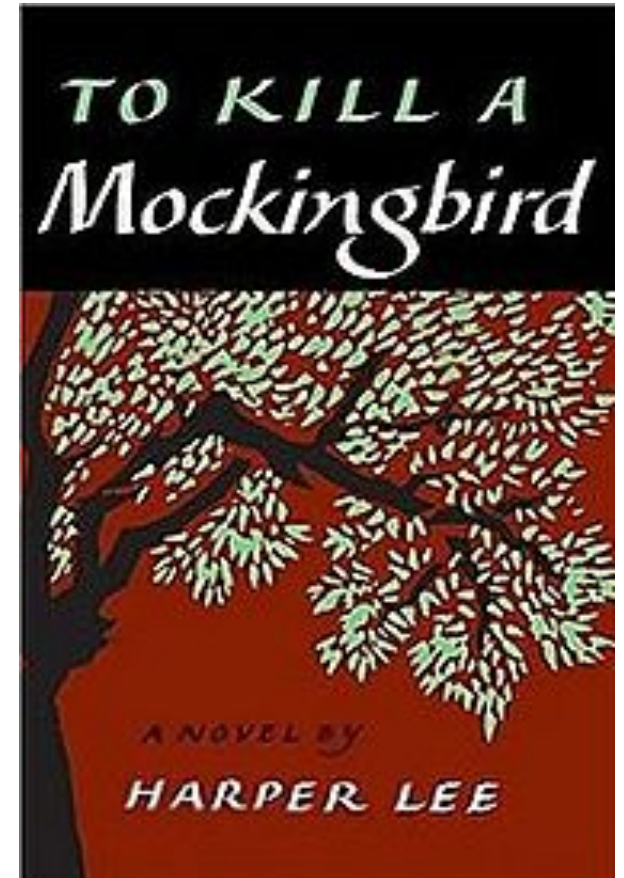
Developmental progressions: How do features of texts at different levels change?

First Count: Numbers Matter in Reading [e.g., amount of cognitive processing & memory]



Grs. 4-5:
40,026 words

Grs. 6-8:
50,040 words

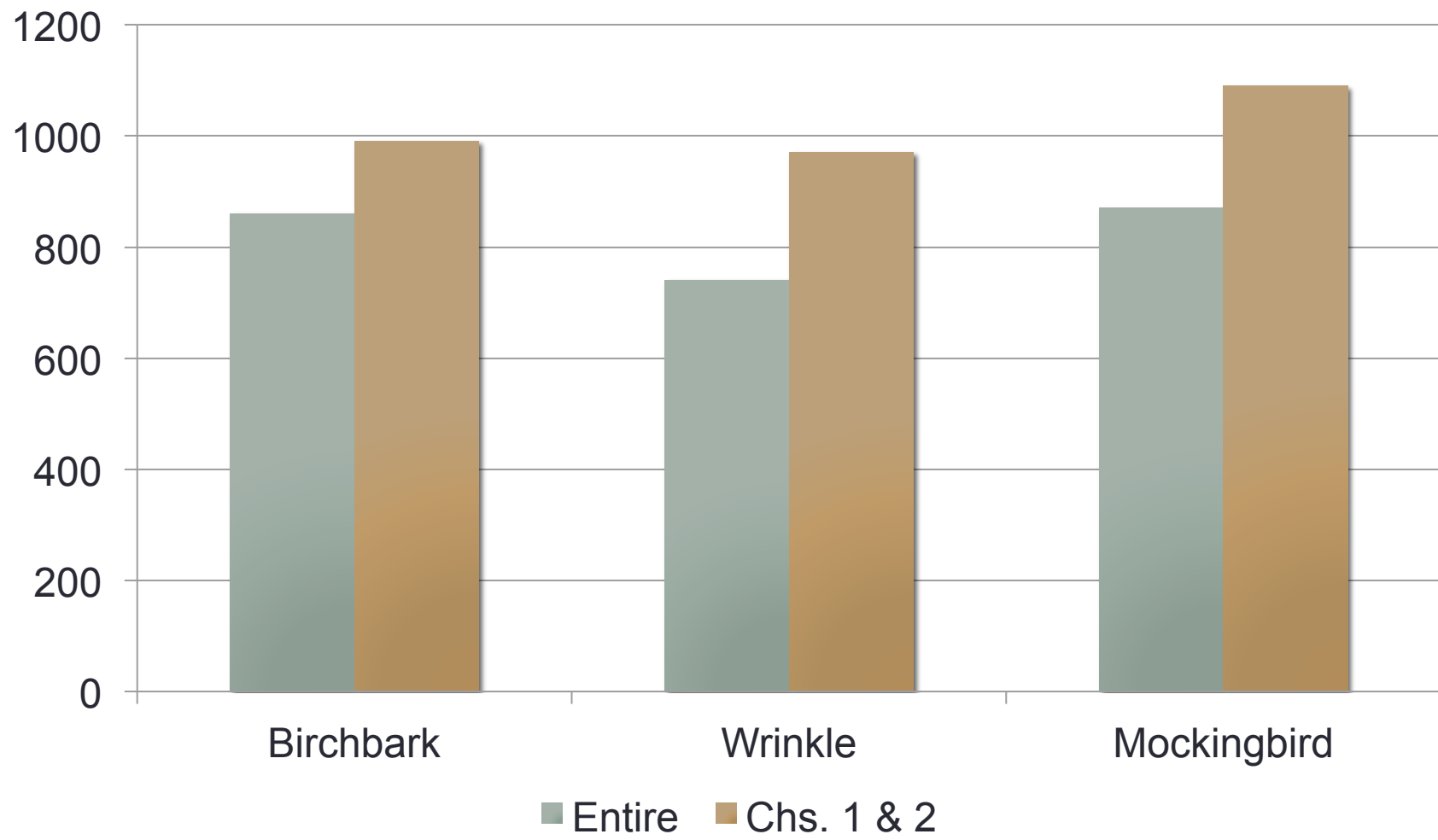


Grs. 9-10:
100,103 words

Second Count: Numbers and their Implications Change Over a Text

- Complexity changes over the course of a text, as the reader builds a situation model.
- It is in the first chapter (and, often, the second as well) where the traits of characters, the context, and the precipitating problem are typically laid out. In terms of vocabulary, this portion of the text may be much more demanding than subsequent chapters.
- In reading the third and fourth chapters of novels like *Birchbark House*, *A Wrinkle in Time* or *To Kill a Mockingbird*, readers build on the background knowledge gained from the first two chapters of the text.

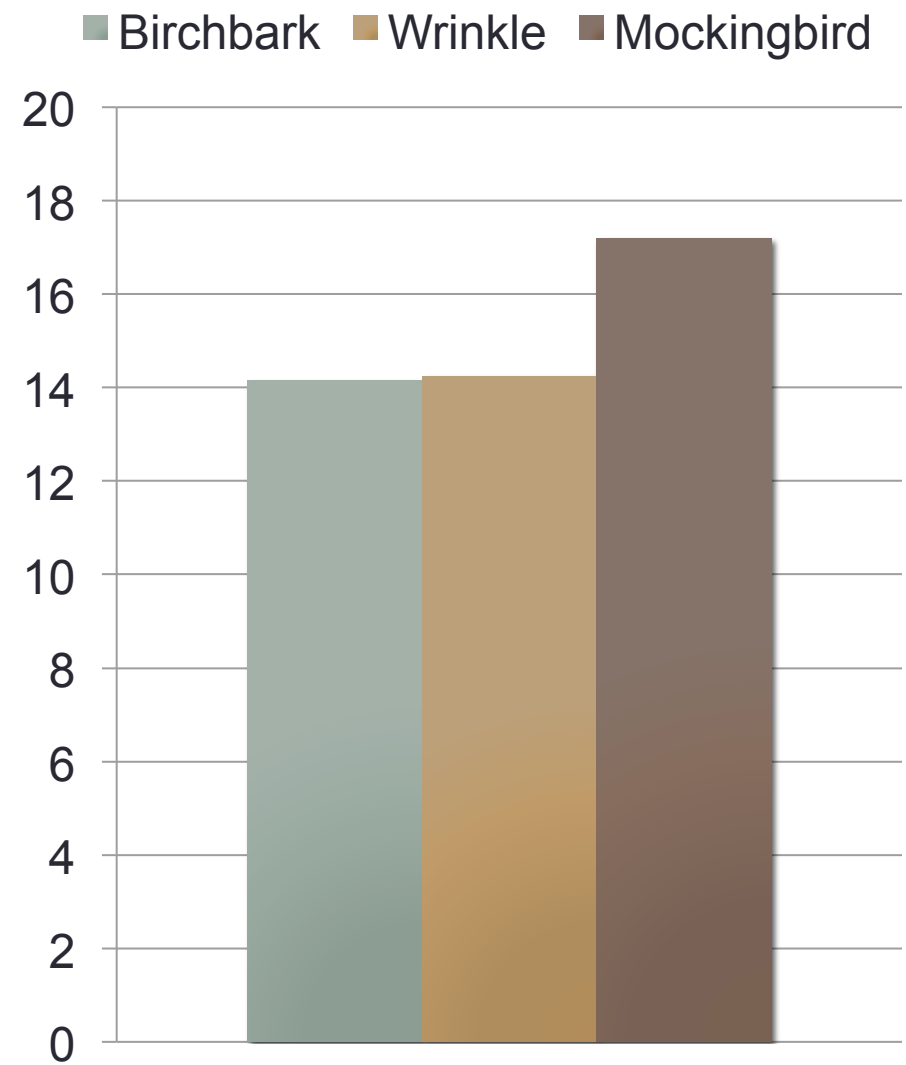
Quantitative data (Lexiles) confirms this pattern.



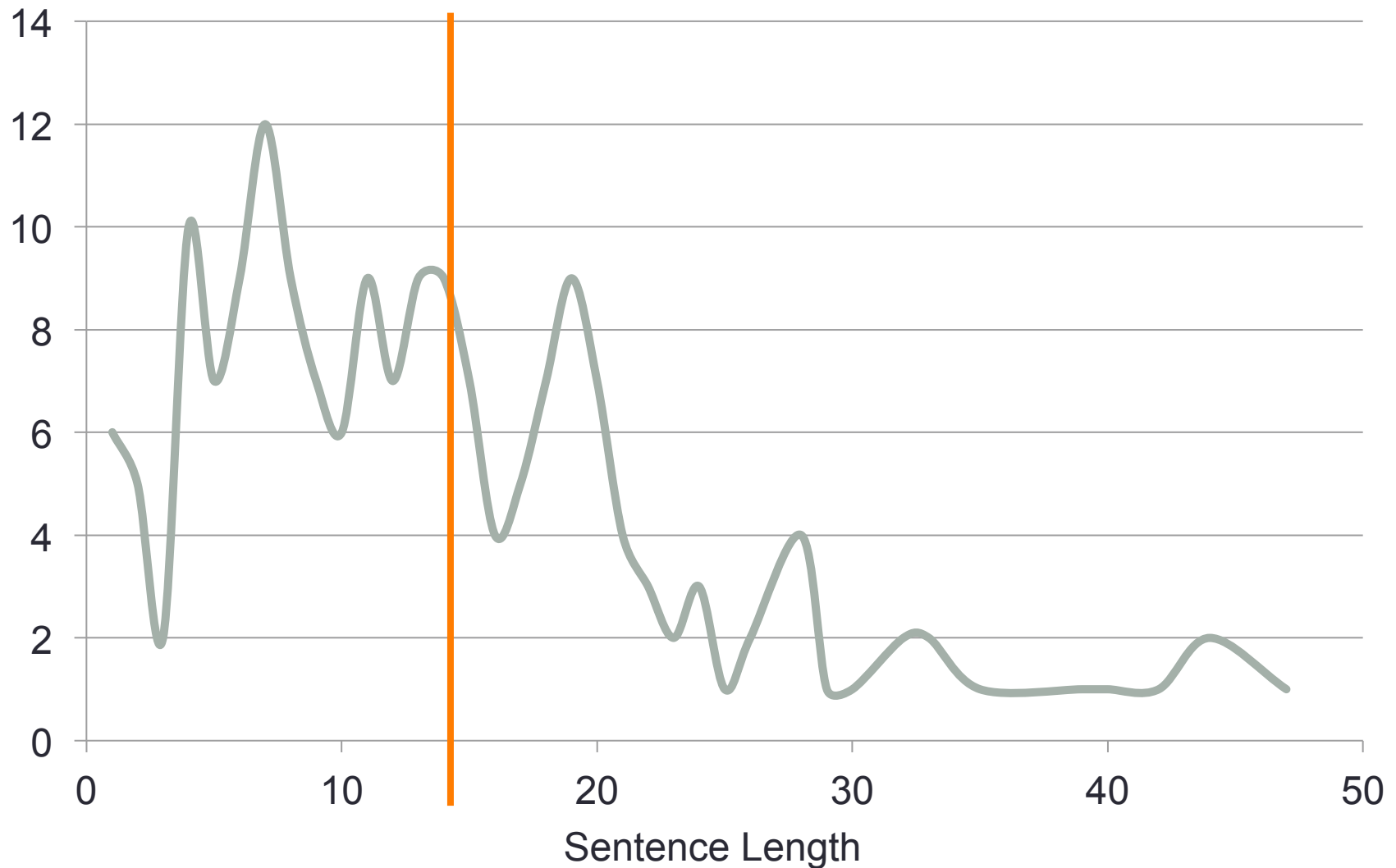
Third Count: Long Sentences Mean Numerous Propositions.

Chapters 1-2 Sentence Length

Sentence Length & Lexiles: <i>R</i> = 0.94		
	Narrative	Expository
0-200	5.3	4.9
201-400	6.2	6.3
401-600	8.6	8.3
601-800	10.9	10.6
801-1000	13.9	13.08
1001-1200	17.4	17.01
1200+	25.6	22.6



Occurrences of Sentence Lengths: 1st Chapter of *Birchbark House*





As it grew dark, the family ate makuks of moose stew and fresh greens and berries, licked their fingers and bowls clean, and at last rolled themselves into warm, fluffy rabbit-skin blankets that still smelled of the cedary smoke of their winter cabin. They were glad to be close to fire, sleeping on soft grassy earth, under leafy sky, and best of all, near water. They fell asleep to the peaceful, curious, continual lapping sound of waves. The fresh wind across the big lake blew away the smoke of cooking fires and vanquished the mosquitoes that came out in whining droves and had plagued them in town. It was good to sleep where the village dogs didn't bark all night and where the only sound to disturb their dreams was the pine trees sifting wind in a lulling roar.

Unless, of course, it stormed.

The moon went down to a fingernail's sliver and the corn popped from the ground. The leaves of the birch grew big enough to flutter in the wind. And then, one night, the first storm of the summer struck the island and startled everybody from their dreams.

The fire was down to red winking eyes when Omakayas woke with an uneasy feeling. Something approached. She'd felt a footstep. Omakayas was always

the one to sleep near Grandma and now she rolled close. There was a lonely insistence to the sound of the wind, and then everything went still. Far off, she heard one huge footstep. There was a long silence. Then another step fell. The earth shook slightly beneath her, vibrated as though she lay on the head of a vast drum.

A drum! She remembered that Grandma had said the island was the drum of the thunder beings. Closer and closer they came, shaking earth with their footsteps. Omakayas's lonely feeling became fright. She hid her face and tried not to think of balls of witch fire or the hooting of Grandfather Owl. She tried to keep herself from picturing pakuks, the skeletons of little children, flying through the woods, or the icy breath of giant windigos striding over the ground, cracking trees off with every foot crunch. Another step. Another and another fell and then the wind howled to life. Rain slashed against the tightly sewn walls. A breath of air stirred up the slumbering coals and cast shadows leaping and fighting on the inside walls of the little birchbark house.

The willow poles trembled, bouncing with the force of the gusts of wind. The birchbark scraped and flapped but was held on with tight stitches. Omakayas hid her face as thunder rolled, smacking onto the lakeshore,

THE BIRCHBARK HOUSE

waking everything and everyone with its quick violence. The storm punished the ground and then passed over, dying off in softer mumbles. The dull thuds of thunder falling in the distance now felt comforting, and before the sounds entirely faded, Omakayas was asleep.



Moningwanaykaning, Island of the Golden-Breasted Woodpecker, sparkled innocently after that night of raw thunder and lightning. Omakayas woke and immediately began wondering. What had the storm done to the trees? What had the waves washed onto the beach? What interesting bits of wood that she could use for pretend dolls? What kind of day would it be? Were the little berries on the edge of the path ripe yet? An unpleasant piece of wondering came to her, too. Had her mother finished scraping and tanning that ugly moose hide or would she have to help her? Oh, she hoped not. How she hoped! There was a saying she hated. Grandma said it all too often. "Each animal," she would say, "has just enough brains to tan its own hide." Mama tanned the moose hide with the very brains of the moose and Omakayas hated the oozy feel of them on her hands, not to mention the boring, endless scraping and rubbing that went into making a hide soft enough for makazins.

The Birchbark House

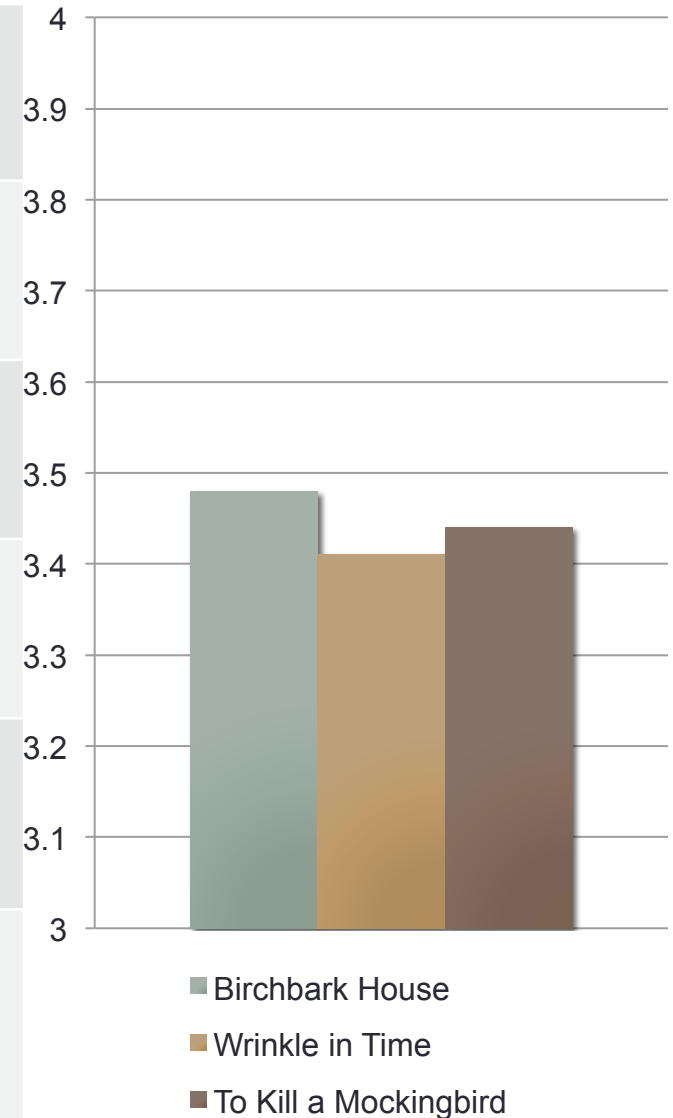
From a fire in the center of the bark house a thin curl of smoke rose, then vanished through a crescent of sunlight in the roof. If only she could escape with the smoke! She could already hear Mama and Grandma outside at the cooking fires. They were planning the day's work. In no time at all, that soaking moose hide would be stretched on a branch frame and she would be required to scrape at it with the sharpened deer's shoulder bone that her mother kept in a bundle of useful things near the door. Her arms would tire; they would feel like falling off. Her fingers would go numb. Her back would hurt. The awful smell would get into her skin. And meanwhile, all the little birds would find the luscious patch of berries she alone knew about. By the time she got that stupid old moose hide softened up, they would have eaten every last berry. She must act. Quickly!

The air was fresh, delicious, smelling of new leaves in the woods, just-popped-out mushrooms, the pelts of young deer. The air flowed in, rainwashed, under the strips of birchbark walls she had helped sew together yesterday. Like a small, striped snake, like a salamander, or a squirrel maybe, or a raccoon, something quick, little, harmless, and desperate, she slid, crept, wiggled underneath the sides of the summer house. The seam of bark

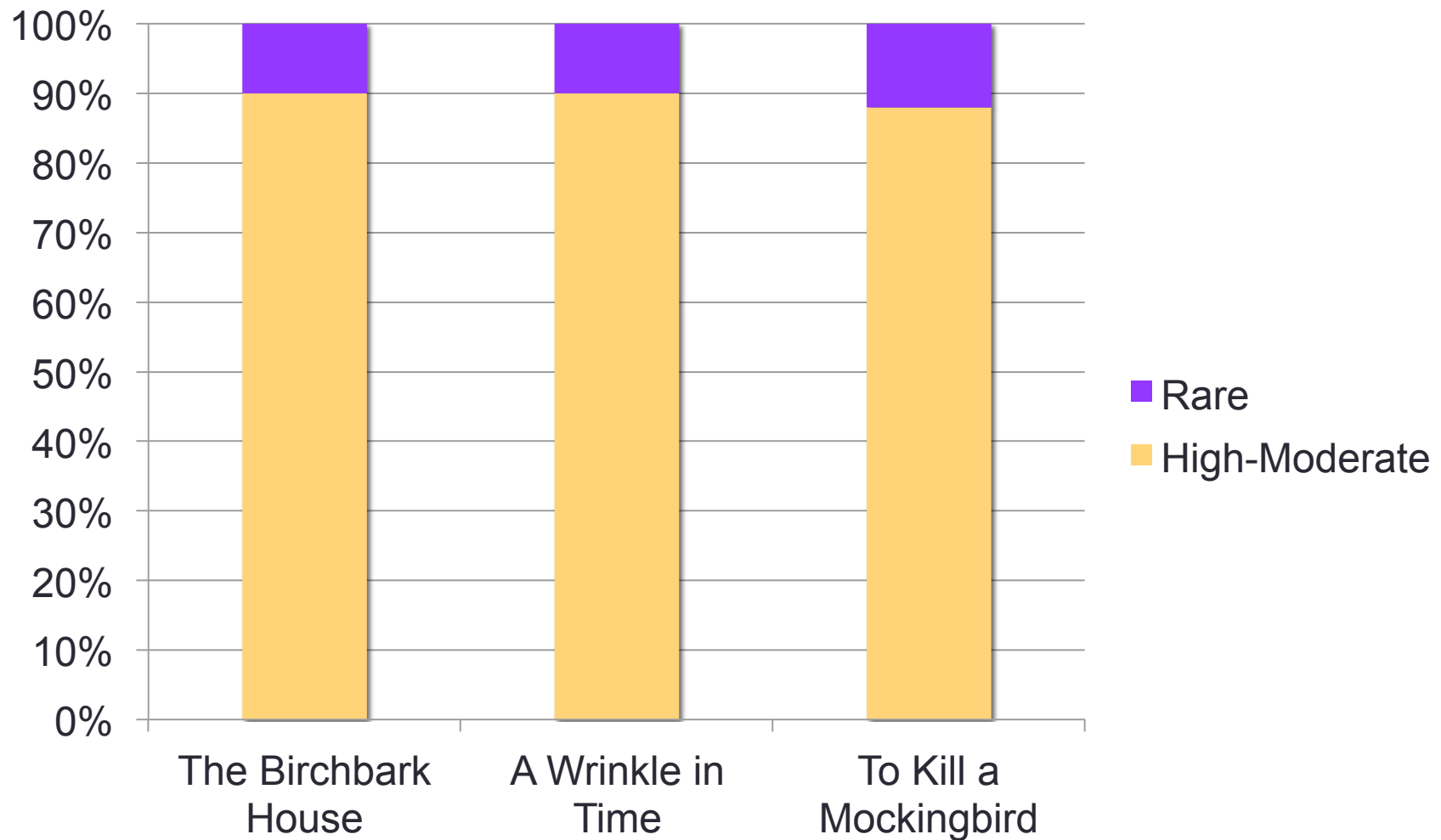
Fourth Count: The Number of Unknown Words in a Text Matters

	Mean Log Word Frequency	A Common Core Exemplar
Few Rare Words	3.9-4.0+	4.1 <i>Green Eggs & Ham</i> (Seuss) 4.0 <i>Little Bear's Friend</i> (Minarik) 3.9 <i>The Treasure</i> (Shulevitz)
	3.7-3.8	3.8 <i>Dragonwings</i> (Yep) 3.75 <i>Peter's Chair</i> (Keats) 3.7 <i>The Raft</i> (LaMarche)
	3.5-3.6	3.6 <i>The Gettysburg Address</i> (Lincoln) 3.55 <i>We are the ship</i> (Nelson) 3.5 <i>The Great Gatsby</i> (Fitzgerald)
	3.3-3.4	3.4 <i>Don Quixote</i> (Cervantes) 3.35 <i>Canterbury Tales</i> (Chaucer) 3.3 <i>Circumference</i> (Nicastro)
	3.1-3.2	3.2 <i>Letter from Birmingham Jail</i> (King) 3.15 <i>The American Language</i> (Mencken) 3.1 <i>As I lay dying</i> (Faulkner)
Many Rare Words (Usually Very Technical)	3.0 and below	3.02 <i>Invasive Plant Inventory</i> (CA Invasive Plant Council) 2.95 <i>Recommended Levels of Insulation</i> (US EPA) 2.76 <i>Euclid's Elements</i> 2.67 <i>Euclid's Elements</i>

Lexile & Word Frequency: $r = -.54$



An Alternative Perspective on Vocabulary: Word Zone Profiler (www.textproject.org)



Rare Words In Chapters 1-2

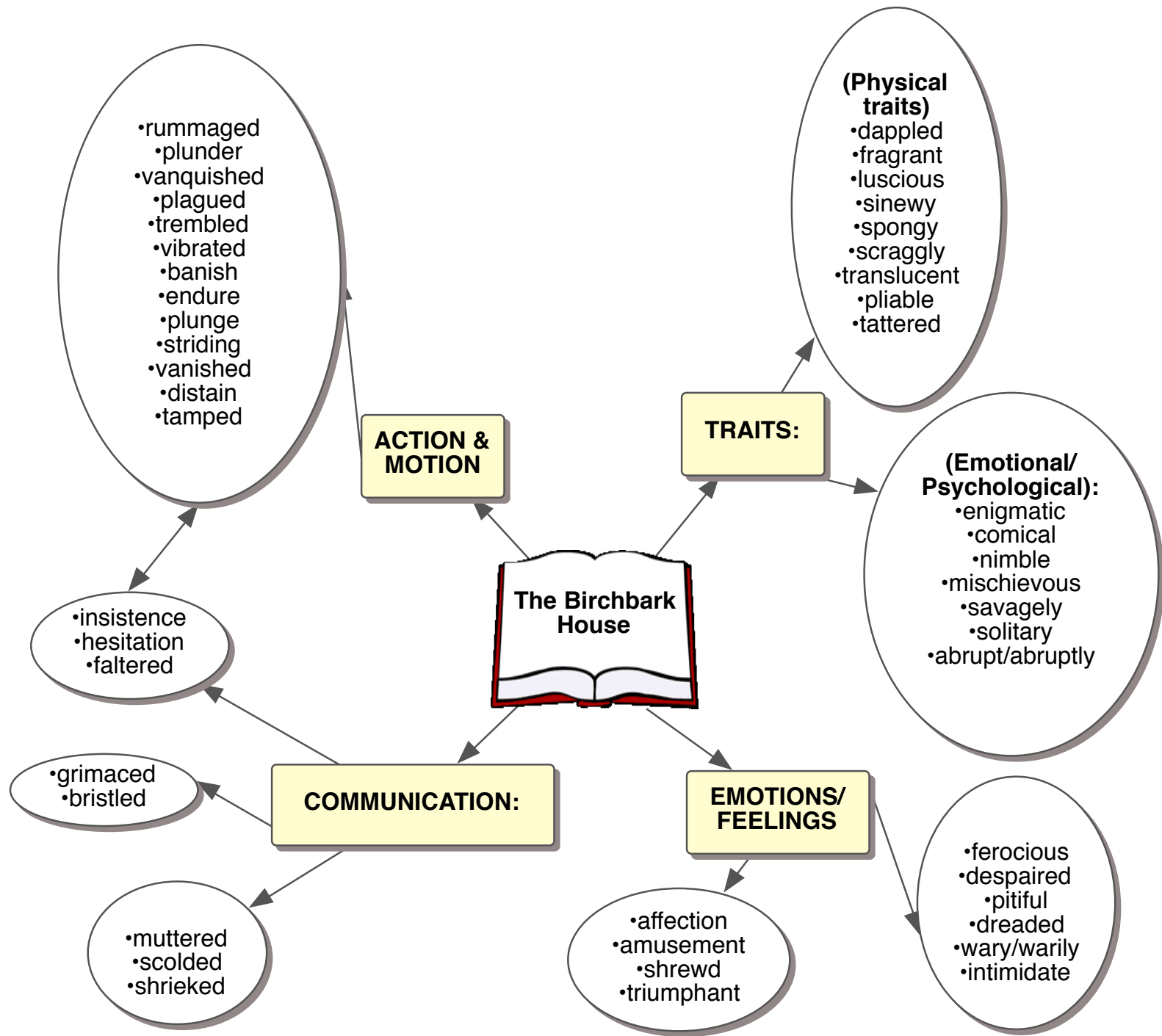
	Unique Words/ Total Words	Rare Words
Birchbark	1,557/5,718	345 (about 6 unique per 100 words)
Wrinkle	1,697/8,340	416 (about 5 unique per 100 words)
Mockingbird	1,893/7,317	507 (about 7 unique per 100 words)

Getting to the Unknown (and Domain-Specific & Text-Specific) Words: Assumptions about what is known

	Birchbark	Wrinkle	Mockingbird
Automaticity with simple word families Within Core Vocabulary (i.e., 4,000 word families)	surround, contrast, curious, confidence	indicate, nevertheless, upsetting, announced, warnings, quantify	deliberately, miserably, bargain, excessive, exploded
WITHIN THE RARE VOCABULARY			
1. Decoding strategies with words with 5 or fewer letters	fury, numb, envy, flaw, grime, stale	quote, scud, meek, mite, smug	alien, enact, sober, optic, eaves, piety
2. Affixes, inflected endings, & compounds of known words	aunt(ie), crook(ed), scrape(d, ing, er), hate(ful)	Distrust, untied, passable, overturned	unaware, checkerboard, scrapbook, untouched, puzzlement
3. Recognition of words within Age of Acquisition Span (Kuperman, Stadthagen-Gonzalez, & Brysbaert, 2012): Words in oral language of students two years younger	politely, splinter, strip, wiggle, earlobe	disgusted, embarrassed, ashamed, unattractive, grammar, pantry	impatience, nocturnal, generosity, misery

Rare words in Chapters 1-2

	Unique Words/ Total Words	Rare Words	Vetted Rare Words (Non-English)
Birchbark	1,557/5,718	345	52 (26)
Wrinkle	1,697/8,340	416	109 (5)
Mockingbird	1,893/7,317	507	83





As it grew dark, the family ate makuks of moose stew and fresh greens and berries, licked their fingers and bowls clean, and at last rolled themselves into warm, fluffy rabbit-skin blankets that still smelled of the cedary smoke of their winter cabin. They were glad to be close to fire, sleeping on soft grassy earth, under leafy sky, and best of all, near water. They fell asleep to the peaceful, curious, continual lapping sound of waves. The fresh wind across the big lake blew away the smoke of cooking fires and **vanquished** the mosquitoes that came out in **whining** droves and had **plagued** them in town. It was good to sleep where the village dogs didn't bark all night and where the only sound to disturb their dreams was the pine trees sifting wind in a lulling roar.

Unless, of course, it stormed.

The moon went down to a fingernail's sliver and the corn popped from the ground. The leaves of the birch grew big enough to flutter in the wind. And then, one night, the first storm of the summer struck the island and startled everybody from their dreams.

The fire was down to red winking eyes when Omakayas woke with an uneasy feeling. Something approached. She'd felt a footstep. Omakayas was always

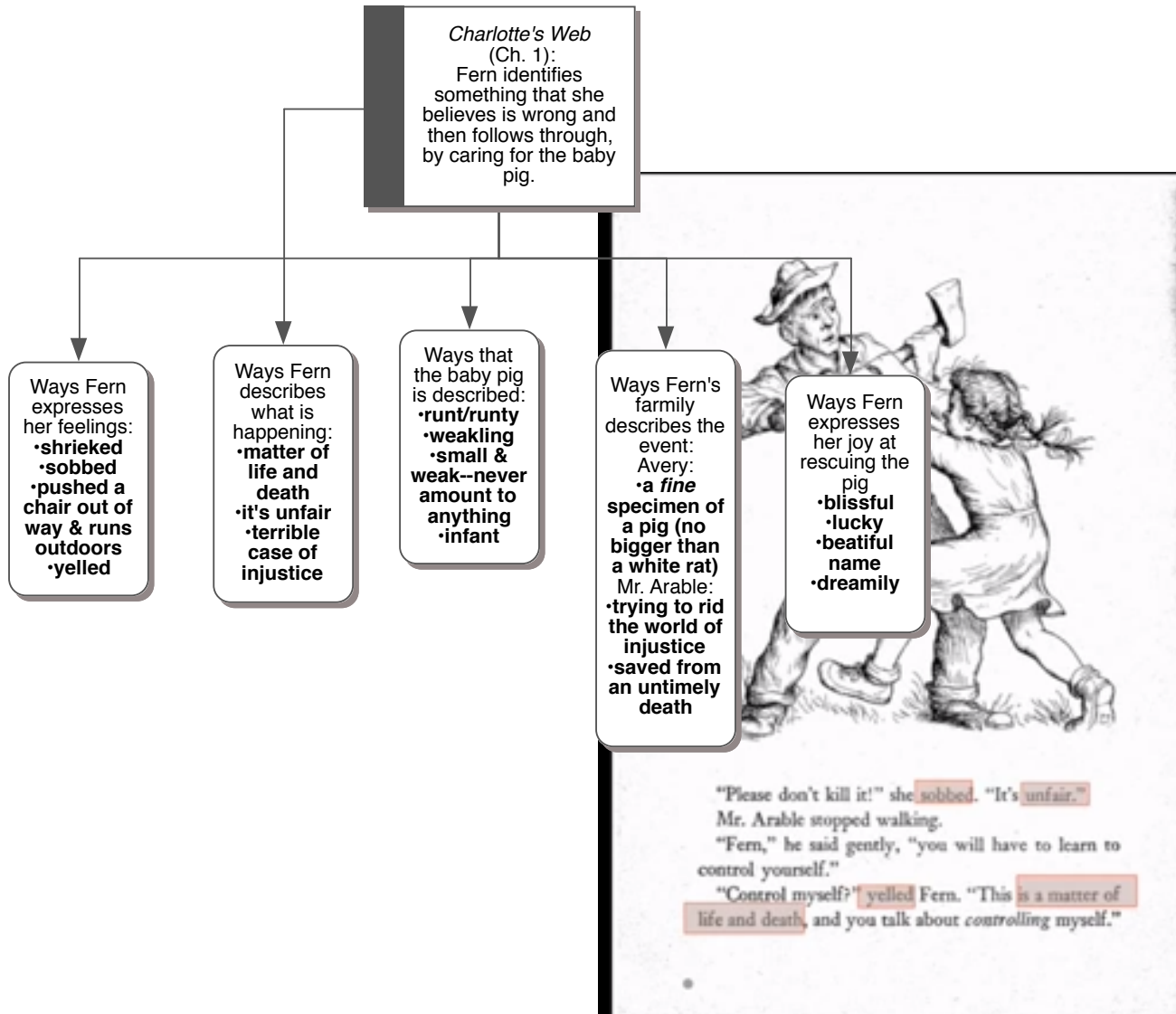
the one to sleep near Grandma and now she rolled close. There was a lonely insistence to the sound of the wind, and then everything went still. Far off, she heard one huge footstep. There was a long silence. Then another step fell. The earth shook slightly beneath her, **vibrated** as though she lay on the head of a vast drum.

A drum! She remembered that Grandma had said the island was the drum of the thunder beings. Closer and closer they came, shaking earth with their footsteps. Omakayas's lonely feeling became fright. She hid her face and tried not to think of balls of witch fire or the hooting of Grandfather Owl. She tried to keep herself from picturing pakuks, the skeletons of little children, flying through the woods, or the icy breath of giant windigos striding over the ground, cracking trees off with every foot crunch. Another step. Another and another fell and then the wind howled to life. Rain slashed against the tightly sewn walls. A breath of air stirred up the slumbering coals and cast shadows leaping and fighting on the inside walls of the little birchbark house.

The willow poles trembled, bouncing with the force of the gusts of wind. The birchbark scraped and flapped but was held on with tight stitches. Omakayas hid her face as thunder rolled, smacking onto the lakeshore,

Close Reading & Vocabulary

video available at YouTube/TextProject



Before Breakfast 3

Tears ran down her cheeks and she took hold of the ax and tried to pull it out of her father's hand.

"Fern," said Mr. Arable, "I know more about raising a litter of pigs than you do. A weakling makes trouble. Now run along!"

"But it's unfair," cried Fern. "The pig couldn't help being born small, could it? If I had been very small at birth, would you have killed me?"

Mr. Arable smiled. "Certainly not," he said, looking down at his daughter with love. "But this is different. A little girl is one thing, a little runty pig is another."

"I see no difference," replied Fern, still hanging on to the ax. "This is the most terrible case of injustice I ever heard of."

A queer look came over John Arable's face. He seemed almost ready to cry himself.

"All right," he said. "You go back to the house and I will bring the runt when I come in. I'll let you start it on a bottle, like a baby. Then you'll see what trouble a pig can be."

When Mr. Arable returned to the house half an hour later, he carried a carton under his arm. Fern was upstairs changing her sneakers. The kitchen table was set for breakfast, and the room smelled of coffee, bacon, damp plaster, and wood smoke from the stove.

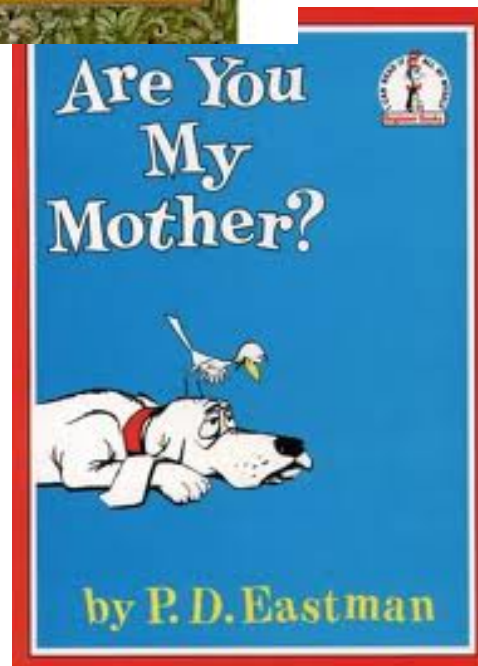
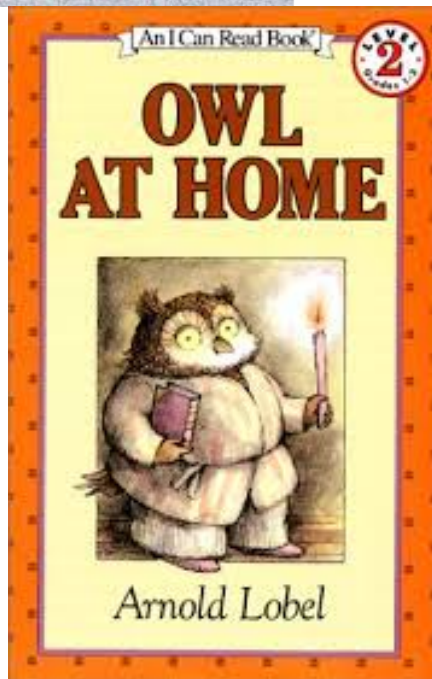
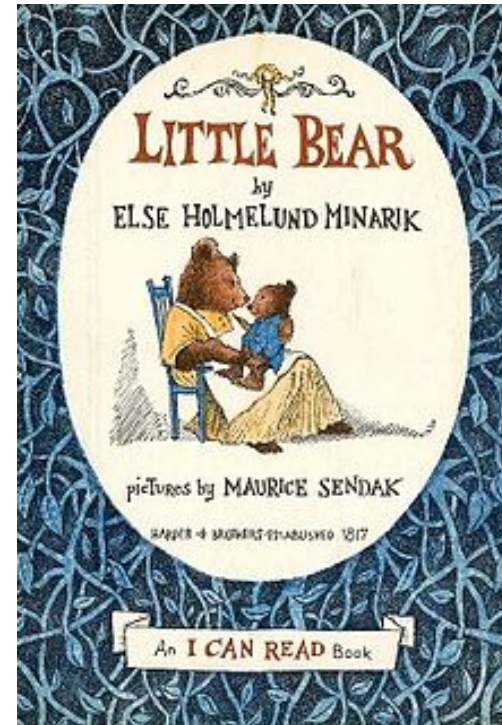
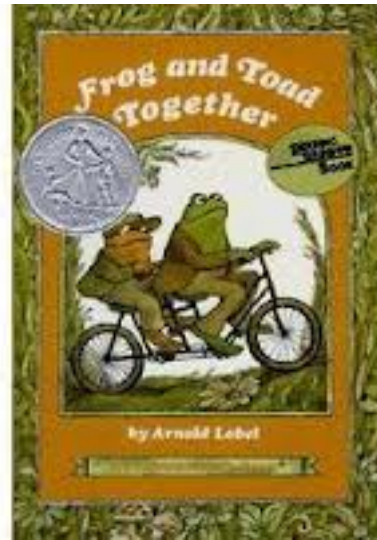
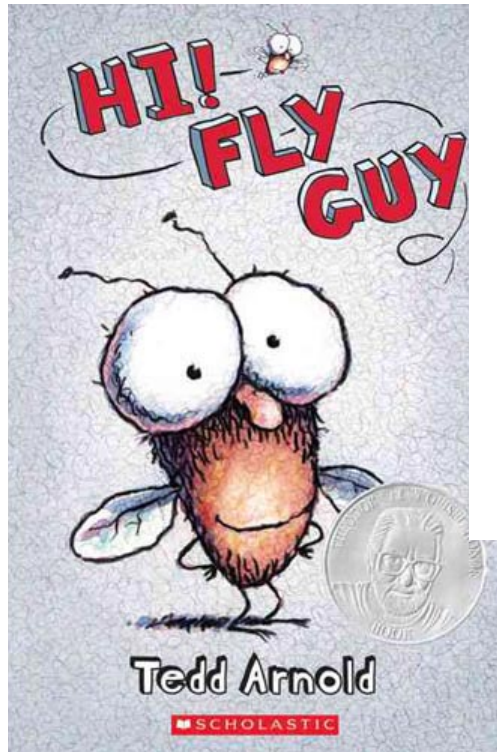
"Put it on her chair!" said Mrs. Arable. Mr. Arable set the carton down at Fern's place. Then he walked

Final Observation about Quantitative Features of Texts: A View Across Entire Texts

	Total Words in Text	Potential Rare (Vetted)
Birchbark	40,026	2,415 (364)
Wrinkle	50,040	2,496 (654)
Mockingbird	100,103	7,605 (1,245)

Themes of the Presentation:

- I. Quantitative (or qualitative) assessments that give a single number or letter don't help teachers know *what* to teach or *how* to match students with texts that support their growth in reading.
- II. There is quantitative information that can aid teachers in choosing *what texts* to teach and *how* to assign appropriate texts to students.
 - a) In particular, information provided from large digital databases of texts means that vocabulary representing key concepts and potentially challenging for readers can be identified.
 - b) But there are other quantitative features of texts that matter a great deal in students' growth of reading capacity and also their ability to read texts independently.



Using Quantitative Measures of Text Complexity in Classroom Instruction: Grades K-1

By September 1, 2013
on TextProject's YouTube
Channel



Using Quantitative Measures of Text Complexity in Classroom Instruction: What's Appropriate? What's Not?

General measures may be useful in building assessments but, for classroom purposes, specific information about features of texts is needed. The use of specific information about text features will be demonstrated for primary grades and for middle grades and beyond.

Join us on 6/20/2013 as Elfrieda (Freddy) H. Hiebert presents a FREE webinar. [Register now!](#)

Student Resources

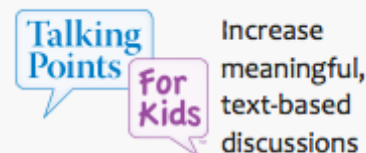
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Timothy Shanahan, University of Illinois at Chicago

Dr. Shanahan identifies tasks which states and districts must undertake to successfully implement the English/Language Arts Common Core standards.



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Research and the Common Core: Can the Romance Survive?

Dr. P. David Pearson, University of California, Berkeley

This presentation considers the research foundations of the Common Core State Standards, especially as it pertains to comprehension.



24 April 2013

Key Shifts in Assessment and Instruction Related to CCSS-ELA

Dr. Karen K. Wixson, University of North Carolina at Greensboro

1—2pm, Pacific Daylight Time

Registration is now open! <https://www4.gotomeeting.com/register/751883535>



30 May 2013

Informational Text and the CCSS: Pitfalls and Potential

Dr. Nell K. Duke, University of Michigan

1—2pm, Pacific Daylight Time

More information, including how to register, will be available soon.



20 June 2013

Quantitative Measurement of Text Complexity

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

Please note that the date for this webinar has been changed to June 20, 2013.

2—3pm, Pacific Daylight Time (5—6pm Eastern)

Registration is now open! <https://www4.gotomeeting.com/register/916300207>

Recordings of past webinars are available at
TextProject's YouTube channel.

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