Determining Text Complexity

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Text Complexity

"The Common Core Standards hinge on students encountering appropriately complex texts at each grade level in order to develop the mature language skills and the conceptual knowledge they need for success in school and life" (p. 3).

Reading Anchor Standard

R.CCR.10. Read and comprehend complex literary and informational texts independently and proficiently.

Definition

Text complexity is defined by the CCSS as a three-part model consisting of quantitative and qualitative dimensions as well as reader and task consideration

- Quantitative measures include analysis of word frequency and sentence length, which are typically best measured by computer software.
- Qualitative factors include levels of meaning, structure, language conventionality, clarity, and knowledge demands.

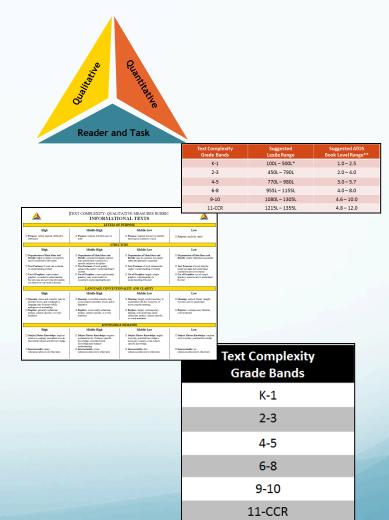


• Reader and Task considerations include students' motivation, knowledge, and background interests, and are best made by the teacher.

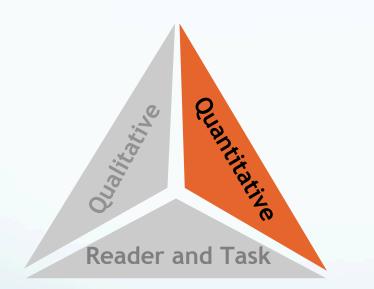
Determining Text Complexity

Four Step Process

- 1. Determine the quantitative measures of the text.
- 2. Analyze the qualitative measure of the text
- 3. Reflect upon the reader and task considerations.
- 4. Recommend placement in the appropriate text complexity band.



Step 1: Quantitative Measures



Measures such as the following:

- Word length
- Word frequency
- Word difficulty
- Sentence length
- Text length
- Text cohesion

Lexile Text Measures



Resources for Selecting Texts Quantitative Measures

- Lexile Find a Book (Lexile measure) <u>http://lexile.com/findabook</u>
- The Accelerated Reader BookFinder (ATOS book level) <u>http://www.arbookfind.com/</u>
- Questar Degree of Reading Power DRP Analyzer (Textbook readability score)

http://www.questarai.com/products/drpprogram/pages/ textbook_readability.aspx

Grade Bands and Associated Ranges

Multiple Measures from different sources

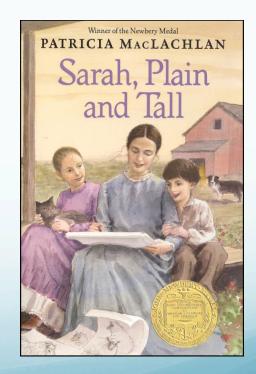
Common Core Band	ATOS	Degrees of Reading Power®	Flesch- Kincaid ⁸	The Lexile Framework®	Reading Maturity	SourceRater
2 nd – 3rd	2.75 - 5.14	42 – 54	1.98 – 5.34	420 - 820	3.53 - 6.13	0.05 - 2.48
4 th – 5 th	4.97 – 7.03	52 - 60	4.51 - 7.73	740 - 1010	5.42 - 7.92	0.84 – 5.75
6 th – 8 th	7.00 – 9.98	57 - 67	6.51 - 10.34	925 - 1185	7.04 – 9.57	4.11 - 10.66
9 th – 10 th	9.67 - 12.01	62 - 72	8.32 - 12.12	1050 - 1335	8.41 - 10.81	9.02 - 13.93
11 th – CCR	11.20 - 14.10	67 – 74	10.34 - 14.2	1185 - 1385	9.57 - 12.00	12.30 - 14.50

ATOS: Accelerated Reader - Renaissance Learning Degrees of Reading Power: Questar Flesch-Kincaid: Readability Formulas The Lexile Framework: Meta Metrix Reading Maturity: Pearson Reading Maturity Metric - Pearson Education Source Rater: Educational Testing Service

Example of Using the Lexile Analyzer

Imagine we want to see where a text falls on the quantitative measures "leg" of the text complexity triangle, using the Lexile text measures.

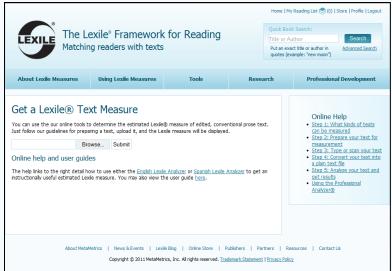
For illustrative purposes, let's choose Patricia MacLachlan's 1986 book, *Sarah, Plain and Tall*.



Using the Lexile Analyzer

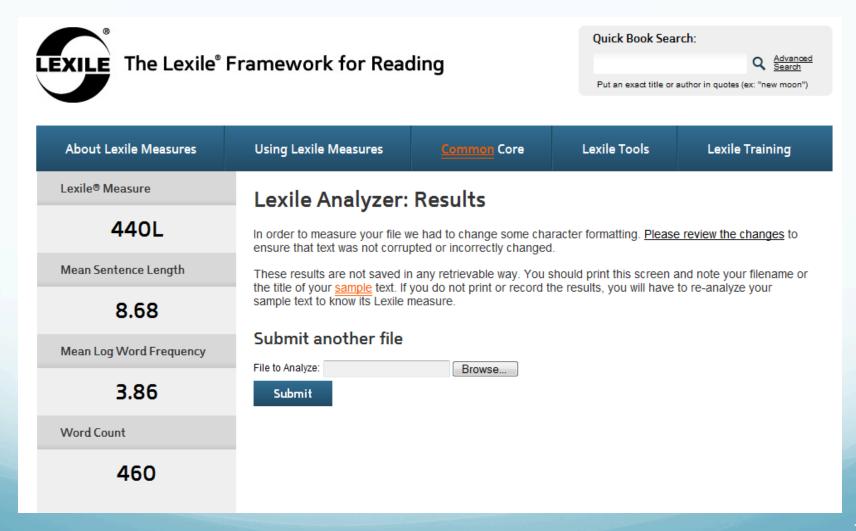
For texts with not in the Lexile database: www.lexile.com/analyzer/

- Free registration is required. http://www.lexile.com/account/register/
- Allows user to receive an "estimated" Lexile score
- Accommodates texts up to 1000 words in length

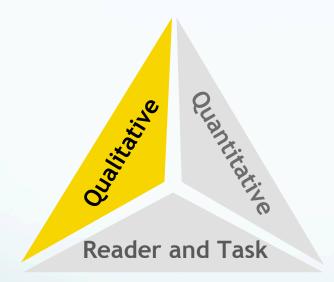


 Texts of any length can be evaluated using the Professional Lexile Analyzer. Educators can upgrade to this tool for free by requesting access. <u>http://www.lexile.com/account/profile/access/</u>

Passage from Sarah, Plain and Tall



Step 2: Qualitative Measures



Measures such as the following:

- Levels of meaning
- Levels of purpose
- Structure
- Organization
- Language conventionality
- Language clarity
- Prior knowledge demands

Step 2: Qualitative Measures

Qualitative Measures Rubrics for Literary and Informational Text

http://www.ksde.org/Default.aspx?tabid=4605

The rubric for literary text and the rubric for informational text allow educators to evaluate the important elements of text that are often missed by computer software that tends to focus on more easily measured factors.

	TEXT COMPLEXITY: QUALITATIVE MEASURES RUBRIC LITERARY TEXTS				
	LEVELS OI	F MEANING		1	
High	Middle High	Middle Low	Low	1	
Multiple Levels of Complex Meaning	Multiple Levels of Meaning	Single Level of Complex Meaning	Single Level of Simple Meaning		
	STRUC			1	
High	Middle High	Middle Low	Low		
 Narrative Structure: complex, implicit, and unconventional Narration: many shifts in point of view 	 Narrative Structure: some complexities, more implicit than explicit, some unconventionality Narration: occasional shifts in point of view 	 Narrative Structure: largely simple structure, more explicit than implicit, largely conventional, Narration: few, if any, shifts in point of view 	 Narrative Structure: simple, explicit, conventional, no shifts in point of view Narration: no shifts in point of view 		
Order of Events: not in chronological order Use of Graphics: sophisticated graphics, essential to understanding	 Order of Events: several major shifts in time, use of flashback Use of Graphics: some sophisticated graphics, may occasionally be 	 Order of Events: occasional use of flashback, no major shifts in time Use of Graphics: largely simple graphics, supplementary to 	 Order of Events: chronological Use of Graphics: use of simple graphics, unnecessary to understand 		
the text, may also provide information not otherwise conveyed in the text	essential to understanding the text	understanding of the text	the text		
	LANGUAGE CONVENTI	ONALITY AND CLARITY			
High	Middle High	Middle Low	Low		
Meaning: implicit or inferred meaning, heavy use of figurative or ironic language, may be purposefully ambiguous or misleading at times	 Meaning: some implicit or inferred meaning, use of figurative or ironic language 	 Meaning: largely explicit and literal meaning, subtle use of figurative or ironic language 	 Meaning: explicit and literal meaning, little or no use of figurative or ironic language 		
 Register: generally unfamiliar, archaic, domain-specific, or overly academic 	 Register: occasionally unfamiliar, archaic, domain-specific, or overly academic 	 Register: largely contemporary, familiar, conversational, rarely unfamiliar, archaic, domain-specific, or overly academic 	 Register: contemporary, familiar, conversational 		
	KNOWLEDG	E DEMANDS			
High	Middle High	Middle Low	Low		
□ Life Experiences: explores complex, sophisticated, multiple themes; experiences portrayed are not fantasy but are distinctly different from the common reader	 Life Experiences: explores multiple themes of varying levels of complexity; experiences portrayed are not famtasy but are uncommon to most readers 	 Life Experiences: explores a single complex theme; experiences portrayed are common to many readers or are clearly fantasy 	 Life Experiences: explores a single theme; experiences portrayed are everyday and common or are clearly fantasy 		
□ Cultural/Literary Knowledge: many references/allusions to other texts (interestvalusity) and cultural elements □ Subject Matter Knowledge: requires extensive, perhaps specialized content knowledge	 Cultural/Literary Knowledge: some references/allusions to other texts (intertextuality) and cultural elements Subject Matter Knowledge: requires moderate levels of content knowledge 	 Cultural/Literary Knowledge: few references/allusions to other texts (intertextuality) and cultural elements Subject Matter Knowledge: requires some content knowledge 	 Cultural/Literary Knowledge: no references/allusions to other texts (intertextuality) and cultural elements Subject Matter Knowledge: requires only everyday content knowledge 		

IFEXT COMPLEXITY: QUALITATIVE MEASURES RUBRIC INFORMATIONAL TEXTS								
LEVELS OF PURPOSE								
High	Middle High	Middle Low	Low					
Purpose: subtle, implied, difficult to determine	Purpose: implied, but fairly easy to infer	Purpose: implied, but easy to identify based upon context or source	Purpose: explicitly stated					
	STRUC	TURE						
High	Middle High	Middle Low	Low					
 Organization of Main Ideas and Details: highly complex; not explicit, must be inferred by the reader Text Features: if used, are essential in understanding content 	Organization of Main Ideas and Details: complex but largely explicit; may exhibit traits common to a specific subject or discipline I Text Features: if used, greatly enhance the reader's understanding of content	Organization of Main Ideas and Details: may be complex, but clearly stated and generally sequential Text Features: if used, enhance the reader's understanding of content	 Organization of Main Ideas and Details: clearly stated and sequential Text Features: if used, help the reader ravigate and understand content but are not essential 					
Use of Graphics: sophisticated graphics, essential to understanding the text, may also provide information not otherwise conveyed in the text	Use of Graphics: some sophisticated graphics, may occasionally be essential to understanding the text	Use of Graphics: largely simple graphics, supplementary to understanding of the text	Use of Graphics: use of simple graphics, unnecessary to understand the text					
	LANGUAGE CONVENTION	ONALITY AND CLARITY						
High	Middle High	Middle Low	Low					
Meaning: dense and complex; may be abstract, ironic, and/or figurative; language may be purposefully ambiguous or misleading	Meaning: somewhat complex; may occasionally be abstract, ironic, and/or figurative	 Meaning: largely explicit and easy to understand with few occasions of more complex meaning 	 Meaning: explicit, literal, straight- forward, easy to understand 					
 Register: generally unfamiliar, archaic, subject-specific, or overly academic 	 Register: occasionally unfamiliar, archaic, subject-specific, or overly academic 	 Register: largely contemporary, familiar, conversational; rarely unfamiliar, archaic, subject-specific, or overly academic 	 Register: contemporary, familiar, conversational 					
KNOWLEDGE DEMANDS								
High	Middle High	Middle Low	Low					
 Subject Matter Knowledge: requires extensive, perhaps specialized or even theoretical subject-specific knowledge 	 Subject Matter Knowledge: requires moderate levels of subject-specific knowledge; some theoretical knowledge may enhance understanding 	 Subject Matter Knowledge: largely everyday, practical knowledge is necessary; requires some subject- specific knowledge 	 Subject Matter Knowledge: requires only everyday, practical knowledge 					
□ Intertextuality: many references/allusions to other texts	 Intertextuality: some references/allusions to other texts 	 Intertextuality: few references/allusions to other texts 	 Intertextuality: no references/allusions to other texts 					



knowledge

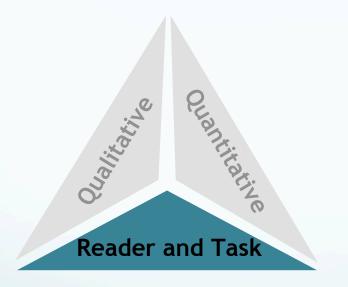
TEXT COMPLEXITY: QUALITATIVE MEASURES RUBRIC LITERARY TEXTS



LEVELS OF MEANING							
High	Middle High	Middle Low	Low				
Multiple Levels of Complex Meaning	Multiple Levels of Meaning	□ Single Level of Complex Meaning	□ Single Level of Simple Meaning				
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	LANGUAGE CONVENTION	ONALITY AND CLARITY					
High	Middle High	Middle Low	Low				
 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 	 Meaning: some implicit or inferred meaning, use of figurative or ironic language Register: occasionally unfamiliar, archaic, domain-specific, or overly academic 	 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 	 Meaning: explicit and literal meaning, little or no use of figurative or ironic language Register: contemporary, familiar, conversational 				
KNOWLEDGE DEMANDS							
High	Middle High	Middle Low	Low				
 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 	 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 	 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 	 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 				

Step 2: Qualitative Measures

- Our initial placement of *Sarah*, *Plain and Tall* into a text complexity band changed when we examined the qualitative measures.
- Remember, however, that we have completed only the first two legs of the text complexity triangle.
- The **reader and task considerations** still remain.



Considerations such as the following:

- Motivation
- Knowledge and experience
- Purpose for reading
- Complexity of task assigned regarding text
- Complexity of questions asked regarding text

Questions for Professional Reflection on Reader and Task Considerations

http://www.ksde.org/Default.aspx?tabid=4605

The questions provided in this resource are meant to spur teacher thought and reflection upon the text, students, and any tasks associated with the text.

(They are largely open-ended questions without single, correct answers, but help educators to think through the implications of using a particular text in the classroom.)

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

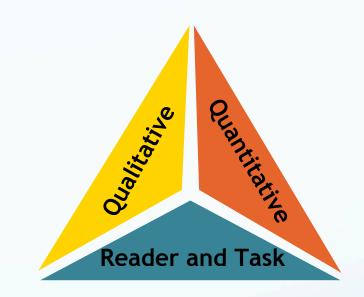
- Does the reader possess the necessary inferencing skills to "read between the lines" and make connections among elements that may not be explicit in this specific text?
- Does the reader possess the necessary visualization skills to imagine what is
 occurring or what is being described in this specific 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?

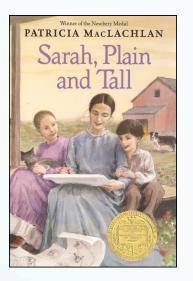
Motivation and Engagement with Task and Text

- 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 on our examination of the Reader and Task Considerations, we have completed the third leg of the text complexity model and are now ready to recommend a final placement within a text complexity band.





Lexile Text Measure: **560L**

State or LEA System -Book Level:

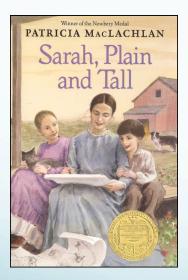
2-3

Reflecting on the questions posed for Reader and Task Considerations and both Quantitative and Qualitative measures, we have the following information to make a decision:

Text Complexity Grade Band In the Standards	Old Lexile Ranges	Lexile Ranges Aligned to CCR expectations	Text Complexity Grade Band In the Standards	Old Lexile Ranges	Lexile Ranges Aligned to CCR expectations	Text Complexity Grade Band In the Standards	Old Lexile Ranges	Lexile Ranges Aligned to CCR expectations
K-1	N/A	N/A	K-1	N/A	N/A	K-1	N/A	N/A
2-3	450-725	150 700	2-3	450-725	150 700	2-3	450-725	150 700
4-5	645-84	770-980	4-5	645-84	770-980	4-5	645-845	770-980
6-8	860-1010	955-1155	6-8	860-1010	955-1155	6-8	860-1010	955-1155
9-10	960-1115	1080-1305	9-10	960-1115	1080-1305	9-10	960-1115	1080-1305
11-CCR	1070-1220	1215-1355	11-CCR	1070-1220	1215-1355	11-CCR	1070-1220	1215-1355

Step 4: Recommended Placement

Based on all the information—*all three legs of the model*—the final recommendation for *Sarah*, *Plain and Tall* is



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

In this instance, Appendix B confirms our evaluation of the novel. Sarah, Plain and Tall is placed within the grade 2-3 text complexity band.

Text Complexity Analysis of Sarah, Plain and Tall

Qualitative Measures

Levels of Meaning an Purpose:

Numerous levels of meaning: pioneer story but also story of a motherless family

Structure:

Follows a fairly conventional narrative sequence

Language Conventions and Clarity:

Use of language is simple but elegant. Some archaic words (e.g., *hearthstones*).

Knowledge Demands:

High: Knowledge of pioneer life and effects on life of geography

Reader and Tasks:

Appropriate for teacher-led discussions with 3rd graders (i.e., early Stage 2 readers)

Quantative Measures

A Lexile Measure for this book is 560L. Accelerated Reader (AR) identifies this title as a 2.8-3.4 grade level. Developmental Reading Assessment (DRA) identifies this title as a 40 or 4.2 grade level. The complexity of the book's themes and knowledge of geographic differences would indicate a higher level of skills are necessary for an independent level of reading.

Reader-Task Considerations

These are to be determined locally with reference to variables such as students' motivation, knowledge, and experiences as well as purpose and complexity of the task assigned and the questions posed. Topics could include westward expansion, changes or new experiences, death/grief/loss, or blended families.

Recommended Placement

Being mindful of the quantitative and qualitaive measures and taking into consideration the Reader and task considerations, the Common Core Standards Text Exemplars also place this book at the 3rd grade level. 2

Reader and Task Considerations about Cognitive Capabilities

- Does the reader possess
 - the necessary attention to read and comprehend this specific text?
 - 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 the reader be able to make connections among the various details presented in this specific text to remember them?

and/or

• Will this specific text help to develop the attention, memory, and critical/analytic thinking skills necessary for future reading endeavors?

Reader and Task Considerations about 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?
- the necessary visualization skills to imagine what is occurring or what is being described in this specific text?
- the necessary questioning skills to challenge the ideas being presented in this text and consider those ideas from multiple points of view?

and/or

• Will this specific text help to develop the inferencing skills, visualization skills, questioning skills and comprehension strategies necessary for future reading endeavors?

Reader and Task Considerations: 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?

Considerations for English Language Learners (ELLs)

- With our ELL population, it is imperative to go to deeper levels when analyzing a text to identify the linguistic features that might provide additional difficulties.
- Advances in cognitive science, linguistics, and computer technology are opening new doors on the text-complexity front. The information provided can inform teachers and specialists of the factors that may need to be pretaught or in which mini-lessons will need to be developed for ELLs to access the text.

Instructional Implications

- 1. Need for mini-lessons on specific grammar conventions prior to reading text
- 2. Building background before text exposure
- 3. Teaching vocabulary required
- 4. Considerations when creating questions to guide students through text
- 5. Helping students build meaning out of complex text

Additional Resources

Fillmore, C. & Fillmore, L. (2012) Understanding Language: What does Text Complexity Mean for English Learners and Language Minority Students. University of California, Berkeley. Retrieved May 14, 2012 on the World Wide Web <u>http://ell.stanford.edu/sites/default/files/pdf/academic-papers/06-LWF%20CJF%20Text%20Complexity</u> %20FINAL 0.pdf.

Fisher, D., Drey, N. & Lapp, D. (2012) *Text Complexity: Raising Rigor in Reading*. Newark, DE: International Reading Association.

Gewertz, G. (2011). Teachers Tackle Text Complexity. Education Week, March 14, 2011. Retrieved May 14, 2012 on the World Wide Web
<u>http://www.edweek.org/ew/articles/2011/03/16/24text_ep.h30.html?tkn=PNOFOScSnVXvvXXsw</u>
<u>%252FYb4r2qWJb7ezAbupao&cmp=clp-edweek.</u>

Hiebert, E. (2011). The Common Core State Standards and Text Complexity. Text Project & University of Califormia, Santa Cruz. Retrieved June 2, 2012 on the World Wide Web. <u>http://textproject.org/assets/library/papers/Hiebert-2011-Text-Complexity-Lexiles.pdf</u>.

Kansas DOE CCSS Website: <u>http://www.ksde.org/Default.aspx?tabid=4778#PPPres</u>.

Stevens, K. (2010)l. Using Text Complexity in the Classroom. United Federation of Teachers, November 11, 2010. Retrieved May 14, 2012 on the World Wide Web
<u>http://www.uft.org/teacher-teacher/using-text-complexity-classroom.</u>



For additional information, please contact

MC3 REGIONAL ELL/CCSS TASK FORCE c/o the University of Oklahoma

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