

Practice with Text Complexity Science



Today we will...

- Review the 3 dimensions of text complexity
- Analyze the 3 dimensions of text complexity using a science text
- Synthesize data collected to identify an appropriate recommendation of a text for the classroom

Materials needed:

Text Complexity Diagnostic Tool



Text Complexity Diagnostic Tool

Text Analyzed: _____

Common Core Band	ATOS	Degree of Reading	Flesh-Kincaid	The Lexile Framework	Reading Maturity	Source/Author
2 nd -3 rd	2.75-5.14	40-54	1.00-5.24	420-920	5.33-6.13	05-1.48
4 th -5 th	4.97-7.03	55-60	4.51-7.73	740-1010	6.42-7.22	0.84-3.75
6 th -8 th	7.00-9.98	67-67	6.51-10.34	925-1165	7.04-9.37	4.11-10.66
9 th -10 th	8.07-12.01	65-72	8.30-12.12	1050-1325	8.41-10.81	8.05-14.99
11 th -CCR	11.30-14.10	67-74	10.34-14.12	1185-1385	8.57-12.00	11.30-14.50

Grade Band

Find links and instructions for using these quantitative analysis tools at: www.ck12.org/reading-complexity

Qualitative Summary

What instructional implications are indicated based on your analysis of this text using the Qualitative Text Complexity matrix?

- Purpose
- Text Structure
- Knowledge Demands
- Language

Reader-Task Considerations for Student Growth

What instructional implications are indicated based on your analysis of this text using the Read and Task Considerations Text Complexity matrix?

- Cognitive Capabilities
- Reading Skills
- Motivation
- Prior Knowledge-Biases
- Task Purpose and Complexity
- Cognitive Demand of Questions/Tasks

Based on analysis of this information, what is the grade level(s) for this text? _____

DRAFT 2/1/2012 Maryland State Department of Education

Text Complexity Quantitative Tool

Qualitative Dimensions of Text Complexity: Science and Technical Subjects Grades 6-12

	Complex Text	Mostly Complex Text	Mostly Simple Text	Simple Text
Purpose	□ Purpose is specific and difficult to determine. It requires multiple inferences to determine the author's intent.	□ Purpose is somewhat clear but not fully stated. It is somewhat inferential.	□ Purpose is clearly stated. It is directly related to the text.	□ Purpose is a common, predictable result related to the beginning of the text.
Text Structure	□ Text Structure is highly complex and difficult to follow. It requires multiple inferences to understand the structure.	□ Text Structure is somewhat complex and difficult to follow. It requires multiple inferences to understand the structure.	□ Text Structure is clear and easy to follow. It includes a clear beginning, middle, and end.	□ Text Structure is simple and predictable. It includes a clear beginning, middle, and end.
Knowledge Demands	□ Knowledge Demands are high and require multiple inferences to understand the text. It requires multiple inferences to understand the text.	□ Knowledge Demands are moderate and require multiple inferences to understand the text. It requires multiple inferences to understand the text.	□ Knowledge Demands are low and require minimal inferences to understand the text. It requires minimal inferences to understand the text.	□ Knowledge Demands are very low and require minimal inferences to understand the text. It requires minimal inferences to understand the text.
Language	□ Language is highly complex and difficult to understand. It requires multiple inferences to understand the text. It includes multiple inferences to understand the text.	□ Language is somewhat complex and difficult to understand. It requires multiple inferences to understand the text. It includes multiple inferences to understand the text.	□ Language is clear and easy to understand. It includes a clear beginning, middle, and end. It includes a clear beginning, middle, and end.	□ Language is simple and predictable. It includes a clear beginning, middle, and end. It includes a clear beginning, middle, and end.

DRAFT 11/05/12 Maryland State Department of Education Adapted from Common Core State Standards for Appendix A, Page 6

Text Complexity Reader and Task Considerations

Reader and Task Considerations for Text Complexity in Science/Technical Subjects and History/SS

Cognitive Capabilities and Reading Skills	Discussion/Comments
<p>Textual degree ...</p> <ul style="list-style-type: none"> do the readers possess the attention span and reading skills necessary to read and comprehend the text? do readers possess the critical/analytical thinking skills necessary to understand the relationships between and among the various parts of the text? do the text be sufficiently explicit to overcome any deficits in cognitive capabilities and reading skills? 	
<p style="text-align: center;">Motivation and Engagement with Text and Task</p> <p>Textual degree ...</p> <ul style="list-style-type: none"> do the readers be interested and engaged in the content and the presentation of ideas of the text? do sufficient motivation be developed to increase the reader's enthusiasm and engagement with the text and task? 	
<p style="text-align: center;">Prior Knowledge and Biases</p> <p>Textual degree ...</p> <ul style="list-style-type: none"> do the readers possess adequate prior knowledge of and/or experience with the topic, the vocabulary, and the language of the text? do connections be made between the content of the text and other learning experiences? do deficits in prior knowledge and/or experience with the topic, the vocabulary, and/or the language of the text, with minimal instructional time? 	
<p style="text-align: center;">Associated Tasks</p> <p>Textual degree ...</p> <ul style="list-style-type: none"> do the characteristics of any tasks and/or questions (format, length, relevance, etc.) associated with the text interfere with the reading experience? do all the tasks and/or questions require the reader to stay grounded in the text? 	

Climate of Extremes? David J. Tenenbaum

The Why Files (<http://whyfiles.org/2011/a-climate-of-extremes/> January 24, 2013)
 And the LA Times <http://www.latimes.com/news/science/2011/jan/24/sci-sr-higher-global-temperatures-na>

Skeptical about global warming? The average global temperature in 2012 was among the 10 hottest since official record keeping began in 1880. Except for 1988, the nine warmest years in the 132-year record all have occurred since 2000.

But temperature is only part of the story. After a year that saw epic floods in Pakistan and California, massive floods have swamped Brisbane, Australia, population 2 million. Russia was toasted by a record heat wave last summer. Europe and, of course, New York were smothered by giant snowstorms.

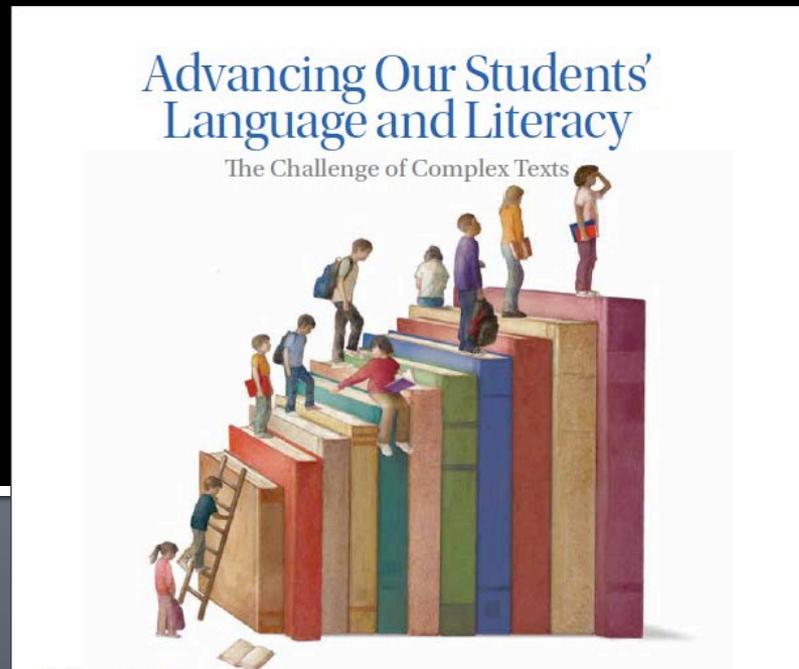
And we just read that 2010 had the heaviest precipitation on records that date to 1880.

So we have to ask: Is this normal weather, or is this climate change in action?

And as greenhouse gases continue to accumulate in the atmosphere, what will happen the day after tomorrow?

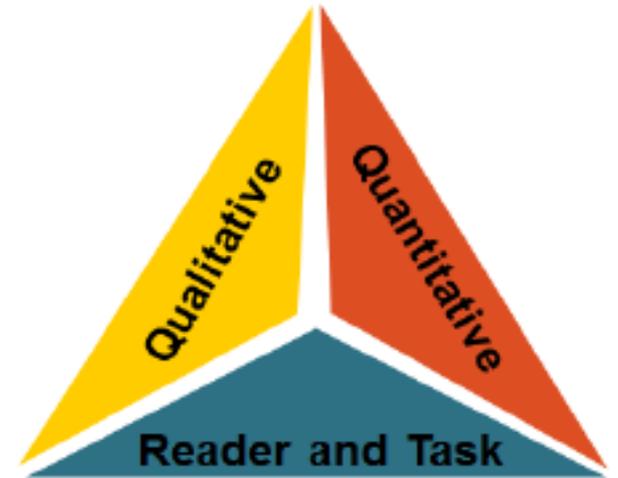
Text – Climate of Extremes

How is text complexity determined?



Text complexity is determined by evaluating 3 instructional dimensions:

- Quantitative
- Qualitative
- Reader and Task Considerations





Quantitative Measure:

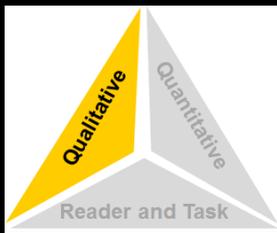
- ▶ Includes readability of text best measured by computer software
- ▶ Determined by:
 - word length, frequency, and difficulty
 - sentence length
 - text length
 - text cohesion

One of the tools that can be used to evaluate the quantitative dimension

The screenshot shows the Lexile Analyzer interface. It has a navigation bar with three tabs: 'About Lexile Measures', 'Using Lexile Measures', and 'Common Core'. The 'Using Lexile Measures' tab is active. The main content area is titled 'Lexile Analyzer: Results'. It displays the following data:

Metric	Value
Lexile® Measure	1060L
Mean Sentence Length	14.35
Mean Log Word Frequency	3.22

Below the results, there is a warning: 'These results are not saved in any retrievable way. You should print or record the title of your sample text. If you do not print or record the title, you will not be able to retrieve its Lexile measure.' There is a section for 'Submit another file' with a text input field, a 'Browse...' button, and a 'Submit' button. A 'Usage history' link is partially visible at the bottom.



Qualitative Measure:

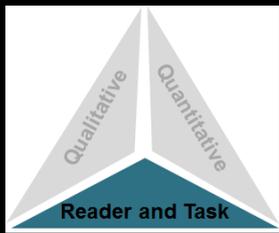
- Includes purpose, text structure, knowledge demands and language

Tool used to evaluate qualitative dimension


Qualitative Dimensions of Text Complexity: Science and Technical Subjects Grades 6-12

	Complex Text	Mostly Complex Text	Mostly Simple Text	Simple Text
Purpose	<ul style="list-style-type: none"> ■ Purpose is subtle/implicit and difficult to determine ■ may present multiple purposes revealed over the entirety of the text 	<ul style="list-style-type: none"> ■ Purpose is implicit, but easier to infer ■ is revealed over the entirety of the text 	<ul style="list-style-type: none"> ■ Purpose is explicitly stated ■ tends to be revealed early in the text 	<ul style="list-style-type: none"> ■ Purpose is implied or explicitly stated ■ is usually revealed at the beginning of the text or in the title
Text Structure	<ul style="list-style-type: none"> ■ Text Structure is subtle or absent ■ if used, is essential in understanding the text 	<ul style="list-style-type: none"> ■ Text Structure is implied or difficult to determine ■ used; signal words is minimal ■ if used, is essential to enhance the understanding of the text 	<ul style="list-style-type: none"> ■ Text Structure includes a range of implicit structures ■ contains signal words ■ supports the reader's understanding of the text 	<ul style="list-style-type: none"> ■ Text Structure is implied and simple ■ contains signal words ■ helps the reader recognize and understand content
Text Features	<ul style="list-style-type: none"> ■ are sophisticated, essential and integrated in the text ■ provides information related to where 	<ul style="list-style-type: none"> ■ are integrated in the text ■ are necessary to make meaning of the text 	<ul style="list-style-type: none"> ■ are used and supplement the reader's understanding of the text 	<ul style="list-style-type: none"> ■ are unnecessary or merely supplemental to the understanding of the text
Knowledge Demands	<ul style="list-style-type: none"> ■ Knowledge Demands require unfamiliar concepts ■ requires specialized and extensive content/technical knowledge ■ includes difficult and/or unfamiliar (disciplinary) concepts 	<ul style="list-style-type: none"> ■ Knowledge Demands include a range of challenging/familiar and unfamiliar disciplinary concepts 	<ul style="list-style-type: none"> ■ Knowledge Demands include familiar disciplinary concepts 	<ul style="list-style-type: none"> ■ Knowledge Demands present familiar concepts/experiences ■ are related to students' experiences
Infer-Textually	<ul style="list-style-type: none"> ■ contains multiple references or allusions to events of texts and/or other texts 	<ul style="list-style-type: none"> ■ Infer-Textually contains multiple references or allusions to events of texts and/or other texts 	<ul style="list-style-type: none"> ■ Infer-Textually contains references to another text or the same text or other texts 	<ul style="list-style-type: none"> ■ Infer-Textually contains no references or allusions to other text, ideas or theories
Language	<ul style="list-style-type: none"> ■ Language is dense and mainly complex, compound and/or complex sentences ■ contains sentences often include multiple meanings embedded in a phrase 	<ul style="list-style-type: none"> ■ Language includes a range of complex compound and/or complex sentences ■ may contain more than one meaning embedded in a sentence 	<ul style="list-style-type: none"> ■ Language includes simple and compound sentences 	<ul style="list-style-type: none"> ■ Language includes mainly simple sentences
Vocabulary	<ul style="list-style-type: none"> ■ includes sophisticated, complex and/or unfamiliar disciplinary vocabulary essential to understanding the text ■ is not specifically defined in the text, and assumes prior knowledge 	<ul style="list-style-type: none"> ■ Vocabulary includes unfamiliar disciplinary vocabulary ■ may be defined contextually at the paragraph or passage level 	<ul style="list-style-type: none"> ■ Vocabulary includes a range of familiar and unfamiliar disciplinary vocabulary ■ is defined contextually or in a footnote 	<ul style="list-style-type: none"> ■ Vocabulary includes familiar disciplinary vocabulary ■ is usually defined within the same sentence

DRAFT 11/15/12 Maryland State Department of Education Adopted from Common Core State Standards for Appendix A, Page 6



Reader and Task Considerations:

- Includes background knowledge of reader, motivation, interests, and complexity of tasks
- Involves teacher judgment based on knowledge of students

Tool to evaluate reader and task

 Reader and Task Considerations for Text Complexity in Science/Technical Subjects and History/SS	
Cognitive Capabilities and Reading Skills	Discussion/Comments
To what degree ... <ul style="list-style-type: none"> • <i>QA</i> the readers possess the attention span and reading skills necessary to read and comprehend the text? • <i>QA</i> readers possess the critical/analytical thinking skills necessary to understand the relationships between and among the various parts of the text? • <i>QPO</i> the text be sufficiently <i>appropiated</i> to overcome any deficits in cognitive capabilities and reading skills? 	
Motivation and Engagement with Task and Text <ul style="list-style-type: none"> • <i>QA</i> the readers be interested and engaged in the content and the presentation of ideas of the text? • <i>QPO</i> sufficient motivation be developed to increase the reader's enthusiasm and engagement with the task and text? 	
Prior Knowledge and Experience <ul style="list-style-type: none"> • <i>QA</i> the readers possess adequate prior knowledge of and/or experience with the topic, the vocabulary, and the language of the text? • <i>QPO</i> connections be made between the content of the text and other learning experiences? • <i>QPO</i> deficits in prior knowledge of and/or experience with the topic, the vocabulary, and/or the language be overcome with minimal instructional time? 	
Associated Tasks <ul style="list-style-type: none"> • <i>QA</i> the characteristics of any tasks and/or questions (complexity, length, relevance, etc) associated with the text interfere with the reading experience? • <i>QA</i> the tasks and/or questions require the reader to stay grounded in the text? 	

How are the text complexity tools used to analyze text?

About Lexile Measures

Lexile® Measure

1060L

Mean Sentence Length

14.35

Mean Log Word Frequency

3.22

Using Lexile Measures

Common Core

Lexile Analyzer: Results

These results are not saved. The title of your sample text and text to know its Lexile measure.

Submit another file

Usage history

Qualitative Dimensions of Text Complexity: Science and Technical Subjects Grades 6-12

	Complex Text	Mostly Complex Text	Mostly Simple Text	Simple Text
Purpose	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex 	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex 	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex 	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex
Text Structure	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex 	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex 	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex 	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex
Knowledge Demands	<ul style="list-style-type: none"> requires a range of background knowledge requires a range of background knowledge, and the text is more complex requires a range of background knowledge, and the text is more complex, and the text is more complex 	<ul style="list-style-type: none"> requires a range of background knowledge requires a range of background knowledge, and the text is more complex requires a range of background knowledge, and the text is more complex, and the text is more complex 	<ul style="list-style-type: none"> requires a range of background knowledge requires a range of background knowledge, and the text is more complex requires a range of background knowledge, and the text is more complex, and the text is more complex 	<ul style="list-style-type: none"> requires a range of background knowledge requires a range of background knowledge, and the text is more complex requires a range of background knowledge, and the text is more complex, and the text is more complex
Language	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex 	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex 	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex 	<ul style="list-style-type: none"> is to inform and/or to persuade is to inform and/or to persuade, but with a more complex purpose is to inform and/or to persuade, but with a more complex purpose, and the text is more complex

DRAFT 11/05/12 Maryland State Department of Education Adapted from Common Core State Standards for Appendix A, Page 6

Reader and Task Considerations for Text Complexity in Science/Technical Subjects and History/SS

Cognitive Capabilities and Reading Skills	Discussion/Comments
<p>To what degree ...</p> <ul style="list-style-type: none"> do the readers possess the attention span and reading skills necessary to read and comprehend the text? do readers possess the critical/analytical thinking skills necessary to understand the relationships between and among the various parts of the text? do the text be sufficiently explicit to overcome any deficits in cognitive capabilities and reading skill? 	
<p>Motivation and Engagement with Text and Task</p> <p>To what degree ...</p> <ul style="list-style-type: none"> do the readers be interested and engaged in the content and the presentation of ideas of the text? do sufficient motivation be developed to increase the reader's enthusiasm and engagement with the text and task? 	
<p>Prior Knowledge and Experience</p> <p>To what degree ...</p> <ul style="list-style-type: none"> do the readers possess adequate prior knowledge of and/or experience with the topic, the vocabulary, and the language of the text? do connections be made between the content of the text and other learning experiences? do deficits in prior knowledge of and/or experience with the topic, the vocabulary, and/or the language be overcome with minimal instructional time? 	
<p>Associated Tasks</p> <p>To what degree ...</p> <ul style="list-style-type: none"> do the characteristics of any tasks and/or questions (complexity, length, relevance, etc.) associated with the text interfere with the reading experience? do all the tasks and/or questions require the reader to stay grounded in the text? 	

The text complexity tools assist in the assessment of the quantitative measures, qualitative characteristics, and reader and task considerations of a text.

Text Complexity Diagnostic Tool

Text Analyzed: _____

Quantitative Results

Common Core Band	ATOS	Degrees of Reading Power [®]	Fleisch-Kincaid [®]	The Lexile Framework [®]	Reading Maturity	SourceRater
2 nd – 3 rd	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 – 64				
9 th – 10 th	9.67 – 12.01	62 – 74				
11 th – CCR	11.20 – 14.10	67 – 74				

Qualitative Summary

What instructional implications are indicated by this Complexity Matrix?

- Purpose
- Text Structure
- Knowledge Demands
- Language

Based on synthesis of this information, what Reader-Task Considerations for Student Success are indicated?

- Cognitive Capabilities
- Reading Skills
- Motivation
- Prior Knowledge-Experiences
- Task Purpose and Complexity
- Cognitive Demand of Questions/Tasks

©2007, 2012/13 Maryland State Department of Education

Qualitative Dimensions of Text Complexity: Science and Technical Subjects Grades 6-12

	Complex Text	Mostly Complex Text	Mostly Simple Text	Simple Text
Purpose	<ul style="list-style-type: none"> Purpose is explicit, implicit and difficult to determine may present multiple purposes may be presented early in the text 	<ul style="list-style-type: none"> Purpose is implicit, but seems to infer is revealed over the course of the text 	<ul style="list-style-type: none"> Purpose is explicitly stated is revealed early in the text 	<ul style="list-style-type: none"> Purpose is explicit and explicitly stated is usually revealed at the beginning of the text or in the title
Text Structure	<ul style="list-style-type: none"> Text Structure is implicit or difficult to determine is used to support or enhance understanding of the text 	<ul style="list-style-type: none"> Text Structure is implicit or difficult to determine is used to support or enhance understanding of the text 	<ul style="list-style-type: none"> Text Structure is explicit or somewhat explicit is used to support or enhance understanding of the text 	<ul style="list-style-type: none"> Text Structure is explicit and simple is used to support or enhance understanding of the text
Knowledge Demands	<ul style="list-style-type: none"> Knowledge Demands require a range of prior knowledge and/or discipline-specific knowledge is used to support or enhance understanding of the text 	<ul style="list-style-type: none"> Knowledge Demands require a range of prior knowledge and/or discipline-specific knowledge is used to support or enhance understanding of the text 	<ul style="list-style-type: none"> Knowledge Demands require a range of prior knowledge and/or discipline-specific knowledge is used to support or enhance understanding of the text 	<ul style="list-style-type: none"> Knowledge Demands require a range of prior knowledge and/or discipline-specific knowledge is used to support or enhance understanding of the text
Language	<ul style="list-style-type: none"> Language is complex and/or difficult to understand is used to support or enhance understanding of the text 	<ul style="list-style-type: none"> Language is complex and/or difficult to understand is used to support or enhance understanding of the text 	<ul style="list-style-type: none"> Language is complex and/or difficult to understand is used to support or enhance understanding of the text 	<ul style="list-style-type: none"> Language is simple and/or easy to understand is used to support or enhance understanding of the text

DRAFT 11/15/12 Maryland State Department of Education Adapted from

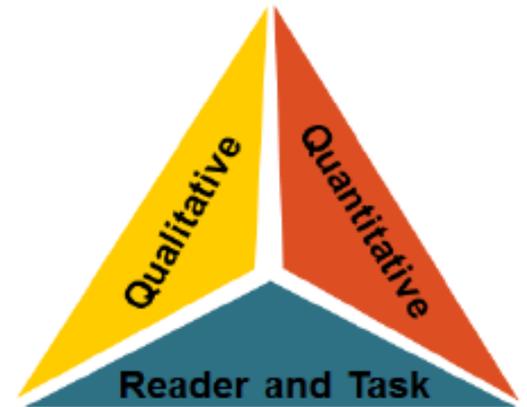
Reader and Task Considerations for Text Complexity in Science/Technical Subjects and History/SS

Cognitive Capabilities and Reading Skills	Discussion/Comments
<p>To what degree ...</p> <ul style="list-style-type: none"> ca the readers possess the attention span and reading skills necessary to read and comprehend the text? ca the readers possess the critical/analytical thinking skills necessary to understand the relationships between and among the various parts of the text? cpo the text is sufficiently appropriate to overcome any deficits in cognitive capabilities and reading skills? 	
<p>Motivation and Engagement with Task and Text</p> <p>To what degree ...</p> <ul style="list-style-type: none"> cpo the readers are interested and engaged in the content and the presentation of ideas of the text? cpo sufficient motivation is developed to increase the reader's enthusiasm and engagement with the task and text? 	
<p>Prior Knowledge and Experiences</p> <p>To what degree ...</p> <ul style="list-style-type: none"> cpo the readers possess adequate prior knowledge of and/or experience with the topic, the vocabulary, and the language of the text? cpo connections are made between the content of the text and other learning experiences? cpo deficits in prior knowledge of and/or experience with the topic, the vocabulary, and/or the language be overcome with minimal instructional time? 	
<p>Associated Tasks</p> <p>To what degree ...</p> <ul style="list-style-type: none"> cpo the characteristics of any tasks and/or questions (complexity, length, relevance, etc) associated with the text interfere with the reading experience? cpo all the tasks and/or questions require the reader to stay grounded in the text? 	

About Lexile Measures	Using Lexile Measures	Common Core
Lexile® Measure	Lexile Analyzer: Results	
1060L	These results are not saved in any retrievable way. If you do not print or record the title of your sample text. If you do not print or record text to know its Lexile measure.	
Mean Sentence Length	14.35	
Mean Log Word Frequency	3.22	
	Submit another file	
	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Submit"/>	

The Text Complexity Process

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



Begin by reading and annotating the text "Climate of Extremes"

TEXT – CLIMATE OF EXTREMES

Climate of Extremes? David J. Tenenbaum
The Why Files (<http://whyfiles.org/2011/e-climate-of-extremes/>) January 24, 2013
And the LA Times <http://www.latimes.com/news/science/sciencenow/le-sci-en-higher-global-temperatures-nasa>

Skeptical about global warming? The average global temperature in 2012 was among the 10 hottest since official record keeping began in 1850. Except for 1998, the nine warmest years in the 153-year record all have occurred since 2000.

But temperature is only part of the story. After a year that saw epic floods in Pakistan and California, massive floods have swamped Brisbane, Australia, population 2 million. Russia was toasted by a record heat wave last summer. Europe and, of course, New York were smothered by giant snowstorms.

And we just read that 2010 had the heaviest precipitation on records that date to 1880.

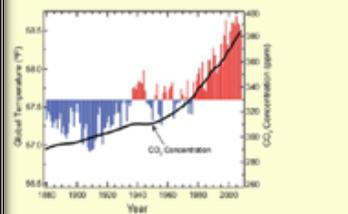
So we have to ask: is this normal weather, or is this climate change in action?
And as greenhouse gases continue to accumulate in the atmosphere, what will happen the day after tomorrow?

There is good theoretical reason to think that an accelerating greenhouse effect will affect weather. Add greenhouse gases like carbon dioxide and methane to the atmosphere, and they trap more heat. In hotter conditions, more water evaporates from the ocean, which eventually falls as precipitation. Heat is energy, and more energy in the ocean and atmosphere provides more power to drive intense storms.

IF, AS VIRTUALLY ALL CLIMATOLOGISTS EXPECT, GLOBAL AVERAGE TEMPERATURES WILL RISE, WHAT WILL HAPPEN TO EXTREMES LIKE THESE:

- Daily record temperatures
- Precipitation
- Drought
- Hurricanes and other storms

These questions are devilishly difficult to answer. It's a big planet, and assessing conditions during the past few decades, and making projections for the future, is a gnarly task. Climate models are better at getting the big picture than making regional forecasts for future weather. Data records are incomplete, especially as we delve further in the past. Nevertheless, let's ask our question about both recent weather data and future forecasts.



Graph: Progress Report of the Intergovernmental Panel on Climate Change Working Group II: Impacts, Adaptation, and Vulnerability. Recommended Actions in Support of a National Climate Change Adaptation Strategy, October 5, 2010

If you doubt that warming temperatures have anything to do with carbon dioxide, the primary greenhouse gas, here's something to think about. Horizontal divider shows average temperatures, 1901-2000.

COMPLETE A CLOSE READING WITH ANNOTATION

As you read

- find key points and main ideas
- look for difficult passages
- note what is confusing
- pay attention to structure
- pay attention to vocabulary

Annotation of Climate of Extremes

Climate of Extremes? David J. Tenenbaum

The Why Files (<http://whyfiles.org/2011/a-climate-of-extremes/>) January 24, 2013
 And the LA Times <http://www.latimes.com/news/science/sciencenow/la-sci-sn-higher-global-temperatures-nasa>

Skeptical about global warming? The average global temperature in 2012 was among the 10 hottest since official record keeping began in 1880. Except for 1988, the nine warmest years in the 132-year record all have occurred since 2000.

But temperature is only part of the story. After a year that saw epic floods in Pakistan and California, massive floods have swamped Brisbane, Australia, population 2 million. Russia was toasted by a record heat wave last summer. Europe and, of course, New York were smothered by giant snowstorms.

And we just read that 2010 had the heaviest precipitation on records that date to 1880. So we have to ask: Is this normal weather, or is this climate change in action?

And as greenhouse gases continue to accumulate in the atmosphere, what will happen the day after tomorrow?

There is good theoretical reason to think that an accelerating greenhouse effect will affect weather. (Add greenhouse gases like carbon dioxide and methane to the atmosphere, and they trap more heat. In hotter conditions, more water evaporates from the ocean, which eventually falls as precipitation. Heat is energy, and more energy in the ocean and atmosphere provides more power to drive intense storms.)

*Content knowledge required - cause + effect difficult
 Cause + effect text structure with signal words*

- If, AS VIRTUALLY ALL CLIMATOLOGISTS EXPECT, GLOBAL AVERAGE TEMPERATURES WILL RISE, WHAT WILL HAPPEN TO EXTREMES LIKE THESE:
- Daily record temperatures
- Precipitation
- Drought
- Hurricanes and other storms

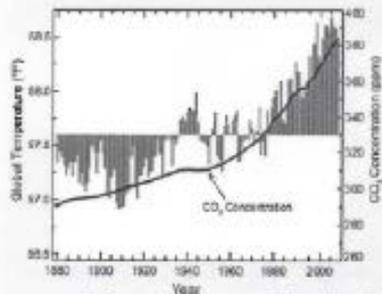
provides outline of text

more difficult as headings for bullets. Written as question and not as a statement

What will happen to weather when global temps rise?

These questions are devilishly difficult to answer. It's a big planet, and assessing conditions during the past few decades, and making projections for the future, is a gnarly task. Climate models are better at getting the big picture than making regional forecasts for future weather. Data records are incomplete, especially as we delve further in the past. Nevertheless, let's ask our question about both recent weather data and future forecasts.

Difficult for students to understand forecasting process



Graph: Progress Report of the Intergency Climate Change Adaptation Task Force: Recommended Actions In Support of a National Climate Change Adaptation Strategy, October 5, 2010

If you doubt that warming temperatures have anything to do with carbon dioxide, the primary greenhouse gas, here's something to think about. Horizontal divider shows average temperatures, 1901-2000.

Difficult graph. 2 factors analyzed on one graph

No text support. Stand alone know must have prior knowledge about relationship between temp. + CO2

Step 1. Find the quantitative score

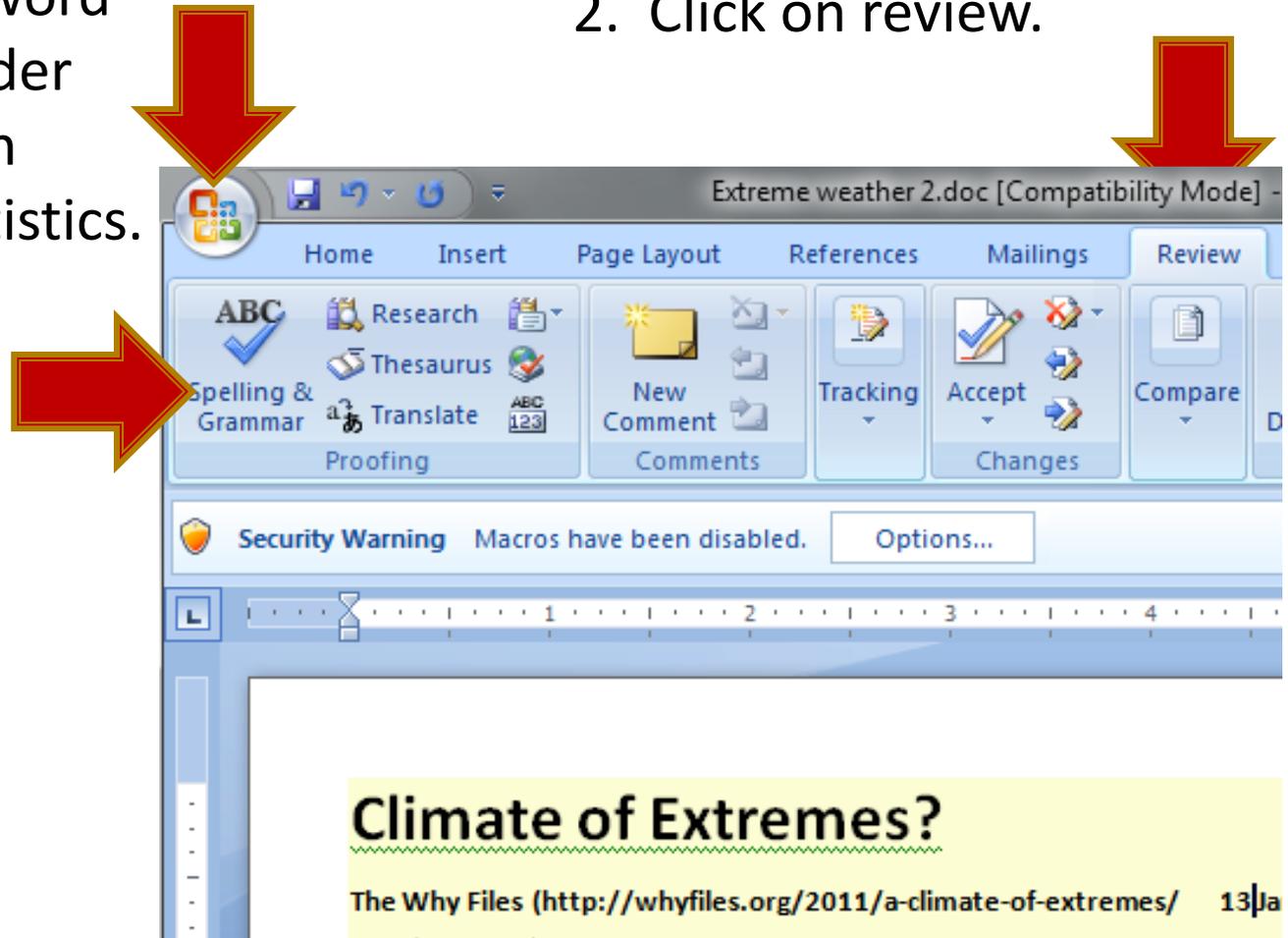
- Use a computer generated program to find the readability measure.
- The Flesch – Kincaid and Lexile analyzers will be modeled with this text.

To find the Flesch – Kincaid score

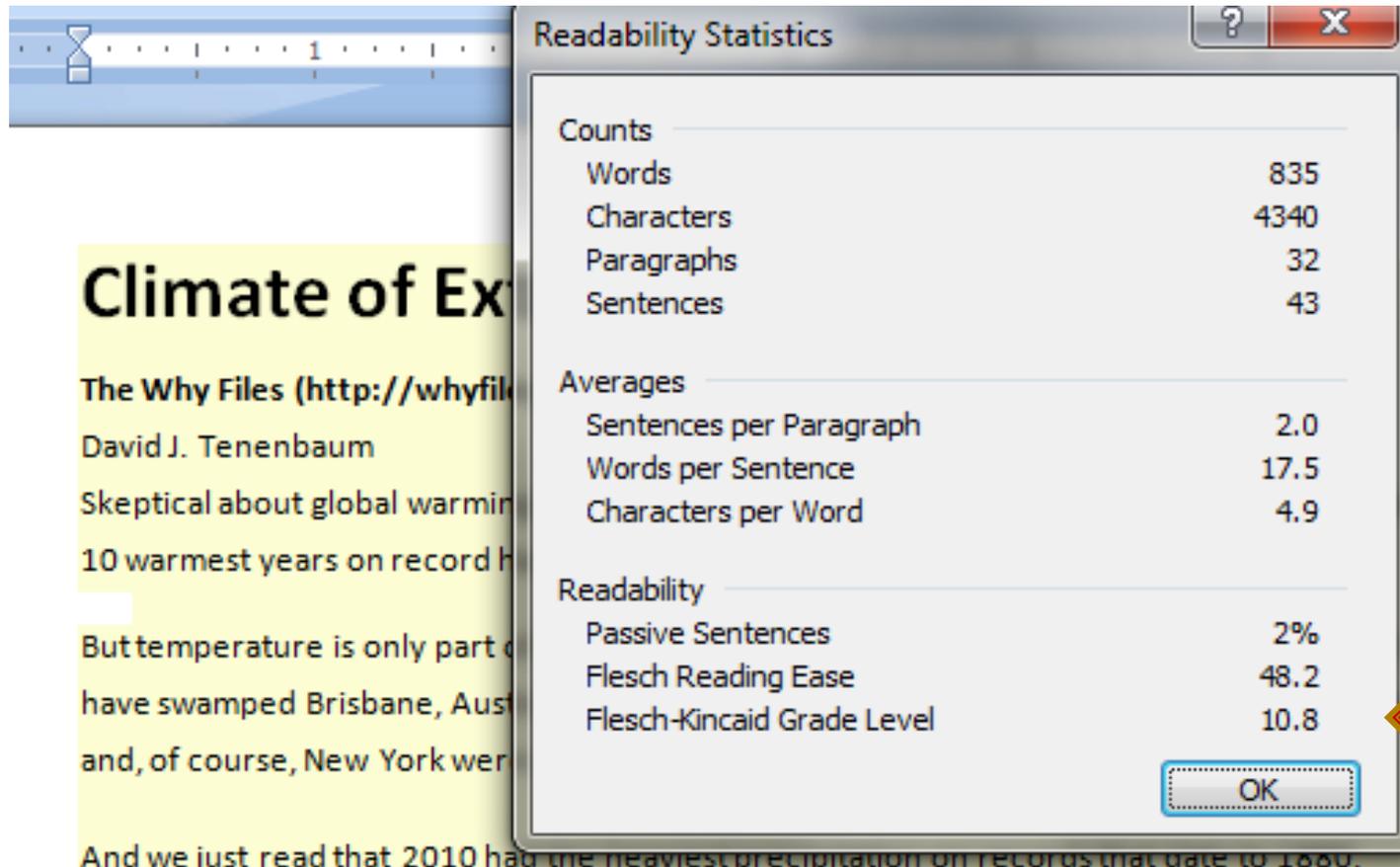
1. Save text as a word document. Under options turn on readability statistics.

2. Click on review.

3. Click on spelling and grammar, then click through “ignore”.



Identify the readability statistics for your text.



The image shows a document with a readability statistics dialog box overlaid. The document text is highlighted in yellow. The dialog box, titled "Readability Statistics", displays the following data:

Counts	
Words	835
Characters	4340
Paragraphs	32
Sentences	43

Averages	
Sentences per Paragraph	2.0
Words per Sentence	17.5
Characters per Word	4.9

Readability	
Passive Sentences	2%
Flesch Reading Ease	48.2
Flesch-Kincaid Grade Level	10.8

An "OK" button is located at the bottom right of the dialog box. A red arrow points to the right side of the dialog box.

For a Lexile Score

- *Save the text as a plain text document
- *Go to lexile.com, login into site
- *Select Lexile Analyzer

2.



1.



Home "Find a Book" Lexile Analyzer Resources Research Store My Profile My Reading Lists Register Login



The Lexile® Framework for Reading

Quick Book Search:



Put an exact title or author in quotes (ex: "n

About Lexile Measures

Using Lexile Measures

Common Core

Lexile Tools

Lexile Trai

Qualitative Measure

“Climate of Extremes” Quantitative Score:

Flesh-Kincaid -10.8; Lexile 930L

Use the Text Complexity Diagnostic Tool to record the quantitative scores



Text Complexity Diagnostic Tool

Text Analyzed: _____

Quantitative Results

Common Core Band	ATOS	Degrees of Reading Power	Flesh-Kincaid	The Lexile Framework	Reading Maturity	SourceRater
2 nd -3 rd	2.75-3.14	45-54	1.98-3.34	400-920	2.59-3.13	.05-2.48
4 th -5 th	4.97-7.03	55-60	4.31-7.73	740-1010	3.43-7.92	0.84-3.75
6 th -8 th	7.00-9.98	57-67	6.31-10.34	925-1185	7.04-9.57	4.11-10.66
9 th -10 th	9.67-12.01	65-72	8.23-12.12	1050-1325	8.41-10.91	8.03-13.99
11 th -CCR	11.20-14.10	67-74	10.34-14.2	1185-1385	9.57-12.00	12.20-14.50

Grade Band _____

Find links and instructions for using these quantitative analysis tools on: www.ohioe.state.gov/text-complexity

Qualitative Summary
What instructional implications are indicated based on your analysis of this text using the Qualitative Text Complexity matrix?

<ul style="list-style-type: none"> • Purpose • Text Structure • Knowledge Demands • Language 	
--	--

Reader-Task Considerations for Student Growth
What instructional implications are indicated based on your analysis of this text using the Reader-Task Considerations Text Complexity matrix?

<ul style="list-style-type: none"> • Cognitive Capabilities • Reading Skills • Motivation • Prior Knowledge-Experiences • Task Purpose and Complexity • Cognitive Demand of Questions/Tasks 	
---	--

Based on synthesis of this information, what is the grade level(s) for this text? _____

DRAFT 2/1/2012 Maryland State Department of Education

Determine the Text Complexity Grade Band

Quantitative Results

Common Core Band	ATOS	Degrees of Reading Power [®]	Flesch-Kincaid [®]	The Lexile Framework [®]	Reading Maturity	SourceRater
2 nd – 3 rd	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	53 – 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

930 L, 10.8 F-K

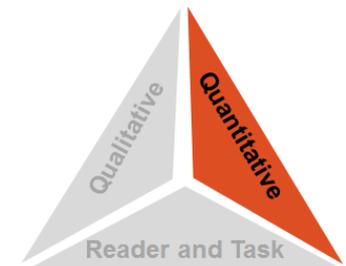
Grade Band 6-CCR

Find links and instructions for using these quantitative analysis tools at: www.achievethecore.org/text-complexity

Quantitative Score:

Flesh-Kincaid – 10.8; Lexile 930

Grade Band 6-CCR



Step 2: Qualitative Measure



❖ Analyze the qualitative dimensions of the text.



Qualitative Dimensions of Text Complexity: Science and Technical Subjects Grades 6-12



	Complex Text	Mostly Complex Text	Mostly Simple Text	Simple Text
Purpose	<input type="checkbox"/> Purpose <ul style="list-style-type: none"> is subtle, implied and difficult to determine may present multiple purposes revealed over the entirety of the text 	<input type="checkbox"/> Purpose <ul style="list-style-type: none"> is implied, but easy to infer is revealed over the entirety of the text 	<input type="checkbox"/> Purpose <ul style="list-style-type: none"> is explicitly stated tends to be revealed early in the text 	<input type="checkbox"/> Purpose <ul style="list-style-type: none"> is simple and explicitly stated usually revealed at the beginning of the text or in the title
Text Structure	<input type="checkbox"/> Text Structure <ul style="list-style-type: none"> is subtle or absent if used, is essential in understanding the content 	<input type="checkbox"/> Text Structure <ul style="list-style-type: none"> is implicit or difficult to determine use of signal words is minimal if used, intended to enhance the understanding of the text 	<input type="checkbox"/> Text Structure <ul style="list-style-type: none"> includes a range of explicit structures contains signal words supports the reader's understanding of the text 	<input type="checkbox"/> Text Structure <ul style="list-style-type: none"> is explicit and simple contains signal words helps the reader navigate and understand content
	<input type="checkbox"/> Text Features <ul style="list-style-type: none"> are sophisticated, essential and integrated with the text provides information not provided elsewhere 	<input type="checkbox"/> Text Features <ul style="list-style-type: none"> are integrated with the text are necessary to make meaning of the text 	<input type="checkbox"/> Text Features <ul style="list-style-type: none"> enhance and supplement the reader's understanding of the text 	<input type="checkbox"/> Text Features <ul style="list-style-type: none"> are unnecessary or merely supplemental to understanding the text
Knowledge Demands	<input type="checkbox"/> Knowledge Demands <ul style="list-style-type: none"> contain unfamiliar concepts require specialized and extensive scientific or technical knowledge include abstract scientific or technical (discipline-specific) concepts 	<input type="checkbox"/> Knowledge Demands <ul style="list-style-type: none"> include a range of challenging familiar and unfamiliar discipline-specific concepts 	<input type="checkbox"/> Knowledge Demands <ul style="list-style-type: none"> include familiar discipline-specific concepts 	<input type="checkbox"/> Knowledge Demands <ul style="list-style-type: none"> present familiar concrete concepts are related to students experiences
	<input type="checkbox"/> Inter-textuality <ul style="list-style-type: none"> contains multiple references or citations to a variety of texts or ideas and theories 	<input type="checkbox"/> Inter-textuality <ul style="list-style-type: none"> contains multiple references or citations to a variety of texts on the same idea or theory 	<input type="checkbox"/> Inter-textuality <ul style="list-style-type: none"> contains a reference to another text on the same idea or theory 	<input type="checkbox"/> Inter-textuality <ul style="list-style-type: none"> contains no references or citations to other text, ideas or theories
Language	<input type="checkbox"/> Language <ul style="list-style-type: none"> is dense containing mainly complex, compound sentences of varied structure contains sentences often include multiple concepts embedded in phrases 	<input type="checkbox"/> Language <ul style="list-style-type: none"> contains a range of complex compound and simple sentences may contain more than one concept embedded in a sentence 	<input type="checkbox"/> Language <ul style="list-style-type: none"> contains simple and compound sentences 	<input type="checkbox"/> Language <ul style="list-style-type: none"> contains mainly simple sentences
	<input type="checkbox"/> Vocabulary <ul style="list-style-type: none"> includes sophisticated, complex academic and/or discipline-specific vocabulary crucial to understanding the text is not specifically defined within the text, and assumes prior knowledge 	<input type="checkbox"/> Vocabulary <ul style="list-style-type: none"> includes unfamiliar discipline-specific or academic words may be defined contextually at the paragraph or passage level 	<input type="checkbox"/> Vocabulary <ul style="list-style-type: none"> includes a range of familiar and unfamiliar discipline-specific or academic words is defined contextually or in a footnote 	<input type="checkbox"/> Vocabulary <ul style="list-style-type: none"> includes familiar discipline specific or academic words is usually defined within the same sentence

Analysis of Purpose

Using the descriptors and information from the text, where on the continuum would you mark purpose?

	Complex Text	Mostly Complex Text	Mostly Simple Text	Simple Text
Purpose	<input type="checkbox"/> Purpose <ul style="list-style-type: none">• is subtle, implied and difficult to determine• may present multiple purposes revealed over the entirety of the text	<input type="checkbox"/> Purpose <ul style="list-style-type: none">• Is implied, but easy to infer• is revealed over the entirety of the text	<input type="checkbox"/> Purpose <ul style="list-style-type: none">• is explicitly stated• tends to be revealed early in the text	<input type="checkbox"/> Purpose <ul style="list-style-type: none">• is simple and explicitly stated• usually revealed at the beginning of the text or in the title

Climate of Extremes? David J. Tenenbaum

The Why Files (<http://whyfiles.org/2011/a-climate-of-extremes/>) January 24, 2013

And the LA Times <http://www.latimes.com/news/science/sciencenow/la-sci-sn-higher-global-tempe>

Skeptical about global warming? The average global temperature in 2012 was among the 10 hottest since official records began in 1880. Except for 1988, the nine warmest years in the 132-year record all have occurred since 2000.

But temperature is only part of the story. After a year that saw epic floods in Pakistan and California, major hurricanes have swamped Brisbane, Australia, population 2 million. Russia was toasted by a record heat wave last year, and, of course, New York were smothered by giant snowstorms.

And we just read that 2010 had the heaviest precipitation on records.

So we have to ask: Is this normal weather, or is this climate change in action?

And as greenhouse gases continue to accumulate in the atmosphere, what will happen the day after tomorrow?



Purpose

Analysis of Text Structure

Using the descriptors and information from the text, where on the continuum would you mark text structure and text features?

Text Structure	<input type="checkbox"/> Text Structure <ul style="list-style-type: none"> • is subtle or absent • if used, is essential in understanding the content 	<input type="checkbox"/> Text Structure <ul style="list-style-type: none"> • is implicit or difficult to determine • use of signal words is minimal • if used, intended to enhance the understanding of the text 	<input type="checkbox"/> Text Structure <ul style="list-style-type: none"> • includes a range of explicit structures • contains signal words • supports the reader's understanding of the text 	<input type="checkbox"/> Text Structure <ul style="list-style-type: none"> • is explicit and simple • contains signal words • helps the reader navigate and understand content
	<input type="checkbox"/> Text Features <ul style="list-style-type: none"> • are sophisticated, essential and integrated with the text • provides information not provided elsewhere 	<input type="checkbox"/> Text Features <ul style="list-style-type: none"> • are integrated with the text • are necessary to make meaning of the text 	<input type="checkbox"/> Text Features <ul style="list-style-type: none"> • enhance and supplement the reader's understanding of the text 	<input type="checkbox"/> Text Features <ul style="list-style-type: none"> • are unnecessary or merely supplemental to understanding the text

Climate of Extremes

Page 1, paragraph 3

Page 2, paragraph 1

Text structure:

Identifies the question and sections of text

Text Structure

- Includes a range of explicit structures; description, time, cause and effect,

• IF, AS VIRTUALLY ALL CLIMATOLOGISTS EXPECT, GLOBAL AVERAGE TEMPERATURE WILL RISE, WHAT WILL HAPPEN TO EXTREMES LIKE THESE:

- Daily record temperatures
- Precipitation
- Drought
- Hurricanes and other storms

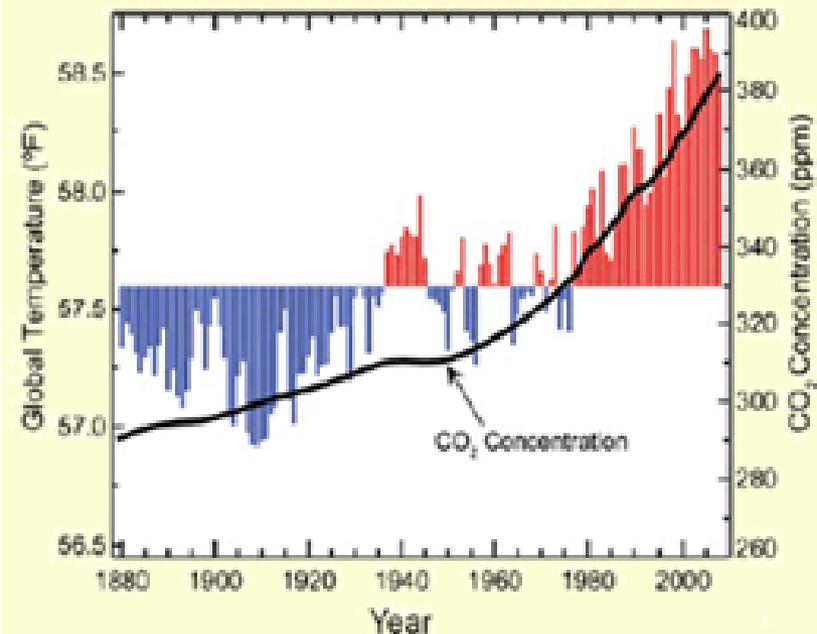
Record Temperatures

As the climate warms, one easy prediction is that record warm days will become more common, and record colds will be less common. When Gerald Meehl, a senior scientist at the National Center for Atmospheric Research, compared the number of record daily highs to the number of record daily lows in the U.S., he found they were roughly equal in the 1950s. Today, he says, "for every two record highs, there is only one record low. If there was no warming going on, the ratio would be one to one, so we are shifting the odds toward having a better chance for setting a record high versus a record low."

Structure: description, no signal words

Text Features

- are sophisticated
- provides information not provided elsewhere



Graph 1.1 Interagency
Climate Change Adaptation Task Force:
Recommended Actions in Support of a
National Climate Change Adaptation Strategy,
October 5, 2010

If you doubt that warming temperatures have anything to do with carbon dioxide, the primary greenhouse gas, here's something to think about. Horizontal divider shows average temperatures, 1901-2000.

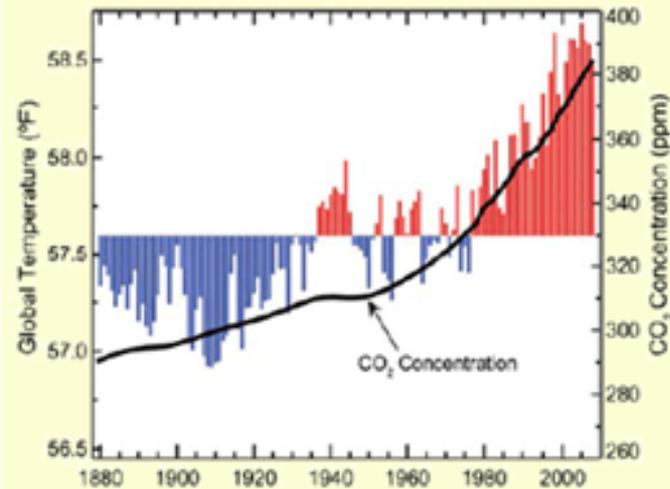
Analysis of Knowledge Demands

Using the descriptors and information from the text, where on the continuum would you mark knowledge demands and inter-textuality?

Knowledge Demands	<input type="checkbox"/> Knowledge Demands <ul style="list-style-type: none"> • contain unfamiliar concepts • require specialized and extensive scientific or technical knowledge • include abstract scientific or technical (discipline-specific) concepts 	<input type="checkbox"/> Knowledge Demands <ul style="list-style-type: none"> • include a range of challenging familiar and unfamiliar discipline-specific concepts 	<input type="checkbox"/> Knowledge Demands <ul style="list-style-type: none"> • include familiar discipline-specific concepts 	<input type="checkbox"/> Knowledge Demands <ul style="list-style-type: none"> • present familiar concrete concepts • are related to students experiences
	<input type="checkbox"/> Inter-textuality <ul style="list-style-type: none"> • contains multiple references or citations to a variety of texts or ideas and theories 	<input type="checkbox"/> Inter-textuality <ul style="list-style-type: none"> • contains multiple references or citations to a variety of texts on the same idea or theory 	<input type="checkbox"/> Inter-textuality <ul style="list-style-type: none"> • contains a reference to another text on the same idea or theory 	<input type="checkbox"/> Inter-textuality <ul style="list-style-type: none"> • contains no references or citations to other text, ideas or theories

Knowledge demands

- Include familiar and unfamiliar concepts

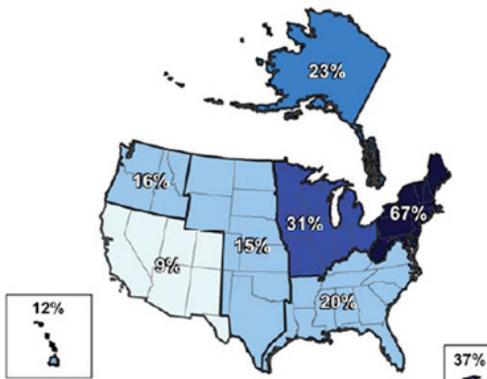


Graph: Progress Report of the Interagency Climate Change Adaptation Task Force: Recommended Actions in Support of a National Climate Change Adaptation Strategy, October 5, 2010

If you doubt that warming temperatures have anything to do with carbon dioxide, the primary greenhouse gas, here is something to think about. The vertical divider shows average temperature from 1901-2000.

Inter-textuality

- Contains multiple references to other texts on the same idea



Map: Recommended Actions in Support of a National Climate Change Adaptation Strategy, October 5, 2010.

The amount of precipitation falling in the heaviest 1 percent of all daily events has increased during the last half-century, especially in New England and the Midwest.

Analysis of Language

Using the descriptors and information from the text, where on the continuum would you mark knowledge and vocabulary?

Language	<input type="checkbox"/> Language <ul style="list-style-type: none"> • is dense containing mainly complex, compound sentences of varied structure • contains sentences often include multiple concepts embedded in phrases 	<input type="checkbox"/> Language <ul style="list-style-type: none"> • contains a range of complex compound and simple sentences • may contain more than one concept embedded in a sentence 	<input type="checkbox"/> Language <ul style="list-style-type: none"> • contains simple and compound sentences 	<input type="checkbox"/> Language <ul style="list-style-type: none"> • contains mainly simple sentences
	<input type="checkbox"/> Vocabulary <ul style="list-style-type: none"> • includes sophisticated, complex academic and/or discipline-specific vocabulary crucial to understanding the text • is not specifically defined within the text, and assumes prior knowledge 	<input type="checkbox"/> Vocabulary <ul style="list-style-type: none"> • includes unfamiliar discipline-specific or academic words • may be defined contextually at the paragraph or passage level 	<input type="checkbox"/> Vocabulary <ul style="list-style-type: none"> • includes a range of familiar and unfamiliar discipline-specific or academic words • is defined contextually or in a footnote 	<input type="checkbox"/> Vocabulary <ul style="list-style-type: none"> • includes familiar discipline specific or academic words • is usually defined within the same sentence

Example analysis of language

Page 1, paragraph 4

Language

- Contains a range of compound and simple and sentences
- May contain more than 1 concept in a sentence

There is good theoretical reason to think that an accelerating greenhouse effect will affect weather: Add greenhouse gases like carbon dioxide and methane to the atmosphere, and they trap more heat. In hotter conditions, more water evaporates from the ocean, which eventually falls as precipitation. Heat is energy, and more energy in the ocean and atmosphere provides more power to drive intense storms.

Vocabulary

- Includes a range of familiar and unfamiliar discipline-specific and academic words

Skeptical about global warming?

Is this normal weather, or is this climate change in action?

Greenhouse gases continue to accumulate in the atmosphere...

IF, AS VIRTUALLY ALL CLIMATOLOGISTS EXPECT...

Use the Text Complexity Diagnostic Tool to record the quantitative scores



Text Complexity Diagnostic Tool

Text Analyzed: _____

Quantitative Results

Common Core Band	ATOS	Degrees of Reading Power	Flesh-Kincaid	The Lexile Framework	Reading Maturity	SourceRater
2 nd -3 rd	2.75-3.14	45-54	1.98-3.34	400-920	2.59-3.18	.05-2.48
4 th -5 th	4.97-7.03	55-60	4.31-7.73	740-1010	3.43-7.92	0.84-3.75
6 th -8 th	7.00-9.98	57-67	6.31-10.34	925-1185	7.04-9.57	4.11-10.66
9 th -10 th	9.67-12.01	65-72	8.23-12.12	1050-1325	8.41-10.91	8.03-13.99
11 th -CCR	11.20-14.10	67-74	10.34-14.2	1185-1385	9.57-12.00	12.20-14.50

Grade Band _____

Find links and instructions for using these quantitative analysis tools on: www.ohioe.state.gov/text-complexity

Qualitative Summary
What instructional implications are indicated based on your analysis of this text using the Qualitative Text Complexity matrix?

<ul style="list-style-type: none"> • Purpose • Text Structure • Knowledge Demands • Language 	
--	--

Reader-Task Considerations for Student Growth
What instructional implications are indicated based on your analysis of this text using the Reader-Task Considerations Text Complexity matrix?

<ul style="list-style-type: none"> • Cognitive Capabilities • Reading Skills • Motivation • Prior Knowledge-Experiences • Task Purpose and Complexity • Cognitive Demand of Questions/Tasks 	
---	--

Based on synthesis of this information, what is the grade level(s) for this text? _____

DRAFT 2/1/2012 Maryland State Department of Education



Summarize important information from Qualitative Dimension Rubric



Qualitative Summary

What instructional implications are indicated based on your analysis of this text using the Qualitative Text Complexity matrix?

- | | |
|---------------------|---|
| • Purpose | • Mostly complex text |
| • Text Structure | • Purpose is not clear and must read the entire text to clarify the purpose of the author |
| • Knowledge Demands | • Text structure varies throughout text and is sometimes confusing within one paragraph. |
| • Language | • Text features are very complex and require background knowledge.
• Requires knowledge on weather, understanding data, and climate change.
• Some sentence complex contains many concepts. Vocabulary demand are high in knowledge and some demand in use of academic words. |

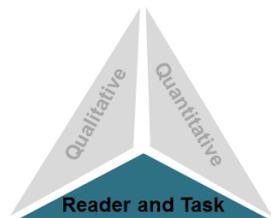


Based on synthesis of this information, what is the grade level(s) for this text? _____

Step 3: Reader and Task Considerations



Reader and Task Considerations for Text Complexity in Science/Technical Subjects and History/SS



Cognitive Capabilities and Reading Skills	Discussion/Comments
<p>To what degree ...</p> <ul style="list-style-type: none"> do the readers possess the attention span and reading skills necessary to read and comprehend the text? do readers possess the critical/analytical thinking skills necessary to understand the relationships between and among the various parts of the text? can the text be sufficiently scaffolded to overcome any deficits in cognitive capabilities and reading skills? 	
Motivation and Engagement with Task and Text	
<p>To what degree ...</p> <ul style="list-style-type: none"> will the readers be interested and engaged in the content and the presentation of ideas of the text? can sufficient motivation be developed to increase the reader's enthusiasm and engagement with the task and text? 	
Prior Knowledge and Experience	
<p>To what degree ...</p> <ul style="list-style-type: none"> do the readers possess adequate prior knowledge of and/or experience with the topic, the vocabulary, and the language of the text? can connections be made between the content of the text and other learning experiences? can deficits in prior knowledge of and/or experience with the topic, the vocabulary, and/or the language be overcome with minimal instructional time? 	
Associated Tasks	
<p>To what degree ...</p> <ul style="list-style-type: none"> will the characteristics of any tasks and/or questions (complexity, length, relevance, etc.) associated with the text interfere with the reading experience? do all the tasks and/or questions require the reader to stay grounded in the text? 	

Use the Text Complexity Diagnostic Tool to summarize Reader and Task considerations



Text Complexity Diagnostic Tool

Text Analyzed: _____

Quantitative Results

Common Core Band	ATOS	Degrees of Reading Power	Flesh-Kincaid	The Lexile Framework	Reading Maturity	SourceRater
2 nd -3 rd	2.75-3.14	45-54	1.98-3.34	400-920	2.59-3.12	.05-2.48
4 th -5 th	4.97-7.02	51-60	4.31-7.72	740-1010	3.43-7.92	0.84-3.75
6 th -8 th	7.00-9.98	57-67	6.31-10.34	925-1185	7.04-9.57	4.11-10.66
9 th -10 th	9.67-12.01	62-72	8.22-12.12	1050-1325	8.41-10.91	8.03-12.99
11 th -CCR	11.20-14.10	67-74	10.24-14.2	1185-1385	9.57-12.00	12.20-14.50

Grade Band _____

Find links and instructions for using these quantitative analysis tools on: www.ohioe.state.gov/text-complexity

Qualitative Summary
What instructional implications are indicated based on your analysis of this text using the Qualitative Text Complexity matrix?

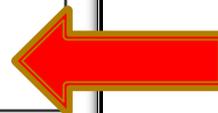
<ul style="list-style-type: none"> • Purpose • Text Structure • Knowledge Demands • Language 	
--	--

Reader-Task Considerations for Student Growth
What instructional implications are indicated based on your analysis of this text using the Reader and Task Considerations Text Complexity matrix?

<ul style="list-style-type: none"> • Cognitive Capabilities • Reading Skills • Motivation • Prior Knowledge-Experiences • Task Purpose and Complexity • Cognitive Demand of Questions/Tasks 	
---	--

Based on synthesis of this information, what is the grade level(s) for this text? _____

DRAFT 2/1/2012 Maryland State Department of Education



Use the Diagnostic Tool for Text Complexity to record the information on reader and task



Reader-Task Considerations for Student Growth

What instructional implications are indicated based on your analysis of this text using the Read and Task Considerations Text Complexity matrix?

• Cognitive Capabilities	The text will need to be broken into sections to support attention. Providing explicit support and modeling at the beginning moving to greater independence. Students have skills but will need to slow down reading to process sentence by sentence in difficult sections. Wild weather is engaging to students. Introduction is engaging with facts. Need to add an opening video about extreme weather before each section to pique interest. Using an organizer while reading to record evidence will support their ability to write an argument to answer the question posed by the author.
• Reading Skills	
• Motivation	
• Prior Knowledge-Experiences	
• Task Purpose and Complexity	
• Cognitive Demand of Questions/Tasks	

Is this a complex text for your class?

- Using data collected on the Diagnostic Tool for Text Complexity, is this a complex text?
- What would be an appropriate grade level for this text?
- What are the implications for instruction if you used this text?

- Such factors as students' motivation, knowledge, and experiences must also come into play in text selection. Students deeply interested in a given topic, for example, may engage with texts on that subject across a range of complexity.
- Particular tasks may also require students to read harder texts than they would normally be required to.
- Conversely, teachers who have had success using particular texts that are less complex than those required for a given grade band should continue their use. However, students should engage with texts of increasing text complexity during the year. By the end of the year, students should be reading grade level text as defined in CCSS 10.