

The purpose of this tool is to help educators understand each of the grade level standards and how those standards connect to the students' overall preparation for college and career readiness.

Standards are defined as the most critical prerequisite skills and knowledge. This document is color-coded to reflect both anchor and priority standards. Though previous emphasis was placed on priority standards to address lost learning due to COVID-19, New Mexico teachers should note that moving forward, while priority standards allow for acceleration of learning, all standards should be addressed in instruction throughout the school year.

In this guide you will find:

- A breakdown of each of the grade level standards within the literature strand, including:
  - Vertical alignment guidance
  - Essential vocabulary related to the standard
  - Identification of anchor standards as identified by the CCSS and priority standards as identified by NMPED
- Sample aligned assessment items
- Companion resources guides that address:
  - [Planning Literacy Instruction with MLSS Guide](#)
  - [Choosing a Complex Text](#)
  - [Text Dependent Questions with Complex Texts](#)
  - [Vocabulary Instruction with Complex Texts](#)
  - [Speaking, Listening, and Writing](#)
  - [Differentiating Support for All Learners](#)
  - [Cross-Curricular Connections with Literacy](#)
  - [Cultural and Linguistic Responsiveness in Literacy](#)

Key		
	<i>Anchor Standard</i>	Anchor standards, as identified by the Common Core, are denoted with an anchor icon. Anchor standards are the fundamental skills we want students to have when they graduate. The College and Career Ready (CCR) and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate. Anchor standards appear from Kindergarten to 12th grade and are aligned to what colleges and workplaces expect students to be able to do.
	<i>Priority Standard</i>	Priority standards, as identified by NMPED, are denoted with red highlighting. Priority standards are the most critical prerequisite skills and knowledge a student needs. This does not mean that these are only standards required to be taught, just these are the standards that will allow for the acceleration the students of New Mexico need during this time.

## STANDARDS BREAKDOWN

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| <ul style="list-style-type: none"> <li>● <b>Key Ideas and Details</b> <ul style="list-style-type: none"> <li>○ <a href="#">CCSS.RI.12.1</a></li> <li>○ <a href="#">CCSS.RI.12.2</a></li> <li>○ <a href="#">CCSS.RI.12.3</a></li> </ul> </li> <li>● <b>Craft and Structure</b> <ul style="list-style-type: none"> <li>○ <a href="#">CCSS.RI.12.4</a></li> <li>○ <a href="#">CCSS.RI.12.5</a></li> <li>○ <a href="#">CCSS.RI.12.6</a></li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>● <b>Integration of Knowledge and Ideas</b> <ul style="list-style-type: none"> <li>○ <a href="#">CCSS.RI.12.7</a></li> <li>○ <a href="#">CCSS.RI.12.8</a></li> <li>○ <a href="#">CCSS.RI.12.9</a></li> <li>○ <a href="#">NMSS.12.1</a></li> <li>○ <a href="#">NMSS.12.2</a></li> </ul> </li> <li>● <b>Range of Reading Level and Text Complexity</b> <ul style="list-style-type: none"> <li>○ <a href="#">CCSS.RI.12.10</a></li> </ul> </li> </ul> |
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## RI.12.1

	<b>Anchor Standard: Key Ideas and Details</b> <i>R.1: Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</i>	
Grade	CCSS Domain	CCSS Strand
12	Reading: Informational (RI)	Key Ideas and Details
Standard	Vertical Alignment	
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.	Previous Grades:	Future Grades:
	RI.1.1, RI.2.1, RI.3.1, RI.4.1, RI.5.1, RI.6.1, RI.7.1, RI.8.1, RI.9-10	N/A
Clarification Statement	Vocabulary for Teacher Development	
Students deliberately choose evidence that is detailed and complete to best support their analyses of what the text directly states, as well as what the text indirectly states. Students also use the evidence to support their conclusions about where they find the text vague or inconclusive.	<ul style="list-style-type: none"> <li>● <b>analysis</b> – a detailed examination of the components of a subject to understand its meaning and/or nature as a whole</li> <li>● <b>evidence</b> – facts and/or information (quotes, statistics, graphs, etc.) presented together as a body of support for a claim or value statement</li> <li>● <b>explicit, explicitly</b> – stated clearly and directly, leaving no room for confusion or interpretation</li> <li>● <b>inference</b> – a conclusion derived from logical reasoning following an investigation of available evidence</li> <li>● <b>strong and thorough textual evidence</b> – evidence that is judged to be powerful (i.e., having greater rhetorical value) when compared to other information, facts, and data that could be used for support (strong) and encompasses each facet of a particular argument or claim/set of claims such that no area is left vulnerable to simple counterclaims (thorough)</li> <li>● <b>text</b> – anything that students can read, write, view, listen to, or explore, including books, photographs, films, articles, music, art, and</li> </ul>	



more

**Students Who Demonstrate Understanding Can...**

- use a rubric to self-assess textual evidence when answering text-dependent questions or completing text-dependent tasks.
- determine where a text is vague or inconclusive and provide several strong pieces of evidence to validate their arguments.

## RI.12.2

	Anchor Standard: Key Ideas and Details				
	Grade	CCSS Domain	CCSS Strand		
12	Reading: Informational (RI)	Key Ideas and Details			
Standard		Vertical Alignment			
Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.		Previous Grades: RI.1.2, RI.2.2, RI.3.2, RI.4.2, RI.5.2, RI.6.2, RI.7.2, RI.8.2, RI.9-10.2	Future Grades: N/A		
Clarification Statement		Vocabulary for Teacher Development			
Students establish two or more central ideas within a text and notice how they evolve and work together to provide an in-depth investigation of a topic. Using the central ideas and key details, students summarize the text in an unbiased tone.		<ul style="list-style-type: none"> <li><b>analyze</b> – to critically examine the components of a subject to understand its meaning and/or nature as a whole</li> <li><b>central idea</b> – the unifying concept within an informational text to which other elements and ideas relate</li> <li><b>interact</b> – to act in such a manner as to influence another</li> <li><b>objective summary</b> – a brief account of a text’s central or main points, themes, or ideas that is free of bias, prejudice, and personal opinion and does not incorporate outside information</li> <li><b>text</b> – anything that students can read, write, view, listen to, or explore, including books, photographs, films, articles, music, art, and more</li> </ul>			
Students Who Demonstrate Understanding Can...					
<ul style="list-style-type: none"> <li>explain how the central ideas interact and build on one another.</li> <li>create flowcharts for each central idea to map how they develop throughout the text.</li> <li>remove non-essential information and biased language from a text and write summaries using the central ideas and key details that remain.</li> </ul>					

## RI.12.3

	<b>Anchor Standard: Key Ideas and Details</b> <i>R.3: Analyze how and why individuals, events, or ideas develop and interact over the course of a text.</i>		
Grade	CCSS Domain	CCSS Strand	
12	Reading: Informational (RI)	Key Ideas and Details	
			Vertical Alignment
	Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.	<i>Previous Grades:</i> RI.1.3, RI.2.3, RI.3.3, RI.4.3, RI.5.3, RI.6.3, RI.7.3, RI.8.3, RI.9-10.3	<i>Future Grades:</i> N/A
			Vocabulary for Teacher Development
Students examine a multi-faceted set of ideas or sequence of events and then explain how each individual, idea, or event connects to one another and evolves throughout the text.			<ul style="list-style-type: none"> <li>● <b>analyze</b> – to critically examine the components of a subject to understand its meaning and/or nature as a whole</li> <li>● <b>event</b> – a thing that happens; an occurrence</li> <li>● <b>interact</b> – to act in such a manner as to influence another</li> <li>● <b>sequence/sequence of events</b> – a particular (e.g., chronological, logical, etc.) way in which events, ideas, etc. follow each other</li> <li>● <b>text</b> – anything that students can read, write, view, listen to, or explore, including books, photographs, films, articles, music, art, and more</li> </ul>
<b>Students Who Demonstrate Understanding Can...</b>			
<ul style="list-style-type: none"> <li>● discuss and explain how specific individuals, ideas, or events interact and develop throughout a text.</li> <li>● create text maps that explain the relationships between specific individuals, ideas, or events involved in a complex set of ideas or sequence of events and how they develop throughout the text.</li> </ul>			

## RI.12.4

	<b>Anchor Standard: Craft and Structure</b> <i>R.4: Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.</i>				
Grade	CCSS Domain	CCSS Strand			
12	Reading: Informational (RI)	Craft and Structure			
<b>Standard</b> Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10).		<i>Previous Grades:</i> RI.1.4, RI.2.4, RI.3.4, RI.4.4, RI.5.4, RI.6.4, RI.7.4, RI.8.4, RI.9-10.4			
<b>Clarification Statement</b> Students examine the text to understand the meaning of words or phrases using the context to inform their thinking and understanding. Students consider how authors use and clarify keyword(s) throughout their work, such as Madison's use of faction in Federalist No. 10.		<b>Vocabulary for Teacher Development</b> <ul style="list-style-type: none"> <li>analyze – to critically examine the components of a subject to understand its meaning and/or nature as a whole</li> <li>phrase(s) – a small group of words representing a conceptual unit, containing either a subject or a verb, but not both. Both a subject and a verb would constitute a clause (e.g., “Running through the forest, she breathed in the fresh, crisp air.”)</li> <li>text – anything that students can read, write, view, listen to, or explore, including books, photographs, films, articles, music, art, and more</li> </ul>			
<b>Students Who Demonstrate Understanding Can...</b>					
<ul style="list-style-type: none"> <li>explain how the meaning of a given word is refined over the course of the text.</li> <li>discuss and explain how an author uses and develops a word’s definition throughout the text.</li> <li>use context clues to determine a word’s meaning.</li> </ul>					

RI.12.5		
Grade	CCSS Domain	CCSS Strand
12	Reading: Informational (RI)	Craft and Structure
Standard		Vertical Alignment
Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.		<i>Previous Grades:</i> RI.1.5, RI.2.5, RI.3.5, RI.4.5, RI.5.5, RI.6.5, RI.7.5, RI.8.5, RI.9-10.5
Clarification Statement		Vocabulary for Teacher Development
Students critically examine and critique how an author chooses to organize their explanation or argument. Looking at the organization of the text, students determine if the author's structural choices are effective in defining the author's argument, adding to the persuasiveness of the author's points, and gaining the reader's attention.		<ul style="list-style-type: none"> <li>● <b>analyze</b> – to critically examine the components of a subject to understand its meaning and/or nature as a whole</li> <li>● <b>argument</b> – value statement(s) supported by evidence whose purpose is to persuade or explain</li> <li>● <b>evaluate</b> – to determine quality or value after careful analysis or investigation</li> </ul>
Students Who Demonstrate Understanding Can...		
<ul style="list-style-type: none"> <li>● analyze how different structure combinations and sequences affect the presentation of an author's explanation or argument.</li> <li>● critique the effectiveness of a specific structural element as it pertains to making the author's points clear, convincing, and engaging.</li> </ul>		

RI.12.6		
Grade	CCSS Domain	CCSS Strand
12	Reading: Informational (RI)	Craft and Structure
Standard		Vertical Alignment
Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness or beauty of the text.		<i>Previous Grades:</i> RI.1.6, RI.2.6, RI.3.6, RI.4.6, RI.5.6, RI.6.6, RI.7.6, RI.8.6, RI.9-10.6
Clarification Statement		Vocabulary for Teacher Development
Students establish the author's point of view or intention in an exemplar text that illustrates powerful rhetoric. Students examine the author's use of language, rhetoric, and subject matter and recognize how this adds to the power or persuasiveness of the text as a whole.		<ul style="list-style-type: none"> <li>● <b>analyze</b> – to critically examine the components of a subject to understand its meaning and/or nature as a whole</li> <li>● <b>point of view</b> – a narrator's, writer's, or speaker's position with regard to the events of a narrative; one's stance on events or information given their orientation (physically and/or mentally) to the events or information; the vantage point</li> <li>● <b>purpose</b> – the reason for a particular action or creation (e.g., literary work or speech); the reason for which something exists (e.g., to persuade, to inform, to express, and/or to entertain)</li> <li>● <b>rhetoric/rhetorical feature</b> – language (or the art of using language) designed to be persuasive or effective in supporting a claim such that readers or listeners come to agree with the claim, often making use of figurative, sensory, and evocative language; an element of a large literary work that is particularly designed to have a persuasive or emotional impact</li> <li>● <b>style</b> – a particular manner of doing something (e.g., writing, painting, speaking, etc.) characteristic to an individual (e.g., author, singer, etc.), region, time, artistic/literary movement, etc.; in writing, style includes word choice,</li> </ul>

	<p>fluency, voice, sentence structure, figurative language, and syntax</p> <ul style="list-style-type: none"><li>● <b>text</b> – anything that students can read, write, view, listen to, or explore, including books, photographs, films, articles, music, art, and more</li></ul>
<p><b>Students Who Demonstrate Understanding Can...</b></p> <ul style="list-style-type: none"><li>● highlight the rhetorical devices used in a passage to advance the author's point of view or purpose.</li><li>● analyze two texts that use different languages to communicate the same point of view or have the same purpose.</li></ul>	

## RI.12.7

	<b>Anchor Standard: Integration of Knowledge and Ideas</b> <i>R.7: Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.</i>				
Grade	CCSS Domain	CCSS Strand			
12	Reading: Informational (RI)	Integration of Knowledge and Ideas			
<b>Standard</b>		<b>Vertical Alignment</b>			
Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.		<i>Previous Grades:</i>	<i>Future Grades:</i>		
RI.1.7, RI.2.7, RI.3.7, RI.4.7, RI.5.7, RI.6.7, RI.7.7, RI.8.7, RI.9-10.7		N/A			
<b>Clarification Statement</b>		<b>Vocabulary for Teacher Development</b> <ul style="list-style-type: none"> <li>● <b>evaluate</b> – to determine quality or value after careful analysis or investigation</li> <li>● <b>quantitatively</b> – in such a manner that allows something to be measured by numbers and/or ranking; (contrast with qualitatively -in such a manner that allows something to be measured in terms of descriptive experience and reflection)</li> </ul>			
<b>Students Who Demonstrate Understanding Can...</b>					
<ul style="list-style-type: none"> <li>● explain a source's connection to other sources.</li> <li>● evaluate multiple sources for bias, accuracy, relevance to a question/problem, and reliability.</li> <li>● interpret sources presented in a variety of visual or multimedia formats and evaluate those sources.</li> </ul>					

## RI.12.8



### Anchor Standard: Integration of Knowledge and Ideas

*R.8: Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.*

*Grade*

*CCSS Domain*

*CCSS Strand*

**12**

**Reading: Informational (RI)**

**Integration of Knowledge and Ideas**

#### Standard

#### Vertical Alignment

Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., *The Federalist*, presidential addresses).

*Previous Grades:*  
RI.1.8, RI.2.8, RI.3.8, RI.4.8,  
RI.5.8, RI.6.8, RI.7.8, RI.8.8,  
RI.9-10.8

*Future Grades:*  
N/A

#### Clarification Statement

#### Vocabulary for Teacher Development

Students precisely describe and assess the logic behind texts important to United States and/or British history, such as *The Federalist Papers*, U.S. Supreme Court majority opinions, and addresses from political leaders. In texts that have influenced political, social, and economic decisions and changes, students assess the logic used in their arguments, the basis of their arguments, and their overall intentions.

- **argument** – value statement(s) supported by evidence whose purpose is to persuade or explain
- **delineate** – to describe something precisely
- **evaluate** – to determine quality or value after careful analysis or investigation
- **purpose** – the reason for a particular action or creation (e.g., literary work or speech); the reason for which something exists (e.g., to persuade, to inform, to express, and/or to entertain)
- **reasons/reasoning** – an explanation or justification for a claim, action, or value statement; the process of thinking through an argument, forming judgments, and drawing conclusions using a process of logic
- **text** – anything that students can read, write, view, listen to, or explore, including books, photographs, films, articles, music, art, and more

#### Students Who Demonstrate Understanding Can...

- form a claim about the reasoning behind a text.
- delineate the premises, purposes, and arguments in a text.
- rate the logic behind each premise, purpose, and argument in a text.

## RI.12.9



### Anchor Standard: Integration of Knowledge and Ideas

*R.9: Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.*

Grade	CCSS Domain	CCSS Strand
12	Reading: Informational (RI)	Integration of Knowledge and Ideas
Standard	Vertical Alignment	
Analyze 17 <sup>th</sup> -, 18 <sup>th</sup> -, and 19 <sup>th</sup> -century foundational U.S. documents of historical and literary significance (including The Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features.	<i>Previous Grades:</i> RI.1.9, RI.2.9, RI.3.9, RI.4.9, RI.5.9, RI.6.9, RI.7.9, RI.8.9, RI.9-10.9	<i>Future Grades:</i> N/A
Clarification Statement	Vocabulary for Teacher Development	
Students examine U.S. and/or British primary source documents that reflect important historic times and have literary influence, such as The Declaration of Independence, The Preamble to the Constitution, and the Magna Carta. When examining these documents, students note the themes, intents, and language used to achieve a certain result.	<ul style="list-style-type: none"> <li><b>analyze</b> – to critically examine the components of a subject to understand its meaning and/or nature as a whole</li> <li><b>foundational works</b> – works that establish the foundation for the organization, principles, and culture of the country (e.g., the Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, etc.)</li> <li><b>purpose</b> – the reason for a particular action or creation (e.g., literary work or speech); the reason for which something exists (e.g., to persuade, to inform, to express, and/or to entertain)</li> <li><b>rhetoric/rhetorical feature</b> – language (or the art of using language) designed to be persuasive or effective in supporting a claim such that readers or listeners come to agree with the claim, often making use of figurative, sensory, and evocative language; an element of a large literary work that is particularly designed to have a persuasive or emotional impact</li> <li><b>theme</b> – the subject or underlying meaning that a literary text directly or indirectly explains, develops, and/or explores</li> </ul>	

**Students Who Demonstrate Understanding Can...**

- highlight the rhetorical features in a given document used to achieve the purposes and convey the themes.
- annotate the themes and purposes in a given document.
- identify the place and time (context) a document was written and describe the document's audience.
- select thorough evidence that demonstrates how the themes reflect the values of the society and time in which it was written.

12.1				
Grade	NMSS Domain			
12	Reading: Informational Text (RI)			
Standard	Vertical Alignment			
Students in Grade 12 will analyze and evaluate common characteristics of significant works, including Hispanic and Native American oral and written texts.	<i>Previous Grades:</i> 9-10.1	<i>Future Grades:</i> N/A		
Clarification Statement	Vocabulary for Teacher Development			
Students can analyze and evaluate the common characteristics of literary works across a variety of texts, oral and written.	<ul style="list-style-type: none"> <li>● <b>genre</b> – a specific type of composition characterized by similarities in form, style, or subject matter</li> <li>● <b>characteristic</b> – a feature or quality belonging typically to a person, place, or thing and serving to identify it</li> </ul>			
Students Who Demonstrate Understanding Can...				
<ul style="list-style-type: none"> <li>● describe how a common characteristic serves multiple texts, both oral and written.</li> <li>● evaluate how a characteristic varies in nuance across multiple texts and analyze its effect on the text as whole.</li> </ul>				

12.2				
Grade	NMSS Domain			
12	Reading: Informational Text (RI)			
Standard	Vertical Alignment			
Students in Grade 12 will cite strong and thorough textual evidence to support analysis of significant works, including Hispanic and Native American oral and written texts.	Previous Grades: 9-10.2	Future Grades: N/A		
Clarification Statement	Vocabulary for Teacher Development			
Students deliberately choose evidence that is detailed and complete to best support their analyses of what the text directly states (explicit) as well as what the text indirectly states (implicit).	<ul style="list-style-type: none"> <li>● <b>strong and thorough textual evidence</b> – evidence that is judged to be powerful (i.e., having greater rhetorical value) when compared to other information, facts, and data that could be used for support (strong) and encompasses each facet of a particular argument or set of claims such that no area is left vulnerable to simple counter-claims (thorough)</li> </ul>			
Students Who Demonstrate Understanding Can...				
<ul style="list-style-type: none"> <li>● evaluate evidence on a strength scale from weakest to strongest.</li> <li>● assess the quality of several pieces of evidence.</li> <li>● write responses to a text-dependent question, using only pieces of evidence deemed strongest.</li> </ul>				

## RI.12.10



### Anchor Standard: Range of Reading Level and Text Complexity

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

Grade	CCSS Domain	CCSS Strand
12	Reading: Informational (RI)	Range of Reading Level and Text Complexity
Standard	Vertical Alignment	
By the end of Grade 12, read and comprehend literary nonfiction at the high end of the grades 11-CCR text complexity band independently and proficiently.	<i>Previous Grades:</i> RI.1.10, RI.2.10, RI.3.10, RI.4.10, RI.5.10, RI.6.10, RI.7.10, RI.8.10, RI.9-10.10	<i>Future Grades:</i> N/A
Clarification Statement	Vocabulary for Teacher Development	
By the end of Grade 12, students competently read and understand informational texts at the highest end of the text complexity band. They are able to read independently for an extended time. Students make connections to their background knowledge and relevant experiences to engage with text.	<ul style="list-style-type: none"> <li>● <b>independently</b> – on one's own, without aid from another (such as a teacher)</li> <li>● <b>informational text</b> – a nonfiction text whose purpose is to provide information about or explain a topic (e.g., infographic, advertisement, documentary film, etc.)</li> <li>● <b>proficient/proficiently</b> – competent, skilled, and/or showing knowledge and aptitude in doing something; the level at which one is able to complete a particular skill, such as reading complex texts, with success</li> <li>● <b>text</b> – anything that students can read, write, view, listen to, or explore, including books, photographs, films, articles, music, art, and more</li> <li>● <b>text complexity band</b> – stratification of the levels of intricacy and/or difficulty of texts, corresponding to associated grade levels (2-3, 4-5, 6-8, 9-10, 11-12) determined by three factors: 1) qualitative dimensions (levels of meaning, language complexity as determined by the attentive reader), 2) quantitative dimensions (word length and frequency, sentence length, and cohesion), and 3) reader and task considerations (factors related to a</li> </ul>	

	specific reader such as motivation, background knowledge, persistence; others associated with the task itself such as the purpose or demands of the task itself)
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**Students Who Demonstrate Understanding Can...**

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| <ul style="list-style-type: none"><li>use a strategy or keep a purpose in mind while independently reading.</li><li>confirm or revise their ideas about a given topic after independently reading a text.</li></ul> |
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## ASSESSMENT GUIDE

- Constructed Response Assessment Task aligned to RI.12.1 and RI.12.3
- Constructed Response Assessment Task aligned to RI.12.8 and RI.12.9
  - Evidence of Text Complexity and Cultural and Linguistic Responsiveness
  - VABB Analysis with Example Questions and Exemplar Student Responses
  - Example MLSS Universal Supports
- Multiple Choice Assessment Items

<i>Grade</i>	<i>CCSS Domain</i>	<i>CCSS Strand</i>
<b>12</b>	<b>Reading: Informational (RI)</b>	<b>Key Ideas and Details</b>
<b>Sample Task #1 (Constructed Response)</b>		
After reading “Living like Weasels” by Annie Dillard, students must answer: How do the details in paragraph 10 contribute to the overall meaning of the passage?		
<b>Exemplar Student Responses</b>		
<b>RI.12.1</b> <b>RI.12.3</b>	A well-supported argument would include the following ideas: <ul style="list-style-type: none"> <li>• They convey the power of the author’s experience with the weasel. The details, hyperbolic statements like “bright blow to the brain” and “felled the forest” help illustrate how powerful the encounter with the weasel was.</li> </ul>	
	<b>DOK</b>	<b>Blooms</b>
	Level 3	Analyzing
	<b>Possible Aligned Language Objectives</b>	<b>Possible Misconceptions</b>
<ul style="list-style-type: none"> <li>• Students will cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</li> </ul>		<ul style="list-style-type: none"> <li>• Students may focus on details which do not contribute to the overall meaning of the passage even though they may be interesting.</li> <li>• Students may misinterpret or superficially provide a connection between elements of the text.</li> </ul>

<i>Grade</i>	<i>CCSS Domain</i>	<i>CCSS Strand</i>
<b>12</b>	<b>Reading: Informational (RI)</b>	<b>Integration of Knowledge and Ideas</b>
<b>Sample Task #2 (Constructed Response)</b>		
<p>After reading Tecumseh's "Speech to the Osages" and Patrick Henry's "Speech to the Second Virginia Convention," students must answer:      Why would an author use religious references in order to increase public advocacy for their cause or argument? Use evidence from both Tecumseh's and Henry's speeches to defend your argument.</p>		
<b>Exemplar Student Responses</b>		
<b>RI.12.8</b> <b>RI.12.9</b>	<p>A well-supported argument would include the following ideas:</p> <ul style="list-style-type: none"> <li>• Religious references give fuel to the author's argument by citing that their mission/goal is part of their God's plan for the people.</li> <li>• No matter what religious affiliation a certain group may have, using their religious affiliation can invest them in your cause.</li> <li>• Henry invests his audience in his cause by saying that they need to "fulfill the great responsibility which we hold to God." Tecumseh invests his audience by repeatedly referring to his audience as "Brothers" and by stating, "The Great Spirit is angry with our enemies; he speaks in thunder..."</li> <li>• By using a common God or religious figure as a supporter of their argument, the authors try to increase public advocacy because if their audiences believe in that God, then they will be bought into that cause as well.</li> <li>• [Responses might also compare a list of grievances and attempted resolutions, the assertions that the only way to peace is through fighting, the premise of universal human rights, comparing those who don't want war to women, or other valid comparisons.]</li> </ul>	
	<b>DOK</b>	<b>Blooms</b>
Level 3		Analyzing
<b>Possible Aligned Language Objectives</b>		<b>Possible Misconceptions</b>
<ul style="list-style-type: none"> <li>• Students will delineate and evaluate the reasoning in a seminal U.S. text.</li> <li>• Students will select appropriate evidence to back up their response.</li> </ul>		<ul style="list-style-type: none"> <li>• Students may choose details related to the topic that do not directly support their argument.</li> <li>• Students may not make connections to all religious references in either text due to lack of background knowledge.</li> </ul>

<b>Evidence of Text Complexity and Cultural and Linguistic Responsiveness</b>	
<b>RI.12.8</b> <b>RI.12.9</b>	<p><b>Text Summary and evidence of Complexity:</b></p> <ul style="list-style-type: none"> <li>Both speeches use very different rhetoric but offer exactly the same reasons to convince others to go to war.</li> <li>Tecumseh's Lexile level is fairly simple, but the style of expression may be somewhat challenging. Patrick Henry's is on grade level.</li> </ul> <p><b>Evidence of Cultural and Linguistic Responsiveness:</b></p> <ul style="list-style-type: none"> <li><b>Who is represented in the text used to assess this cluster of standards?</b> Native Americans, colonial settlers, oppressed peoples</li> <li><b>How are those groups and individuals portrayed?</b> The groups addressed are portrayed as strong, misused, logical, sentimental, caring.</li> <li><b>Does the text provoke critical questions about cultural and linguistic diversity, especially within marginalized communities?</b> Language is mentioned only tangentially, as part of culture. Culture and the right to self determination are quite central to both.</li> <li><b>What supports are provided to teachers to identify blind spots?</b> Perhaps teachers should know that the great father over the ocean that Tecumseh refers to is the king, who Tecumseh believed would help them. This purely strategic move (the king is on the other side of the ocean) helps explain why some tribes got involved in the Revolutionary War at all.</li> <li><b>How is this text culturally/linguistically responsive?</b> It shows the universality of both oppression and, especially, the necessity of fighting against it when other means of redress have been exhausted. The pairing also allows comparison and appreciation of culturally specific rhetorical styles.</li> </ul>

VABB Analysis		
RI.12.8 RI.12.9	Validate	Affirm
	<p><i>The intentional and purposeful legitimization of the home culture and language of the student.</i></p> <p><b>Question:</b> Tecumseh talks about cultural values such as hospitality to strangers, protecting women and children, and helping one another (sharing burdens). Examine the speech carefully. Using three columns, match (1) quotes from Tecumseh's speech, (2) the value that it indicates, and (3) how this value is shown in your culture. (This would be a good one to have students share and discuss finished charts in groups.)</p> <p><b>ESR:</b> Most religious and cultural traditions have similar teachings, and students should be able to find at least 5 similarities—depending upon their level.</p> <p><i>For Native Schools:</i></p> <p><b>Question:</b> Tecumseh often refers to the Osage as "Brothers" even though they belong to a different tribe. Explain why this is an effective rhetorical strategy.</p> <p><b>ESR:</b> Native students familiar with kinship obligations should recognize the speaker's appeal to that aspect of culture. They should also be able to recognize how Tecumseh builds this obligation through references to shared religion, cultural practices, overlapping territories, etc.</p> <p>[using cultural expertise as the basis of academic discussion]</p>	<p><i>The intentional and purposeful effort to reverse the negative stereotypes, images, and representations of marginalized cultures and languages promoted by corporate mainstream.</i></p> <p><b>Question:</b> Compare and contrast the portrayal of Patrick Henry and other revolutionists in history and popular culture with the way that those media portray Native Americans who fought the colonists. Why are these portrayals so different?</p> <p><b>ESR:</b> Popular culture and history (still) depict the revolutionaries as noble and heroic, while Native fighters are bloodthirsty, savage, and irrational. Students should recognize that portrayals are rarely objective. They may discuss the fact that history is written by the victors, that we are more likely to praise violence when it benefits us than when it hurts us, or some variation of that.</p>
	Build	Bridge
	<p><i>Create the connections between the home culture/language and the school culture/language through instruction for success in school and the broader social context.</i></p>	<p><i>Create opportunities for situational appropriateness that provides the academic and social skills that students will need to have success beyond school culture.</i></p>

**Question:** Using the American revolutionary period or some other period in history, create a narrative telling it from a different perspective than we usually hear.

**ESR:** Response will be in narrative form. Ideally, students will use this opportunity to affirm some aspect of their own culture and address/correct its misrepresentation. However, they may also choose to write about a culture other than their own. This is fine, but it still allows students to work with the ideas of situation and perspective.

**Question:** What factors should one consider when trying to decide whether to engage in war? What other methods might be used?

**ESR:** A thoughtful response might address the grievance itself, what other strategies have been tried, consequences of fighting vs. not fighting, or possibility of success. It might go on to address the possibility of working from within, negotiating, passive resistance, or other tactics.

### Layer 1: Universal Supports

*High-quality core instruction for all students*

In New Mexico we believe that all students deserve access to high-quality grade-level texts to show proficiency with reading and comprehension as outlined in the New Mexico standards. These universal supports provide core instruction that allow students to comprehend complex texts by providing access points and opportunities for deep thinking.

1. Pre-teach Tier 2 Vocabulary Words
  - *Tier 2 Vocabulary are words that are more likely to appear in text than speech. Pre-teaching these words before diving into a text allows students to better understand the text because their cognitive load can be focused more on comprehension. To learn more, please visit Resource Guide on [Vocabulary Instruction with Complex Texts](#)*
  - Choose words that are not implicitly or explicitly defined within the text.
2. Annotate/Create Text-Dependent questions to push student thinking to think about themes and central ideas, knowledge of vocabulary, or syntax and structure following the steps outlined in this resource guide. To learn more, please visit Resource Guide on [Text Dependent Questions with Complex Texts](#)
  - *Crafting and using text dependent questions throughout a complex text allows the reader to chunk the text to better focus on meaning. They also teach the reader how to think deeply about a text and use evidence from the text to support that thinking.*

### Universal Supports

*The details listed below apply to the specific text in the bottom-most box and are meant to offer examples of how universal supports can be planned for lessons using an appropriately complex text.*

Tier 2 Vocabulary to Preteach	Text Dependent Question
<b>Word:</b> <u>ceremony</u>  <b>Think Aloud:</b> We know at least one meaning of <u>ceremony</u> , a formal event like wedding or a graduation, or maybe some other cultural practice. But here, Patrick Henry is using the word in a different way. <u>Ceremony</u> can also be unnecessary "fluff," like gestures and words that are just there to be formal. So he means that he doesn't want to waste time with formalities.	<b>Question:</b> What evidence tells us the meaning of " <u>in vain</u> "?  <b>ESR:</b> Patrick Henry has been talking about how nothing has worked, even after 10 years. This shows us that " <u>in vain</u> " means it doesn't work. Or maybe that the person didn't succeed.

#### Tier 2 Vocabulary:

"MR. PRESIDENT: No man thinks more highly than I do of the patriotism, as well as abilities, of the very worthy gentlemen who have just addressed the House. But different men often see the same subject in different lights; and, therefore, I hope it will not be thought disrespectful to those gentlemen if, entertaining as I do, opinions of a character very opposite to theirs, I shall speak forth my sentiments freely, and without reserve. This is no time for ceremony. The question before the House is one of awful moment to this country. For my own part, I consider it as nothing less than a question of freedom or slavery; and in proportion to the magnitude of the subject ought to be the freedom of the debate. It is only in this way that we can hope to arrive at truth, and fulfil the great responsibility which we hold to God and our country. Should I keep back my opinions at such a time, through fear of giving offence, I should consider myself as guilty of treason towards my country, and of an act of disloyalty toward the majesty of heaven, which I revere above all earthly kings."

"Speech to the Second Virginia Convention" by Patrick Henry

[Link to Full Text](#)

#### Text Dependent Question:

"Shall we try argument? Sir, we have been trying that for the last ten years. Have we anything new to offer upon the subject? Nothing. We have held the subject up in every light of which it is capable; but it has been all in vain. Shall we



New Mexico Instructional Scope  
**12th Grade Informational Text**

resort to entreaty and humble supplication? What terms shall we find which have not been already exhausted? Let us not, I beseech you, sir, deceive ourselves. Sir, we have done everything that could be done, to avert the storm which is now coming on. We have petitioned; we have remonstrated; we have supplicated; we have prostrated ourselves before the throne, and have implored its interposition to arrest the tyrannical hands of the ministry and Parliament. Our petitions have been slighted; our remonstrances have produced additional violence and insult; our supplications have been disregarded; and we have been spurned, with contempt, from the foot of the throne. In vain, after these things, may we indulge the fond hope of peace and reconciliation. There is no longer any room for hope."

"Speech to the Second Virginia Convention" by Patrick Henry

[Link to Full Text](#)

Multiple Choice Assessment Items		
<i>Grade</i>	<i>CCSS Domain</i>	<i>CCSS Strand</i>
<b>12</b>	<b>Reading: Informational (RI)</b>	<b>Key Ideas and Details</b>
<p>Which choice best describes the overall structure of the passage?</p> <p>A. A complex problem is described, a failed attempt to resolve that problem is summarized, and then the details of a successful resolution are presented.            B. A long-standing dilemma is discussed, two different solutions to that dilemma are explored, and then a study of the cost of each solution is considered.            C. A recurrent conflict is examined, a popular means of addressing that conflict is criticized, and then a seemingly outdated method is championed.            D. A major program is outlined, several obstacles to that program's feasibility are analyzed, and then an argument for why the program can work is articulated.</p>		
<b>RI.12.2</b>	<p>Text Reference: "<a href="#">World Development Report 2015: Mind, Society, and Behavior</a>" by International Bank for Reconstruction and Development/The World Bank from the SAT Question Bank</p> <p>The main purpose of the passage is to</p> <p>A. describe a series of experiments on the way technology interferes with critical thinking.            B. assert that people have become overly dependent on computers for storing information.            C. discuss the idea that humans' capacity for memory is much weaker than it once was.            D. share the findings of a study examining the effect of computer use on memory recall.</p> <p>Text Reference: "<a href="#">How the Web Affects Memory</a>" by Harvard Magazine from the SAT Question Bank</p>	
<i>Grade</i>	<i>CCSS Domain</i>	<i>CCSS Strand</i>
<b>12</b>	<b>Reading: Informational (RI)</b>	<b>Craft and Structure</b>
<p>In the last sentence of Passage 2, the author uses the phrase "five years and £500 million" primarily to</p> <p>A. emphasize the scale of the effort needed to make teixobactin available for consumer use.            B. criticize the level of funding that the government has committed to teixobactin development.            C. underscore the amount of time and money that has already been spent researching teixobactin.            D. compare the amount of money spent developing teixobactin with the amount spent developing other antibiotics.</p>		
<b>RI.12.5</b>	<p>Text Reference: "<a href="#">A New Antibiotic Found in Dirt Can Kill Drug-Resistant Bacteria</a>" by Brian Handwerk and "<a href="#">This New Antibiotic Is Cause for Celebration – and Caution</a>" by David Livermore from the SAT Question</p>	

	<p>Bank</p> <p>The main purpose of the fifth paragraph (line 22-25) is to</p> <ul style="list-style-type: none"> <li>A. relate Maguire's study of mental athletes to her study of taxi drivers.</li> <li>B. speculate on the reason for Maguire's unexpected results.</li> <li><b>C. identify an important finding of Maguire's study of mental athletes.</b></li> <li>D. transition from a summary of Maguire's findings to a description of her methods.</li> </ul> <p>Text Reference: <a href="#"><i>Moonwalking with Einstein: The Art and Science of Remembering Everything</i></a> by Joshua Foer from the SAT Question Bank</p>	
<b>RI.12.6</b>	<p>The authors' use of the words "exact," "specific," and "complement" in line 14 in the final paragraph functions mainly to</p> <ul style="list-style-type: none"> <li>A. confirm that the nucleotide sequences are known for most molecules of DNA.</li> <li>B. counter the claim that the sequences of bases along a chain can occur in any order.</li> <li>C. support the claim that the phosphate-sugar backbone of the authors' model is completely regular.</li> <li><b>D. emphasize how one chain of DNA may serve as a template to be copied during DNA replication.</b></li> </ul> <p>Text Reference: <a href="#"><i>"Genetical Implications of the Structure of Deoxyribonucleic Acid"</i></a> by J.D. Watson and F.H.C. Crick from the SAT Question Bank</p> <p>The use of the phrases "happily meanders" (line 5), and "unassuming bug's encounter" (line 5-6) in the first two paragraphs establishes a tone that is</p> <ul style="list-style-type: none"> <li>A. academic.</li> <li>B. melodramatic.</li> <li><b>C. informal.</b></li> <li>D. mocking.</li> </ul> <p>Text Reference: <a href="#"><i>What a Plant Knows: A Field Guide to the Senses</i></a> by Daniel Chamovitz from the SAT Question Bank</p>	
<b>Grade</b>	<b>CCSS Domain</b>	<b>CCSS Strand</b>
<b>12</b>	<b>Reading: Informational (RI)</b>	<b>Integration of Knowledge and Ideas</b>
<b>RI.12.7</b>	According to the data presented in the figure, water demand in Bogota is best described as having <ul style="list-style-type: none"> <li>A. dropped considerably from 1999 to 2002.</li> <li>B. risen dramatically from 2000 to 2001.</li> <li><b>C. declined steadily from 2002 to 2004.</b></li> </ul>	

	<p>D. remained stable from 2007 to 2009.</p> <p>Text Reference: <a href="#">"World Development Report 2015: Mind, Society, and Behavior" by International Bank for Reconstruction and Development/The World Bank</a> from the SAT Question Bank</p> <p>Based on the graph and the passage, people would be most likely to follow the advice of which forecaster?</p> <p>A. Forecaster Q, because his or her predictions proved to be more accurate than the predictions of Forecaster P.  <b>B. Forecaster Q, because his or her predictions offered greater certainty than did the predictions of Forecaster P.</b>  C. Forecaster P, because he or she exhibited a greater level of confidence than did Forecaster Q.  D. Forecaster P, because he or she was generally more cautious than was Forecaster Q.</p> <p>Text Reference: <a href="#">Superforecasting: The Art and Science of Prediction</a> by Philip E. Tetlock and Dan Gardner from the SAT Question Bank</p>
RI.12.9	<p>The primary purpose of each passage is to</p> <p>A. make an argument about the difference between legal duties and moral imperatives.  B. discuss how laws ought to be enacted and changed in a democracy.  <b>C. advance a view regarding whether individuals should follow all of the country's laws.</b>  D. articulate standards by which laws can be evaluated as just or unjust.</p> <p>Text Reference: <a href="#">"Address to the Young Men's Lyceum of Springfield, Illinois" by Abraham Lincoln and "Resistance to Civil Government" by Henry David Thoreau</a> from the SAT Question Bank</p> <p>Based on the passages, Lincoln would most likely describe the behavior that Thoreau recommends in line 27-28 ("if it...law") as</p> <p>A. an excusable reaction to an intolerable situation.  <b>B. a rejection of the country's proper forms of remedy.</b>  C. an honorable response to an unjust law.  D. a misapplication of a core principle of the Constitution.</p> <p>Text Reference: <a href="#">"Address to the Young Men's Lyceum of Springfield, Illinois" by Abraham Lincoln and "Resistance to Civil Government" by Henry David Thoreau</a> from the SAT Question Bank</p>

**Text Reference for MC Assessment Item RL.12.2**

This passage and accompanying figure are adapted from World Development Report 2015: Mind, Society, and Behavior. ©2015 by International Bank for Reconstruction and Development/The World Bank.

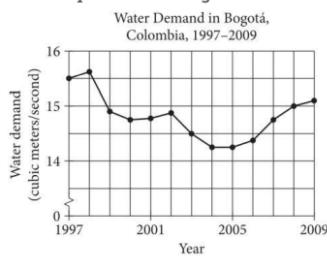
*Line*      The city's strategy was based on the assumption that if individuals were informed of the situation, they would adjust their behavior and reduce usage—after all, no one wants to be without water. But the assumption was wrong. In fact, the city's strategy increased water consumption. Many people did not change their behavior because they did not think they could make a difference and did not know which steps were most important. Some people even started to stockpile water.

5      Recognizing the mistake in its assumptions, the city government changed its strategy. First, the government reminded people to take action by conserving water at times when they were most likely to overuse it. Stickers featuring a picture of a statue of San Rafael—which was the name of the emergency reservoir the city was relying on after the tunnel collapse—were distributed throughout the city. People were asked to place a sticker by the faucet that a particular household, office, or school used most frequently. The stickers made the need to conserve water at all times salient. Daily reports of the city's water consumption were prominently published in the country's major 10 newspapers. The reports became a part of public discussions about the emergency.

Second, the city government launched engaging and entertaining campaigns to teach individuals the most effective techniques for household water conservation. The campaigns contained memorable slogans and organized 4,000 youth volunteers to go throughout the city to inform people about the emergency and teach them effective strategies to reduce consumption. The mayor himself appeared in a TV ad taking a shower, explaining how the tap could be turned off while soaping.

15      Third, the city government publicized information about who was cooperating and who was not. The chief executive officer of the water company personally awarded households with exceptional water savings a poster of San Rafael with the legend, "Here we follow a rational plan for using the precious liquid." These awards were made visible in the media. Three months later, when a second tunnel collapsed in the reservoir, the city imposed sanctions for despilfarradores (squanderers), those with the highest levels of overconsumption. While the sanctions were minor—squanderers had to participate in a water-saving workshop and were subject to an 20 extra day of water cuts—they were nevertheless effective because they targeted highly visible actors. Car-washing businesses, although collectively not a major source of water waste, were the primary targets.

The assumption underlying the new strategy was that conservation would improve if the city created a greater scope for social rewards and punishments that helped to reassure people that achieving the public good—continued access to water—was likely. This time, the assumption was correct. The change in strategy helped to create a social norm of water conservation. By the eighth week of the 25 campaign, citywide water savings had significantly exceeded even the most optimistic technical predictions. Moreover, the reductions in water use persisted long after the tunnel was repaired and the emergency had been addressed.



**Text Reference for MC Assessment Item RL.12.2**

This passage is adapted from "How the Web Affects Memory." ©2011 by Harvard Magazine Inc.

- Line* Search engines have changed the way we use the Internet, putting vast sources of information just a few clicks away. But Harvard professor of psychology Daniel Wegner's recent research proves that websites—and the Internet—are changing much more than technology itself. They are changing the way our memories function.
- Wegner's latest study, "Google Effects on Memory: Cognitive Consequences of Having Information at Our Fingertips," shows that when 5 people have access to search engines, they remember fewer facts and less information because they know they can rely on "search" as a readily available shortcut.
- Wegner, the senior author of the study, believes the new findings show that the Internet has become part of a transactive memory source, a method by which our brains compartmentalize information. First hypothesized by Wegner in 1985, transactive memory exists in many forms, as when a husband relies on his wife to remember a relative's birthday. "[It is] this whole network of memory where you don't 10 have to remember everything in the world yourself," he says. "You just have to remember who knows it." Now computers and technology as well are becoming virtual extensions of our memory.
- The idea validates habits already forming in our daily lives. Cell phones have become the primary location for phone numbers. GPS devices in cars remove the need to memorize directions. Wegner points out that we never have to stretch our memories too far to remember the name of an obscure movie actor or the capital of Kyrgyzstan—we just type our questions into Google. "We become part of 15 the Internet in a way," he says. "We become part of the system and we end up trusting it."
- Working with researchers Betsy Sparrow of Columbia University and Jenny Liu of the University of Wisconsin–Madison, Wegner conducted four experiments to demonstrate the phenomenon, using various forms of memory recall to test reliance on computers. In the first experiment, participants demonstrated that they were more likely to think of computer terms like "Yahoo" or "Google" after being asked a set of difficult trivia questions. In two other experiments, participants were asked to type a collection of readily memorable 20 statements, such as "An ostrich's eye is bigger than its brain." Half the subjects were told that their work would be saved to a computer; the other half were informed that the statements would be erased. In subsequent memory testing, participants who were told their work would not be saved were best at recalling the statements. In a fourth experiment, participants typed into a computer statements they were told would be saved in specific folders. Next, they were asked to recall the statements. Finally, they were given cues to the wording and asked to name the folders where the statements were stored. The participants proved better able to recall the folder locations than the 25 statements themselves.
- Wegner concedes that questions remain about whether dependence on computers will affect memories negatively: "Nobody knows now what the effects are of these tools on logical thinking." Students who have trouble remembering distinct facts, for example, may struggle to employ those facts in critical thinking. But he believes that the situation overall is beneficial, likening dependence on computers to dependence on a mechanical hand or other prosthetic device.
- And even though we may not be taxing our memories to recall distinct facts, we are still using them to consider where the facts are 30 located and how to access them. "We still have to remember things," Wegner explains. "We're just remembering a different range of things." He believes his study will lead to further research into understanding computer dependence, and looks forward to tracing the extent of human interdependence with the computer world—pinpointing the "movable dividing line between us and our computers in cyber networks."

**Text Reference for MC Assessment Item RL.12.5**

Passage 1 is adapted from Brian Handwerk, "A New Antibiotic Found in Dirt Can Kill Drug-Resistant Bacteria." ©2015 by Smithsonian Institution. Passage 2 is adapted from David Livermore, "This New Antibiotic Is Cause for Celebration—and Caution." ©2015 by Telegraph Media Group Limited.

Line

**Passage 1**

"Pathogens are acquiring resistance faster than we can introduce new antibiotics, and this is causing a human health crisis," says biochemist Kim Lewis of Northeastern University.

Lewis is part of a team that recently unveiled a promising antibiotic, born from a new way to tap the powers of soil microorganisms.

5 In animal tests, teixobactin proved effective at killing off a wide variety of disease-causing bacteria—even those that have developed immunity to other drugs. The scientists' best efforts to create mutant bacteria with resistance to the drug failed, meaning teixobactin could function effectively for decades before pathogens naturally evolve resistance to it.

Natural microbial substances from soil bacteria and fungi have been at the root of most antibiotic drug development during the past century. But only about one percent of these organisms can be grown in a lab. The rest, in staggering numbers, have remained 10 uncultured and of limited use to medical science, until now. "Instead of trying to figure out the ideal conditions for each and every one of the millions of organisms out there in the environment, to allow them to grow in the lab, we simply grow them in their natural environment where they already have the conditions they need for growth," Lewis says.

To do this, the team designed a gadget that sandwiches a soil sample between two membranes, each perforated with pores that allow molecules like nutrients to diffuse through but don't allow the passage of cells. "We just use it to trick the bacteria into thinking 15 that they are in their natural environment," Lewis says.

The team isolated 10,000 strains of uncultured soil bacteria and prepared extracts from them that could be tested against nasty pathogenic bacteria. Teixobactin emerged as the most promising drug. Mice infected with bacteria that cause upper respiratory tract infections (including *Staphylococcus aureus* and *Streptococcus pneumoniae*) were treated with teixobactin, and the drug knocked out the infections with no noticeable toxic effects.

20 It's likely that teixobactin is effective because of the way it targets disease: The drug breaks down bacterial cell walls by attacking the lipid molecules that the cell creates organically. Many other antibiotics target the bacteria's proteins, and the genes that encode those proteins can mutate to produce different structures.

**Passage 2**

Many good antibiotic families—penicillin, streptomycin, tetracycline—come from soil fungi and bacteria and it has long been suspected that, if we could grow more types of bacteria from soil—or from exotic environments, such as deep oceans—then we might find new natural antibiotics. In a recent study, researchers [Kim Lewis and others] found that they could isolate and grow individual 25 soil bacteria—including types that can't normally be grown in the laboratory—in soil itself, which supplied critical nutrients and minerals. Once the bacteria reached a critical mass they could be transferred to the lab and their cultivation continued. This simple and elegant methodology is their most important finding to my mind, for it opens a gateway to cultivating a wealth of potentially antibiotic-producing bacteria that have never been grown before.

The first new antibiotic that they've found by this approach, teixobactin, from a bacterium called *Eleftheria terrae*, is less exciting to my mind, though it doesn't look bad. Teixobactin killed Gram-positive bacteria, such as *S. aureus*, in the laboratory, and cured experimental infection in mice. It also killed the tuberculosis bacterium, which is important because there is a real problem with resistant tuberculosis in the developing world. It was also difficult to select teixobactin resistance.

35 So, what are my caveats? Well, I see three. First, teixobactin isn't a potential panacea. It doesn't kill the Gram-negative opportunists as it is too big to cross their complex cell wall. Secondly, scaling to commercial manufacture will be challenging, since the bacteria making the antibiotic are so difficult to grow. And, thirdly, it's early days yet. As with any antibiotic, teixobactin now faces the long haul of clinical trials: Phase I to see what dose you can safely give the patient, Phase II to see if it cures infections, and Phase III to compare its efficacy to that of "standard of care treatment." That's going to take five years and £500 million and these are numbers we must find ways to reduce (while not compromising safety) if we're to keep ahead of bacteria, which can evolve far more swiftly and cheaply.

**Text Reference for MC Assessment Item RL.12.5**

This passage is adapted from Joshua Foer, *Moonwalking with Einstein: The Art and Science of Remembering Everything*. ©2011 by Joshua Foer.

Line In 2000, a neuroscientist at University College London named Eleanor Maguire wanted to find out what effect, if any, all that driving around the labyrinthine streets of London might have on cabbies' brains. When she brought sixteen taxi drivers into her lab and examined their brains in an MRI scanner, she found one surprising and important difference. The right posterior hippocampus, a part of the brain known to be involved in spatial navigation, was 7 percent larger than normal in the cabbies—a small but very significant 5 difference. Maguire concluded that all of that way-finding around London had physically altered the gross structure of their brains. The more years a cabbie had been on the road, the more pronounced the effect.

10 The brain is a mutable organ, capable—with limits—of reorganizing itself and readapting to new kinds of sensory input, a phenomenon known as neuroplasticity. It had long been thought that the adult brain was incapable of spawning new neurons—that while learning caused synapses to rearrange themselves and new links between brain cells to form, the brain's basic anatomical structure was more or less static. Maguire's study suggested the old inherited wisdom was simply not true.

15 After her groundbreaking study of London cabbies, Maguire decided to turn her attention to mental athletes. She teamed up with Elizabeth Valentine and John Wilding, authors of the academic monograph *Superior Memory*, to study ten individuals who had finished near the top of the World Memory Championship. They wanted to find out if the memorizers' brains were—like the London cabbies'—structurally different from the rest of ours, or if they were somehow just making better use of memory abilities that we all possess.

20 The researchers put both the mental athletes and a group of matched control subjects into MRI scanners and asked them to memorize three-digit numbers, black-and-white photographs of people's faces, and magnified images of snowflakes, while their brains were being scanned. Maguire and her team thought it was possible that they might discover anatomical differences in the brains of the memory champs, evidence that their brains had somehow reorganized themselves in the process of doing all that intensive remembering. But when the researchers reviewed the imaging data, not a single significant structural difference turned up. The brains of the mental athletes appeared to be indistinguishable from those of the control subjects. What's more, on every single test of general cognitive ability, the mental athletes' scores came back well within the normal range. The memory champs weren't smarter, and they 25 didn't have special brains.

25 But there was one telling difference between the brains of the mental athletes and the control subjects: When the researchers looked at which parts of the brain were lighting up when the mental athletes were memorizing, they found that they were activating entirely different circuitry. According to the functional MRIs [fMRIs], regions of the brain that were less active in the control subjects seemed to be working in overdrive for the mental athletes.

30 Surprisingly, when the mental athletes were learning new information, they were engaging several regions of the brain known to be involved in two specific tasks: visual memory and spatial navigation, including the same right posterior hippocampal region that the London cabbies had enlarged with all their daily way-finding. At first glance, this wouldn't seem to make any sense. Why would mental athletes be conjuring images in their mind's eye when they were trying to learn three-digit numbers? Why should they be navigating like London cabbies when they're supposed to be remembering the shapes of snowflakes?

Maguire and her team asked the mental athletes to describe exactly what was going through their minds as they memorized. The mental athletes said they were consciously converting the information they were being asked to memorize into images, and distributing those images along familiar spatial journeys. They weren't doing this automatically, or because it was an inborn talent they'd nurtured since childhood. Rather, the unexpected patterns of neural activity that Maguire's fMRIs turned up were the result of training and practice.

**Text Reference for MC Assessment Item RL.12.6**

This passage is adapted from J. D. Watson and F. H. C. Crick, "Genetical Implications of the Structure of Deoxyribonucleic Acid." ©1953 by Nature Publishing Group. Watson and Crick deduced the structure of DNA using evidence from Rosalind Franklin and R. G. Gosling's X-ray crystallography diagrams of DNA and from Erwin Chargaff's data on the base composition of DNA.

*Line*      The first feature of our structure which is of biological interest is that it consists not of one chain, but of two. These two chains are both coiled around a common fiber axis. It has often been assumed that since there was only one chain in the chemical formula there would only be one in the structural unit. However, the density, taken with the X-ray evidence, suggests very strongly that there are two.

5      The other biologically important feature is the manner in which the two chains are held together. This is done by hydrogen bonds between the bases. The bases are joined together in pairs, a single base from one chain being hydrogen-bonded to a single base from the other. The important point is that only certain pairs of bases will fit into the structure. One member of a pair must be a purine and the other a pyrimidine in order to bridge between the two chains. If a pair consisted of two purines, for example, there would not be room for it.

10     We believe that the bases will be present almost entirely in their most probable forms. If this is true, the conditions for forming hydrogen bonds are more restrictive, and the only pairs of bases possible are: adenine with thymine, and guanine with cytosine. Adenine, for example, can occur on either chain; but when it does, its partner on the other chain must always be thymine.

15     The phosphate-sugar backbone of our model is completely regular, but any sequence of the pairs of bases can fit into the structure. It follows that in a long molecule many different permutations are possible, and it therefore seems likely that the precise sequence of bases is the code which carries the genetical information. If the actual order of the bases on one of the pair of chains were given, one could write down the exact order of the bases on the other one, because of the specific pairing. Thus one chain is, as it were, the complement of the other, and it is this feature which suggests how the deoxyribonucleic acid molecule might duplicate itself.

The table shows, for various organisms, the percentage of each of the four types of nitrogenous bases in that organism's DNA.

Organism	Base Composition of DNA			
	Percentage of base in organism's DNA			
	adenine (%)	guanine (%)	cytosine (%)	thymine (%)
Maize	26.8	22.8	23.2	27.2
Octopus	33.2	17.6	17.6	31.6
Chicken	28.0	22.0	21.6	28.4
Rat	28.6	21.4	20.5	28.4
Human	29.3	20.7	20.0	30.0
Grasshopper	29.3	20.5	20.7	29.3
Sea urchin	32.8	17.7	17.3	32.1
Wheat	27.3	22.7	22.8	27.1
Yeast	31.3	18.7	17.1	32.9
<i>E. coli</i>	24.7	26.0	25.7	23.6

Adapted from Manju Bansal, "DNA Structure: Revisiting the Watson-Crick Double Helix." ©2003 by Current Science Association, Bangalore.

**Text Reference for MC Assessment Item RL.12.6**

This passage is adapted from Daniel Chamovitz, *What a Plant Knows: A Field Guide to the Senses*. ©2012 by Daniel Chamovitz.

*Line* We can look at this system as analogous to short-term memory. First, the flytrap encodes the information (forms the memory) that something (it doesn't know what) has touched one of its hairs. Then it stores this information for a number of seconds (retains the memory) and finally retrieves this information (recalls the memory) once a second hair is touched. If a small ant takes a while to get from one hair to the next, the trap will have forgotten the first touch by the time the ant brushes up against the next hair. In other words, it loses the storage of the information, doesn't close, and the ant happily meanders on. How does the plant encode and store the information from the unassuming bug's encounter with the first hair? How does it remember the first touch in order to react upon the second?

*5* Scientists have been puzzled by these questions ever since John Burdon-Sanderson's early report on the physiology of the Venus flytrap in 1882. A century later, Dieter Hodick and Andreas Sievers at the University of Bonn in Germany proposed that the flytrap stored information regarding how many hairs have been touched in the electric charge of its leaf. Their model is quite elegant in its simplicity. In their studies, they discovered that touching a trigger hair on the Venus flytrap causes an electric action potential [a temporary reversal in the electrical polarity of a cell membrane] that induces calcium channels to open in the trap (this coupling of action potentials and the opening of calcium channels is similar to the processes that occur during communication between human neurons), thus causing a rapid increase in the concentration of calcium ions.

*10* They proposed that the trap requires a relatively high concentration of calcium in order to close and that a single action potential from just one trigger hair being touched does not reach this level. Therefore, a second hair needs to be stimulated to push the calcium concentration over this threshold and spring the trap. The encoding of the information requires maintaining a high enough level of calcium so that a second increase (triggered by touching the second hair) pushes the total concentration of calcium over the threshold. As the calcium ion concentrations dissipate over time, if the second touch and potential don't happen quickly, the final concentration *20* after the second trigger won't be high enough to close the trap, and the memory is lost.

*15* Subsequent research supports this model. Alexander Volkov and his colleagues at Oakwood University in Alabama first demonstrated that it is indeed electricity that causes the Venus flytrap to close. To test the model they rigged up very fine electrodes and applied an electrical current to the open lobes of the trap. This made the trap close without any direct touch to its trigger hairs (while they didn't measure calcium levels, the current likely led to increases). When they modified this experiment by altering the amount of electrical current, Volkov could determine the exact electrical charge needed for the trap to close. As long as *25* fourteen microcoulombs—a tiny bit more than the static electricity generated by rubbing two balloons together—flowed between the two electrodes, the trap closed. This could come as one large burst or as a series of smaller charges within twenty seconds. If it took longer than twenty seconds to accumulate the total charge, the trap would remain open.

**Text Reference for MC Assessment Item RL.12.7**

This passage and accompanying figure are adapted from World Development Report 2015: Mind, Society, and Behavior. ©2015 by International Bank for Reconstruction and Development/The World Bank.

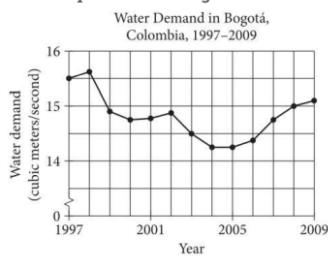
*Line*      The city's strategy was based on the assumption that if individuals were informed of the situation, they would adjust their behavior and reduce usage—after all, no one wants to be without water. But the assumption was wrong. In fact, the city's strategy increased water consumption. Many people did not change their behavior because they did not think they could make a difference and did not know which steps were most important. Some people even started to stockpile water.

5      Recognizing the mistake in its assumptions, the city government changed its strategy. First, the government reminded people to take action by conserving water at times when they were most likely to overuse it. Stickers featuring a picture of a statue of San Rafael—which was the name of the emergency reservoir the city was relying on after the tunnel collapse—were distributed throughout the city. People were asked to place a sticker by the faucet that a particular household, office, or school used most frequently. The stickers made the need to conserve water at all times salient. Daily reports of the city's water consumption were prominently published in the country's major 10 newspapers. The reports became a part of public discussions about the emergency.

Second, the city government launched engaging and entertaining campaigns to teach individuals the most effective techniques for household water conservation. The campaigns contained memorable slogans and organized 4,000 youth volunteers to go throughout the city to inform people about the emergency and teach them effective strategies to reduce consumption. The mayor himself appeared in a TV ad taking a shower, explaining how the tap could be turned off while soaping.

15      Third, the city government publicized information about who was cooperating and who was not. The chief executive officer of the water company personally awarded households with exceptional water savings a poster of San Rafael with the legend, "Here we follow a rational plan for using the precious liquid." These awards were made visible in the media. Three months later, when a second tunnel collapsed in the reservoir, the city imposed sanctions for despilfarradores (squanderers), those with the highest levels of overconsumption. While the sanctions were minor—squanderers had to participate in a water-saving workshop and were subject to an 20 extra day of water cuts—they were nevertheless effective because they targeted highly visible actors. Car-washing businesses, although collectively not a major source of water waste, were the primary targets.

The assumption underlying the new strategy was that conservation would improve if the city created a greater scope for social rewards and punishments that helped to reassure people that achieving the public good—continued access to water—was likely. This time, the assumption was correct. The change in strategy helped to create a social norm of water conservation. By the eighth week of the 25 campaign, citywide water savings had significantly exceeded even the most optimistic technical predictions. Moreover, the reductions in water use persisted long after the tunnel was repaired and the emergency had been addressed.



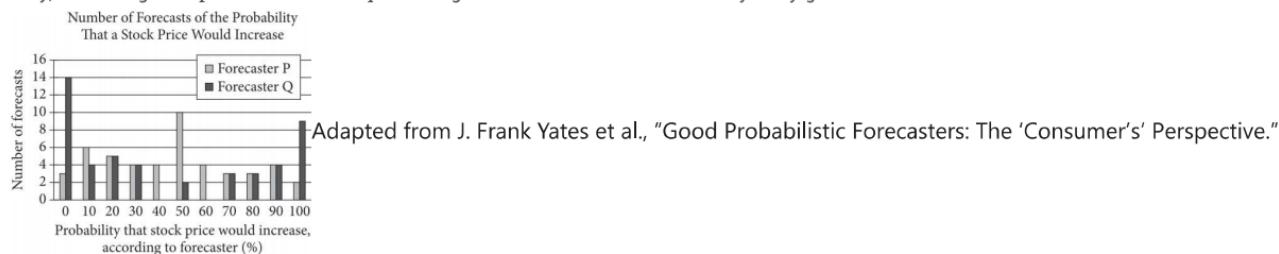
### Text Reference for MC Assessment Item RL.12.7

This passage is adapted from Philip E. Tetlock and Dan Gardner, Superforecasting: The Art and Science of Prediction. ©2015 by Philip Tetlock Consulting, Inc., and Connaught Street, Inc.

*Line* Human beings have coped with uncertainty for as long as we have been recognizably human. And for almost all that time we didn't have access to statistical models of uncertainty because they didn't exist. It was remarkably late in history—arguably as late as the 1713 publication of Jakob Bernoulli's *Ars Conjectandi*—before the best minds started to think seriously about probability.  
 Before that, people had no choice but to rely on the tip-of-your-nose perspective. You see a shadow moving in the long grass. Should you worry about lions? You try to think of an example of a lion attacking from the long grass. If the example comes to mind easily, run! If the response is strong enough, it can produce a binary conclusion: "Yes, it's a lion," or "No, it's not a lion." But if it's weaker, it can produce an unsettling middle possibility: "Maybe it's a lion." What the tip-of-your-nose perspective will not deliver is a judgment so fine grained that it can distinguish between, say, a 60% chance that it is a lion and an 80% chance. That takes slow, conscious, careful thought. Of course, when you were dealing with the pressing existential problems our ancestors faced, it was rarely necessary to make such fine distinctions. It may not even have been desirable. A three-setting dial gives quick, clear directions. Is that a lion? YES = run! MAYBE = stay alert! NO = relax. The ability to distinguish between a 60% probability and an 80% probability would add little. In fact, a more fine-grained analysis could slow you down—and get you killed.

In this light, the preference for two- and three-setting mental dials makes sense. And lots of research underscores the point. Why is a decline from 5% to 0% so much more valuable than a decline from 10% to 5%? Because it delivers more than a 5% reduction in risk. It delivers certainty. Both 0% and 100% weigh far more heavily in our minds than the mathematical models of economists say they should. Again, this is not surprising if you think about the world in which our brain evolved. There was always at least a tiny chance a lion was lurking in the vicinity. Or a snake. Or any of the countless other threats people faced. But our ancestors couldn't maintain a state of constant alert. The cognitive cost would have been too great. They needed worry-free zones. The solution? Ignore small chances and use the two-setting dial as much as possible. Either it is a lion or it isn't. Only when something undeniably falls between those two settings—only when we are compelled—do we turn the mental dial to maybe.

We want answers. A confident yes or no is satisfying in a way that maybe never is, a fact that helps to explain why the media so often turn to hedgehogs [single-minded people] who are sure they know what is coming no matter how bad their forecasting records may be. Of course it's not always wrong to prefer a confident judgment. All else being equal, our answers to questions like "Does France have more people than Italy?" are likelier to be right when we are confident they are right than when we are not. Confidence and accuracy are positively correlated. But research shows we exaggerate the size of the correlation. For instance, people trust more confident financial advisers over those who are less confident even when their track records are identical. And people equate confidence and competence, which makes the forecaster who says something has a middling probability of happening less worthy of respect. As one study noted, people "took such judgments as indications the forecasters were either generally incompetent, ignorant of the facts in a given case, or lazy, unwilling to expend the effort required to gather information that would justify greater confidence."



**Text Reference for MC Assessment Item RL.12.9**

Passage 1 is adapted from Abraham Lincoln, "Address to the Young Men's Lyceum of Springfield, Illinois." Originally delivered in 1838. Passage 2 is from Henry David Thoreau, "Resistance to Civil Government." Originally published in 1849.

Line      Let every American, every lover of liberty, every well wisher to his posterity, swear by the blood of the Revolution, never to violate in the least particular, the laws of the country; and never to tolerate their violation by others. As the patriots of seventy-six did to the support of the Declaration of Independence, so to the support of the Constitution and Laws, let every American pledge his life, his property, and his sacred honor;—let every man remember that to violate the law, is to trample on the blood of his father, and to tear the character of his own, and his children's liberty. Let reverence for the laws, be breathed by every American mother, to the lisping babe, that prattles on her lap—let it be taught in schools, in seminaries, and in colleges;—let it be written in Primers, spelling books, and in Almanacs;—let it be preached from the pulpit, proclaimed in legislative halls, and enforced in courts of justice. And, in short, let it become the political religion of the nation; and let the old and the young, the rich and the poor, the grave and the gay, of all sexes and tongues, and colors and conditions, sacrifice unceasingly upon its altars. . . .

10      When I so pressingly urge a strict observance of all the laws, let me not be understood as saying there are no bad laws, nor that grievances may not arise, for the redress of which, no legal provisions have been made. I mean to say no such thing. But I do mean to say, that, although bad laws, if they exist, should be repealed as soon as possible, still while they continue in force, for the sake of example, they should be religiously observed. So also in unprovided cases. If such arise, let proper legal provisions be made for them with the least possible delay; but, till then, let them if not too intolerable, be borne with.

15      There is no grievance that is a fit object of redress by mob law. In any case that arises, as for instance, the promulgation of abolitionism, one of two positions is necessarily true; that is, the thing is right within itself, and therefore deserves the protection of all law and all good citizens; or, it is wrong, and therefore proper to be prohibited by legal enactments; and in neither case, is the interposition of mob law, either necessary, justifiable, or excusable.

**Passage 2**

20      Unjust laws exist; shall we be content to obey them, or shall we endeavor to amend them, and obey them until we have succeeded, or shall we transgress them at once? Men generally, under such a government as this, think that they ought to wait until they have persuaded the majority to alter them. They think that, if they should resist, the remedy would be worse than the evil. But it is the fault of the government itself that the remedy is worse than the evil. It makes it worse. Why is it not more apt to anticipate and provide for reform? Why does it not cherish its wise minority? Why does it cry and resist before it is hurt? . . .

25      If the injustice is part of the necessary friction of the machine of government, let it go, let it go; perchance it will wear smooth—certainly the machine will wear out. If the injustice has a spring, or a pulley, or a rope, or a crank, exclusively for itself, then perhaps you may consider whether the remedy will not be worse than the evil; but if it is of such a nature that it requires you to be the agent of injustice to another, then, I say, break the law. Let your life be a counter friction to stop the machine. What I have to do is to see, at any rate, that I do not lend myself to the wrong which I condemn.

30      As for adopting the ways which the State has provided for remedying the evil, I know not of such ways. They take too much time, and a man's life will be gone. I have other affairs to attend to. I came into this world, not chiefly to make this a good place to live in, but to live in it, be it good or bad. A man has not everything to do, but something; and because he cannot do everything, it is not necessary that he should do something wrong. . . .

35      I do not hesitate to say, that those who call themselves Abolitionists should at once effectually withdraw their support, both in person and property, from the government . . . and not wait till they constitute a majority of one, before they suffer the right to prevail through them. I think that it is enough if they have God on their side, without waiting for that other one. Moreover, any man more right than his neighbors constitutes a majority of one already.