

## Reviewing Using the IMET: ELA

### Module 103: Building Knowledge

#### Essential Questions:

- How does the **Instructional Materials Evaluation Tool (IMET)** reflect the major features of the Standards and the Shifts?
- What understandings support high-quality, accurate application of the IMET metrics?

#### Goals:

- ✓ Understand how aligned materials embody the shifts inherent in the Common Core State Standards
- ✓ Understand the precise meaning of each metric
- ✓ Recognize examples and non-examples related to each IMET criteria metric

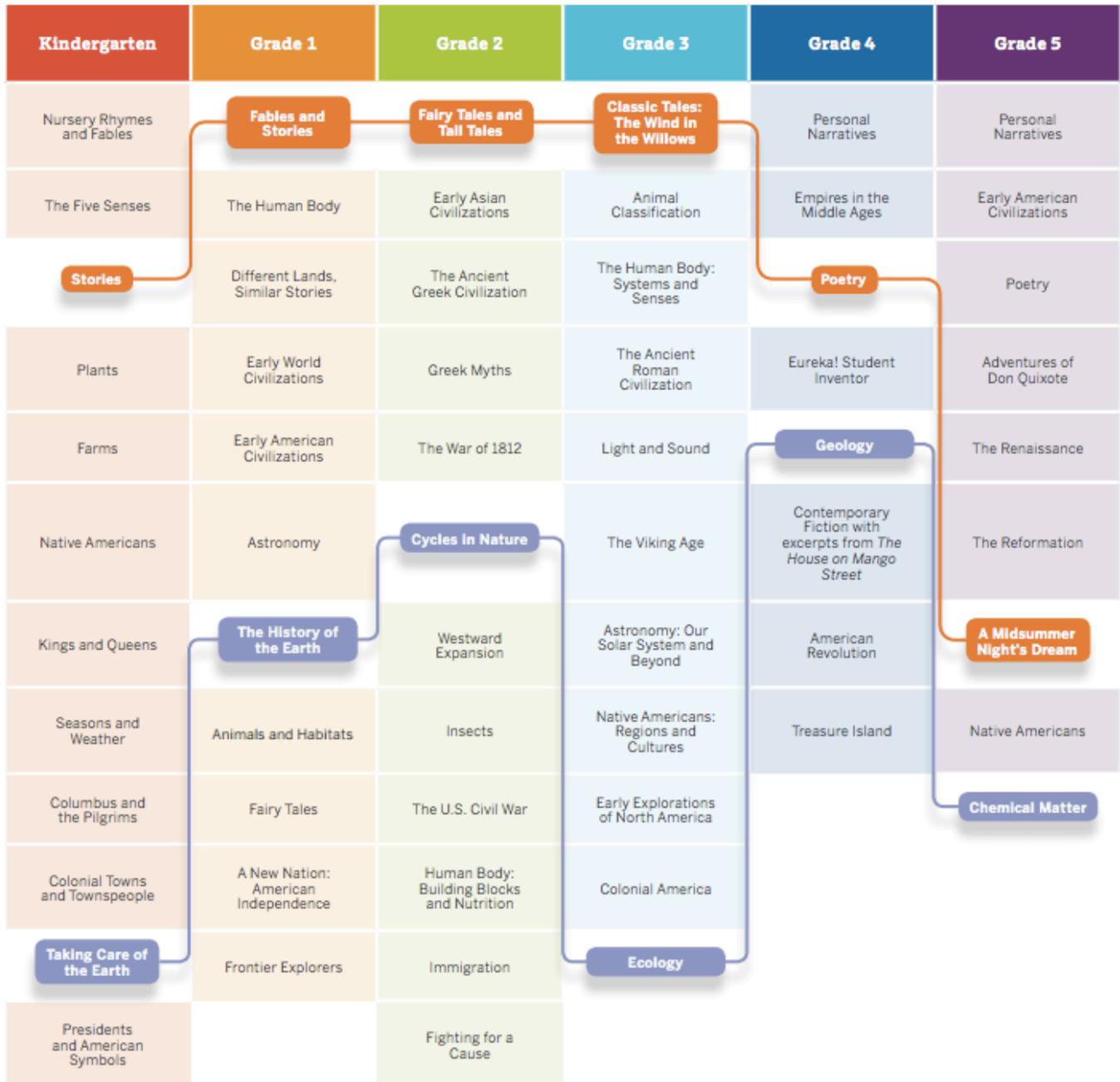
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### Module 103

Metric 3A: Materials provide a sequence or series of texts that build knowledge and vocabulary systematically through reading, writing, listening, and speaking. These texts are organized around a variety of topics at each grade level.

Metric 3B: Materials provide instructions, clear design and lightweight student accountability, that guide instructors regarding how students will regularly engage in a volume of independent reading, both assigned, related to the anchor texts, or texts of their own choosing, in or outside of class.

# Example



## Knowledge Sequence K-5.

Although this Program Guide covers K-2 only, students who study CKLA CA through K-5 will continue to build coherent, sequenced background knowledge in 3rd-5th grade.

## Close Reading and Volume of Reading

A volume of reading should be balanced with the close analytic reading.

<b>Close Reading</b>	<b>Volume of Reading</b>
Fewer pages	More pages
Grade-level complex text	Text at different levels of complexity
All students same text	Student or teacher choice of text
Teaches students to attend to text and to words	Rapidly builds knowledge & vocab
Heavy support	Light support
Solely instructional	Guided or independent
Exposes students to higher level content	Builds knowledge of words, and the world
Gives all students access	Builds love of reading

# Independent Reading

## Independent Reading

Accountable Independent Reading is an important part of a student's day. Have students choose one of the suggested texts listed on the opposite page to read independently, or select a different text based on students' interests or your own observations of your students' needs.

### ACCOUNTABLE INDEPENDENT READING

#### Literary Text

Ask students questions such as the following to check accountability of their independent reading of literary text:

##### KEY IDEAS AND DETAILS

- Which examples of dialogue and description help you understand characters, settings, and events?
- Which details, examples, and inferences help you summarize the text or explain a theme about how nature impacts humankind?

##### CRAFT AND STRUCTURE

- Which elements of fiction genres help you explain the text?
- Which words and phrases does the author use to reveal point of view?

##### INTEGRATION OF IDEAS

- What are the differences and similarities between the descriptions of events and characters in the text and the illustrations?
- Identify details from the text that show effect of nature on humankind. What themes do the texts have in common?

#### Informational Text

Ask students questions such as the following to check accountability of their independent reading of informational text:

##### KEY IDEAS AND DETAILS

- What is the main idea of the text? Which key details support the main idea and help you summarize the text?
- What specific information in the text helps you explain how researchers help us understand nature?

##### CRAFT AND STRUCTURE

- What words and phrases can you use to describe the overall structure of the text?
- How are reasons and evidence used to support points in a text?

##### INTEGRATION OF IDEAS

- How does the visual connect to the text? What information does it provide that the text does not or cannot provide?
- What reasons and evidence does the author use to support the ideas in the text?

See the Independent Reading Routine on pp. TR22–TR25.

### Text Club

Encourage students to form a Text Club and discuss the texts they've read in Independent Reading with classmates who have read the same texts. In order to have a successful discussion, have them follow these Text Club tips.

- Come to discussions prepared.
- Build on the ideas of other group members and express your own ideas clearly.
- Follow agreed-upon rules for discussions.
- Pose and respond to specific questions to clarify or follow up on information.
- Make comments that contribute to the discussion.
- Review key ideas and explain your own ideas and understanding in light of the discussion.
- Identify reasons and evidence a speaker provides to support their points.

See the Text Club Routine on pp. TR26–TR29.

**SUGGESTED TEXTS** The suggested texts listed below connect closely to the Enduring Understanding. Readers understand that they use specific strategies to help them understand what they read. As you build your Text Club library, consider using the texts below.

#### *Fly Guy vs. the Fly Swatter*

by Tedd Arnold  
Literary Text  
Lexile 420L

#### *Diary of a Spider*

by Doreen Cronin  
Literary Text  
Lexile 510L

#### *A Walk in the Deciduous Forest*

by Rebecca L. Johnson  
Informational Text  
Lexile 680L

#### *A Bird's Life*

By Ellen Lawrence  
Informational Text  
Lexile 740L

#### *How Animals Protect Themselves*

By Michel Barre  
Informational Text  
Lexile 900L

#### *Spiders*

by Seymour Simon  
Informational Text  
Lexile 950L

## Reviewing Using the IMET: ELA

### Module 103

AC Metric 3A: Materials regularly ask students to complete culminating tasks in which they demonstrate their knowledge of a topic.

AC Metric 3B: Materials require students to engage in many short, focused research projects annually to develop students' knowledge in a range of areas and to enable students to develop the expertise needed to conduct research independently.

AC Metric 3C: Materials include a cohesive, year-long plan for students to interact with and build academic vocabulary.

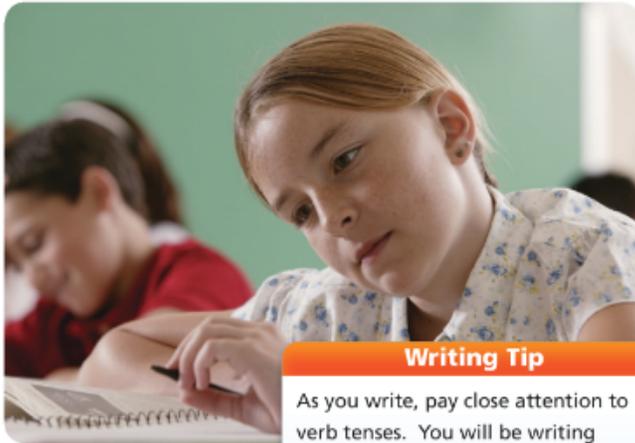
# Building Knowledge: Example or Non-example?

## Performance Task

### WRITE ABOUT READING



**Response** Do you think Sarah stays? Write a paragraph that tells what you think happens. Use text evidence from the story to support your answer. Include a conclusion to sum up your opinion.



#### Writing Tip

As you write, pay close attention to verb tenses. You will be writing mostly about what you think happens to Anna and her family in the future.

**End of Unit 2 Assessment:**  
Writing an Informative Text about Pufferfish Defense Mechanisms

**Part 1 directions:**

- 1.) Read the prompt below.
- 2.) Using the texts and your research notes from the Mid-Unit 2 Assessment, plan an informative written piece for the prompt. *(RI.4.9, W.4.2, W.4.4, W.4.7)*

**Prompt:**

Review your research from the Mid-Unit 2 Assessment about the pufferfish’s defense mechanisms. Then, use the evidence you have gathered to write an informative piece that describes two defense mechanisms of the pufferfish. Be sure to do the following in your piece:

- \_\_\_\_\_ Introduce the pufferfish, including a focus statement that states the main idea of the piece. *(W.4.2a)*
- \_\_\_\_\_ Use paragraphs to group related facts and evidence. *(W.4.2a)*
- \_\_\_\_\_ Use facts and details to describe two of the pufferfish’s defense mechanisms. *(W.4.2b, W.4.8)*
- \_\_\_\_\_ Use precise vocabulary to inform about the pufferfish. *(W.4.2d)*
- \_\_\_\_\_ Provide a concluding statement that restates the focus statement. *(W.4.2e)*
- \_\_\_\_\_ Synthesize information from at least two research sources. *(RI.4.9, W.4.7, W.4.8)*
- \_\_\_\_\_ Use vocabulary from your research on animal defense mechanisms to accurate descriptions throughout the piece. *(W.4.2d, L.4.3a, L.4.6)*
- \_\_\_\_\_ Use correct capitalization and spell fourth-grade words correctly.

Use the following planning graphic organizer to plan your informative piece before writing your draft.

Informative Page Planning Graphic Organizer

**Focus Question:** How does the pufferfish use its body and behaviors to help it survive?

**Focus Statement:**

**Name:**

**Date:**

<p><b>Introduction Paragraph</b> Describe the pufferfish.</p>	<p><b>Detail Paragraph 1</b> Describe one defense mechanism the pufferfish uses.</p>
<p><b>Detail Paragraph 2</b> Describe one defense mechanism the pufferfish uses.</p>	<p><b>Concluding Statement</b> Restate your focus statement.</p>
<p><b>My Sources:</b> List any sources you used in planning your informative piece.</p>	<p><b>Vocabulary from my research to be used:</b></p>

Informative Page Planning Graphic Organizer

**Part 2 directions:** Write your informative piece on a separate sheet of lined paper.

**Part 3 directions:** Reread your informative piece and make any needed revisions or edits based on the directions in Part 1.

## Research: Example or Non-example?

## Research/Writing

**Career Chart**

**Social Studies: Career Choices** Bebe is interested in engineering. John Leguizamo became a comedian. What kind of **career** is right for you? Gather information about jobs that match your talents and interests.

[myNGconnect.com](http://myNGconnect.com)

- Discover what you would be good at.
- Learn about the jobs you are interested in.

Organize your information in a chart. Share it with a classmate who has similar career interests.

Language and Learning Handbook, page 616

**Research the Job Outlook**

When you choose a career, consider what jobs will be available in the future. Analyze the job outlook for a position in the construction industry.

1. Prepare a four-column chart with the following headings: Job, Number of Employees in Industry, Earnings, and Job Outlook.
2. Consult the U.S. Department of Labor, Bureau of Labor Statistics Web site Occupational Outlook Handbook.
3. Fill in the information about your chosen job in the chart. Work with a partner to determine if there is a positive or negative job outlook for your chosen careers. Save the information in a professional career portfolio.

## Example

With prompting, scaffolding, and support, the students will review the series of pictures and text to determine how water was important to early Asian civilizations. After reviewing the documents, students will write to the prompt independently.

### Helpful Vocabulary:

fertile	irrigation canals	Indus River	trade
cultivate	sacred	Yangtze River	transport
source	Hinduism	Yellow River	Himalayan Mountains

Writing Task: Using evidence found in the following documents, your knowledge of our readings, and at least four of the vocabulary words above, please describe how water was important to early Asian civilizations.

# Example

## Vocabulary to Unlock Text

### ANCHOR TEXT *The Tarantula Scientist*

Benchmark Vocabulary	Possible Morphological Links	Possible Semantic Links	Informational Links
<b>aggressive</b>	aggression, aggressor	physical, combative	Topic
<b>documented</b>	document	recorded, observed	Topic
<b>adapted</b>		adjusted, acclimated, conformed	Topic
<b>integral</b>		important, critical, necessary	Topic

### SUPPORTING TEXT *The Boy Who Drew Birds*

**Informational Text** Use this chart as a starting point for your class to generate related words. There may be more words in each cluster than those listed here.

Benchmark Vocabulary	Possible Morphological Links	Possible Semantic Links	Informational Links
<b>migrate</b>	migration, migrant	travel	Topic
<b>hibernated</b>	hibernation	sleep, rest	Topic
<b>transformed</b>	transformation, transformative	change	Topic
<b>naturalist</b>	nature, naturally	scientist	Big Ideas
<b>imitate</b>	imitation	copy, mimic	Topic
<b>complex</b>	complexity	difficult, complicated	Topic
<b>theory</b>	theoretical	idea, concept	Big Ideas

### SUPPORTING TEXT "Fragile Frogs"

**Informational Text** Use this chart as a starting point for your class to generate related words. There may be more words in each cluster than those listed here.

Benchmark Vocabulary	Possible Morphological Links	Possible Semantic Links	Informational Links
<b>international</b>	national		Topic
<b>surveyed</b>		researched, studied	Topic
<b>extinction</b>	extinct	depletion	Big Ideas
<b>juvenile</b>		young, adolescent	Topic
<b>fungus</b>	fungi	mushrooms	Topic
<b>altitudes</b>		heights	Topic
<b>native</b>	nativity	domestic	Topic
<b>vulnerable</b>	vulnerability	fragile	Big Ideas
<b>exposed</b>	exposure	vulnerable, uncovered	Topic

## Reviewing Using the IMET: ELA

### Module 103

AC Metric 4A: Teachers and students can reasonably complete the core content within a regular school year to maximize students' learning.

AC Metric 4B: Materials regularly provide all students, including those who read, write, speak, or listen below grade level, or whose first language is other than English, with extensive opportunities to work with and meet grade-level standards.

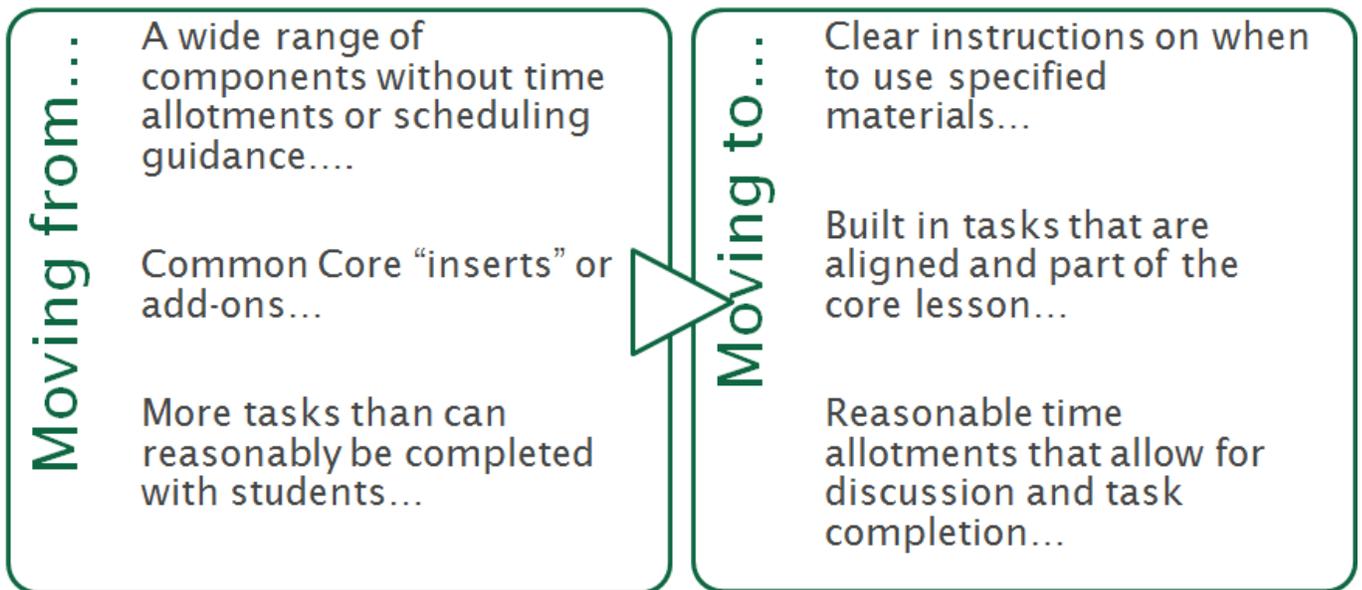
AC Metric 4C: Materials regularly include extensions and/or more advanced opportunities for students who read, write, speak, or listen above grade level.

AC Metric 4D: Materials regularly and systematically build in the time, resources, and suggestions required for adapting instruction to allow teachers to guide all students to meet grade-level standards (e.g., alternative teaching approaches, pacing, instructional delivery options, suggestions for addressing common student difficulties, remediation strategies).

AC Metric 4E: Materials regularly and systematically offer assessment opportunities that genuinely measure progress on reading comprehension and writing proficiency as well as on mastery of grade level standards. This progress includes gradual release of supporting scaffolds for students to measure their independent abilities.

## Alignment Criterion Metric 4A

Teachers and students can reasonably complete the core content within a regular school year to maximize students' learning.

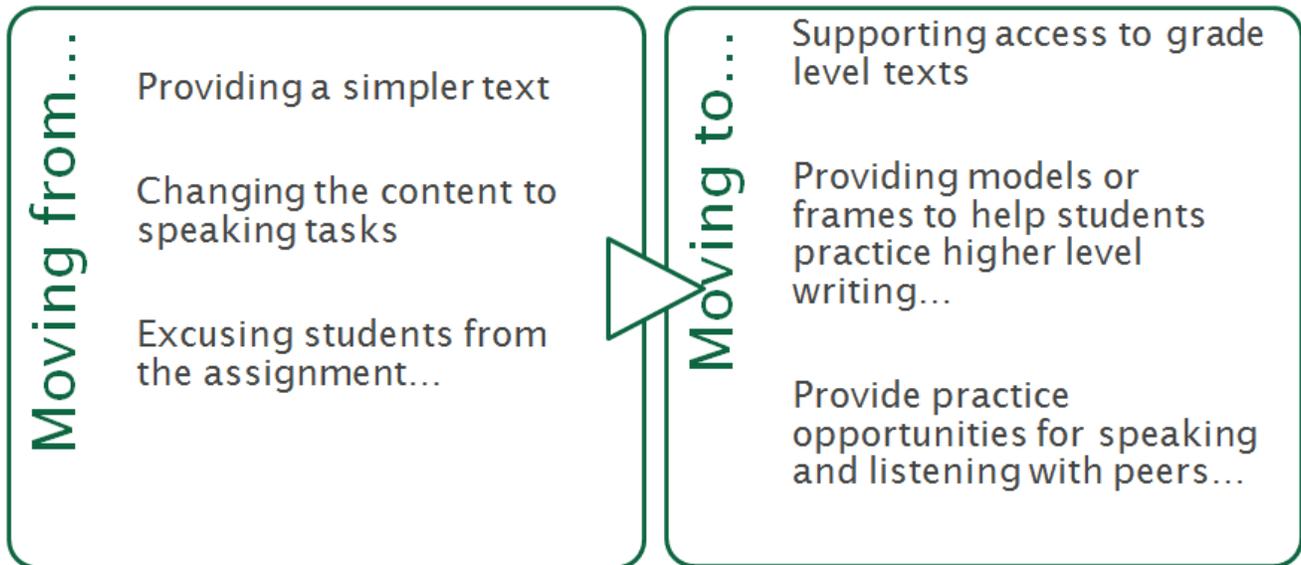


Long-Term Targets Addressed (Based on ELA CCSS)	
<p>I can effectively participate in a conversation with my peers and adults. (SL.3.1)                      I can ask questions to deepen my understanding of informational text. (RI.3.1)                      I can answer questions using specific details from informational text. (RI.3.1)</p>	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none"> <li>I can talk with my partner in order to record what I notice and I wonder about pictures.</li> <li>I can ask and answer questions about a text.</li> </ul>	<ul style="list-style-type: none"> <li>Observation of partner discussions</li> <li>Contributions to conversation norms</li> <li>Asking and Answering Questions about Mystery Texts sheet</li> </ul>

Agenda	Teaching Notes
<ol style="list-style-type: none"> <li>Opening                             <ol style="list-style-type: none"> <li>Unpacking the Learning Targets (5 minutes)</li> <li>Practicing Observing Closely: I Notice/I Wonder (5 minutes)</li> </ol> </li> <li>Work Time                             <ol style="list-style-type: none"> <li>Carousel Protocol: Frog Mystery Pictures (15 minutes)</li> <li>Predicting from Text: “Frog” Poem and Excerpts from <i>Bullfrog at Magnolia Circle</i> (25 minutes)</li> </ol> </li> <li>Closing and Assessment                             <ol style="list-style-type: none"> <li>Debrief (5 minutes)</li> <li>Choral Reading of “Frog” Poem (5 minutes)</li> </ol> </li> <li>Homework</li> </ol>	<ul style="list-style-type: none"> <li>This module opens in a similar way to Module 1, with a “mystery” carousel.</li> <li>The Carousel Brainstorm protocol is a simple way to engage students with new content by getting them moving, thinking, talking, and writing. In this lesson, students look at some “mystery” images to pique their curiosity. Do <i>not</i> reveal what the pictures are about, or tell students the guiding question for the module until the end of the lesson. Technically, this carousel is not a “brainstorm”, but the steps of the protocol still apply.</li> <li>Review Think-Pair-Share and Carousel Brainstorm protocols (Appendix).</li> <li>In advance: Post charts around the room with images (photos or illustrations) from the various texts in this module (see Work Time, Part A). These images should be “mystery” images that don’t totally give away the topic of the module.</li> <li>Students need other basic vocabulary words clarified: <i>question, conversation, excerpt, mystery, expert</i>.</li> <li>Begin to gather texts from the Recommended Texts lists for this unit. Students will use these for independent reading.</li> </ul>

## Alignment Criterion Metric 4B

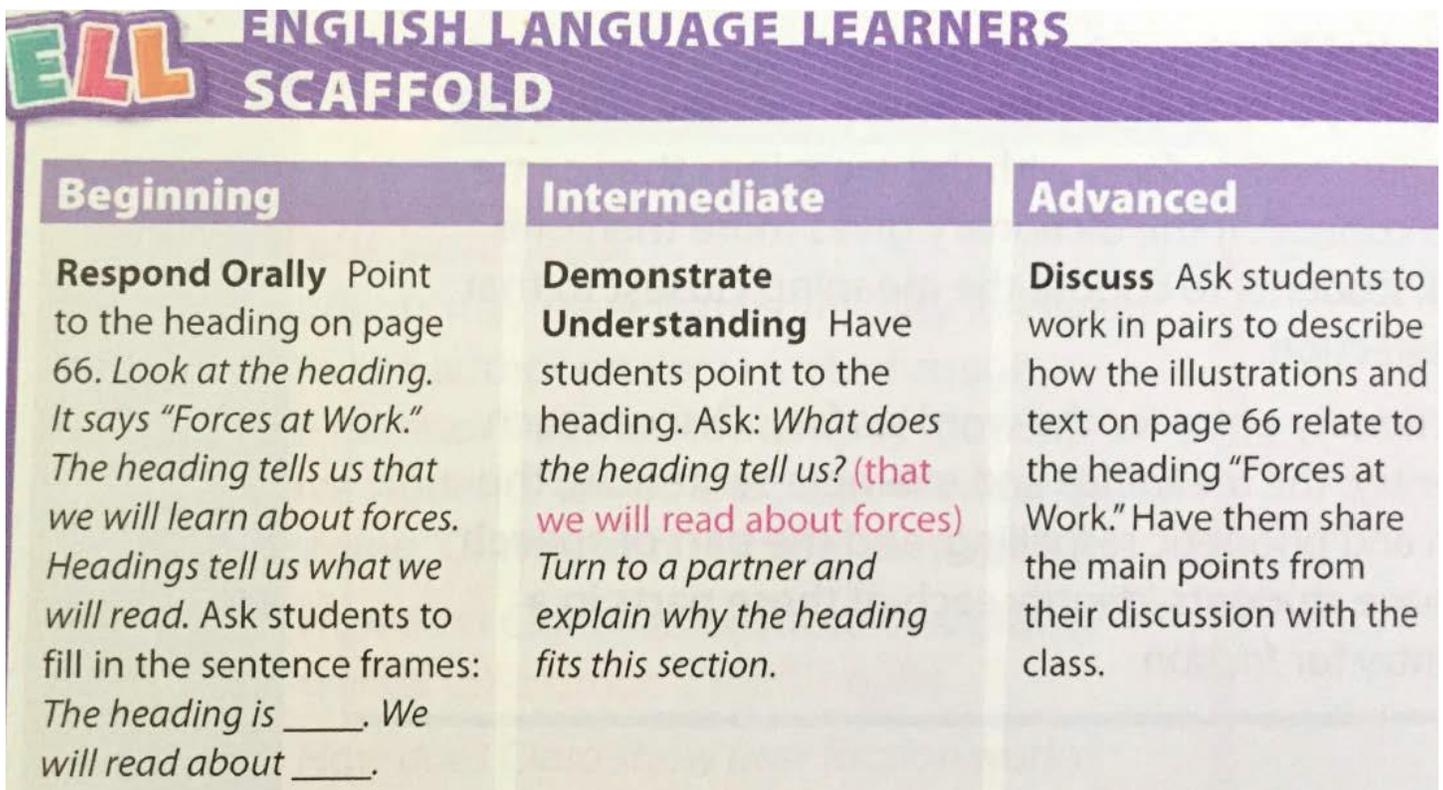
Materials regularly provide all students, including those who read, write, speak, or listen below grade level, or whose first language is other than English, with extensive opportunities to work with and meet grade-level standards.



Example 1:

Standard	Language Function/Skill	Language Frames
<p>Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.</p> <p>d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented</p>	<p><b>Acknowledge Multiple Perspectives</b></p>	<p><b>B</b></p> <p>1. You He She [Name]   say(s) think(s)   ____.</p> <p>2. I have a different   idea thought   about that. feeling</p> <p><b>I</b></p> <p>1. I think you said/meant ____. Did I get that right?</p> <p>2. I understand that you think ____ but I think ____ because ____.</p> <p>3. While some people think ____, other people think ____.</p> <p>4. I agree with what   you he she [name]   says about ____   but   I also think ____. and</p> <p>Some of us thought ____. Others thought ____. We finally agreed on/ that ____. I hadn't thought of that. It makes me think of ____.</p> <p><b>A</b></p> <p>1. While   you he she [name]   think(s) feel(s)   ____ about ____   you he she [name]   seem(s) to think/feel ____.</p> <p>2. I can appreciate that   you he she [name]   think(s) feel(s)   ____, but there are others who   think   ____ feel</p>

Example or Non-example?



**ELL ENGLISH LANGUAGE LEARNERS SCAFFOLD**

Beginning	Intermediate	Advanced
<p><b>Respond Orally</b> Point to the heading on page 66. <i>Look at the heading. It says "Forces at Work." The heading tells us that we will learn about forces. Headings tell us what we will read.</i> Ask students to fill in the sentence frames: <i>The heading is _____. We will read about _____.</i></p>	<p><b>Demonstrate Understanding</b> Have students point to the heading. Ask: <i>What does the heading tell us? (that we will read about forces)</i> Turn to a partner and explain why the heading fits this section.</p>	<p><b>Discuss</b> Ask students to work in pairs to describe how the illustrations and text on page 66 relate to the heading "Forces at Work." Have them share the main points from their discussion with the class.</p>

## Alignment Criteria 4B and 4C

## DIFFERENTIATED INSTRUCTION

## FOR ENGLISH LEARNERS

**Key Academic Vocabulary** Use Word Questioning to teach these words: *crucial* (line 104), *assembly* (line 149), *relax* (line 189), *appropriate* (line 210), *draft* (line 216), *required* (line 230).

 **BEST PRACTICES TOOLKIT—Transparency**  
Word Questioning p. E9

## FOR ADVANCED LEARNERS/PRE-AP

**Research Activity** Have students research the adjustment process of recent immigrants to the United States, especially those from repressive dictatorships. Ask students to compare the experiences of these families with the experience of the family described in “*Daughter of Invention*,” especially with regard to recent immigration policies, educational opportunities, and how families grapple with redefining traditional roles of authority.

## FOR LESS-PROFICIENT READERS

 **Targeted Passage [Lines 144–171]**

This passage provides the reader with background information that is important to the upcoming climax of the story. It also hints at future events between the daughter and her mother.

- What kind of student was the narrator in the Dominican Republic? What kind of student is she now?

## Example

### SCAFFOLDING FOR ELL STUDENTS

**Explain Point of View** Project lines 211–224 of the story on a whiteboard. Highlight as follows:

- Highlight colloquial expressions or multiple-meaning words in yellow.
- Highlight context clues that will help determine what each word or phrase means in green.
- Work with students to rewrite sentences to clarify their meaning. Use reference materials as needed.

**ASK STUDENTS** to use complete sentences to summarize what the Shy Man says.

“I’ll tell you what’s wrong” said the man. “To start with, you can’t get at the dog to fix him except by day, when they let him out. At night he’s shut up inside the house. And suppose you do fix him during the day, what happens then? Either the bloke gets another before night, or else he sits up all night with a gun. It isn’t like as if these blokes was ordinary blokes. They’re down here to look after the house. That’s their job, and they don’t take any chances.”

## Access for All Students

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# Introduction

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## Example or Non-example?

### Meeting Students' Needs

- For ELLs, consider providing extended time for tasks and answering questions in class discussions.
- Defining key verbs for learning actions (e.g., *introduction* and *skim*) helps ELLs and other struggling learners understand and engage more fully in the task.
- Physically demonstrating key verbs (e.g., showing how to *skim* by running your finger across a page of text) reinforces definitions.
- Some vocabulary is not academic or domain-specific, and students may benefit from instruction or review: *original, simple, without, everyone, no one*.
- When possible, provide text or materials in students' home language.
- Provide ELLs bilingual word-for-word translation dictionaries or online translation sources such as Google Translate to assist with comprehension.

# Alignment Criterion 4D

## Vermont Writing

### Collaborative Grades 7/8

#### Science Becomes Ideology: Germany and the “Master Race”, Excerpted

You have been learning about the all-important habits of mind that scientists agree are necessary in the world of honest, clear scientific inquiry and thought. (Actually, as you may have realized, these habits of mind are necessary in thinking carefully about any field of inquiry, but we’ll save that for another day!)

You have also been reading about a particular period in the world’s history, the early 20<sup>th</sup> century in Germany, at the dawn of the second world war and what has come to be known as the Holocaust - and about the way many of the German scientists were thinking during that pivotal time.

Now your job – of course – is to do some good thinking about that yourself, and to write about it!

Your Focusing Question is:

*How well did the German scientists in the early 20<sup>th</sup> century adhere to the key habits of mind that need to guide scientific thinking?*

You have already gathered evidence about the connection between the scientific habits of mind and the German scientists, and are ready to craft an answer to this question. As you know, the answer to this question will be the Focus Statement / thesis for your essay.

With a partner, discuss and then write what you think a thoughtful, clear, accurate Focus Statement might look like.

Having a good Focus Statement / thesis / claim is so important that we’re going to share what we wrote, then together come to consensus on a useful way to express our thinking here.

*THINK! Why is it so important to decide carefully on a thoughtful Focus Statement / thesis / claim before beginning the essay itself?*

Now that you’ve decided on your Focus Statement / thesis / claim, let’s think about the introduction to your essay. Remember, a good introduction needs to give the readers some background, or context, that they will need to be able to understand your essay and to follow your

thinking. You don't want to say too much (it's the introduction, not the essay!), but you do need to think about what's essential.

In this case, what do you, as the writer, need to make sure your readers understand *before* they get to your Focus Statement?

1) they need to understand about

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2) they need to understand about

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Go ahead now and write your introduction. Remember what it needs to include, then write what you think is a short, clear introduction that contains what your readers need to know before proceeding with reading the essay itself.

After you've written the introduction, we'll share these to make sure we're all on a track that makes sense.

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*Make sure your introduction ends with that all important Focus Statement / thesis / claim!!!!*

Now it's time - as you know - to develop the body of the essay. Read the model below of the first body paragraph.

One habit of mind that the German scientists did embrace is openness to new ideas. An "openness to new ideas" means being willing to consider something that one has not thought much or known much about before. In the early 20<sup>th</sup> century, the idea of natural selection was new. It had first appeared on the scene in 1859 when Charles Darwin published his study *On the Origin of Species*. In it, he noted that organisms are always undergoing changes. When the change is helpful - like a bigger beak for a bird - the organism grows

to reproduce, and the birds without the big beak die off. “Natural selection” has occurred, and the birds with the beaks best adapted to eating during that time are the ones that survive. The German scientists were definitely open to this new idea. According to the text, they embraced the idea of natural selection as a view that showed “natural law” in action. Unlike some other thinkers at the time, the German scientific leaders were open-minded enough to explore this new understanding of the world and accept it.

What do you notice about what kinds of evidence this body paragraph includes?

What do you notice about how it has been built?

Now, you’re ready to write the next body paragraph. With a partner, discuss what kinds of evidence you will use for this paragraph, and how you will build the paragraph. (HINT: *use your notes!*)

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And now, the third body paragraph.....

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Then the last body paragraph.....

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And finally, a short but thoughtful conclusion!

Remember, a *conclusion* has to address both the “what” ( what’s your point) and the *so what* (why does this matter).

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**Focusing Question:** *How well did the German scientists in the early 20<sup>th</sup> century adhere to the key habits of mind that need to guide scientific thinking?*

<b>Habit of Mind</b>	<b>What It Means</b>	<b>Evidence of its presence or absence for the scientists</b>	<b>Elaboration: why this is important</b>
intellectual honesty			
tolerance of ambiguity			
skepticism			
openness to new ideas			

## MS - LS1 From Molecules to Organisms: Structures and Processes

### Science Is a Human Endeavor

Scientists and engineers are guided by habits of mind, such as intellectual honesty, tolerance of ambiguity, skepticism, and openness to new ideas.

### Focusing Question

*How well did the German scientists in the early 20<sup>th</sup> century adhere to the key habits of mind that need to guide scientific thinking?*

### Test Drive / Sample Essay

*Students do NOT see this!*

Scientists are actively engaged in trying to understand the world, in all its complexity. To do this well, scientists are guided by certain key habits of mind. These include intellectual honesty, tolerance of ambiguity, skepticism, and openness to new ideas.

Unfortunately, scientists do not always hold themselves to these important habits of mind. The article “Science Becomes Ideology: Germany and the ‘Master Race’” is about a crucial period in history, during the early 20<sup>th</sup> century. German scientists took the idea of natural selection, developed by Charles Darwin in 1859 as the basis for his ideas about evolution, and used it to validate their own beliefs about the necessary supremacy of Germans as the “master race.” The text makes it clear that these scientists held to some of the key “habits of mind” for science but not others, with disastrous results for the world.

One habit of mind that the German scientists did embrace is openness to new ideas. An “openness to new ideas” means being willing to consider something that one has not thought much or known much about before. In the early 20<sup>th</sup> century, the idea of natural selection was new. It had first appeared on the scene in 1859 when Charles Darwin published his study *On the Origin of Species*. In it, he noted that organisms are always undergoing changes. When the change is helpful – like a bigger beak for a bird – the organism grows to reproduce, and the birds without the big beak die off. “Natural selection” has occurred, and the birds with the beaks best adapted to eating during that

time are the ones that survive. The German scientists were definitely open to this new idea. According to the text, they embraced the idea of natural selection as a view that showed “natural law” in action. Unlike some other thinkers at the time, the German scientific leaders were open-minded enough to explore this new understanding of the world and accept it.

However, a habit of mind of science that the German scientists ignored was intellectual honesty. Intellectual honesty means to look at an idea carefully. An intellectually honest response does not overstate an idea, and does not assume it is the only correct one. An intellectually honest scientist does not think that he now understands everything. Rather, he continues to be open to new ideas and recognizes his own limited understanding. This is just the opposite of what the German scientists did. According to the text, they believed that they completely understood how the world worked, that “all else was illusion and anathema.” Far from recognizing any limited understanding, they believed that their own ideas were a “gospel” of truth. Intellectually, this belief showed deep dishonesty.

Another habit of the scientific mind ignored by the German scientists in the early 20<sup>th</sup> century was tolerance of ambiguity. Tolerance of ambiguity means recognizing that the truth is rarely simple, and that one must be very, very careful not to oversimplify an idea. In addition, one who is being tolerant of ambiguity is not going to leap to conclusions. According to the text, the German scientists of the early 20<sup>th</sup> century had little or no respect for this crucial habit of mind. They took the idea of natural selection and oversimplified it into a “fierce competition in which only the strongest would survive” – and the strongest were the Germans. They jumped to the conclusion that “the Germans are the chosen race” and that therefore anything the country did to bring that about was the right thing to do. They had so little tolerance for ambiguity that they chose to oversimplify Darwin’s idea and turn it into a reason to impose their culture on the whole world.

Finally, the German scientists described in the text ignored the habit of mind of skepticism. Skepticism, in science, is the premise that any belief must come from accurate evidence. The German scientists did not adhere to skepticism. They did not seek evidence for their belief that the Germans were the “chosen race.” Rather, they

began with that assumption, and used an oversimplified understanding of Darwin's theory of evolution to justify their willingness to force German culture on the rest of humanity. In other words, they began with a view of German nationalism and power and used natural selection to confirm what they already believed – which is the opposite of scientific skepticism.

According to the text, the German scientists' view of the "natural order" was a disaster for the world. It is a sobering reminder that scientific habits of mind are more than helpful; they are essential if science is to be a help to the world, and not a destroyer of it.

Students should demonstrate “mastery” of the Standards through tasks that require deep understanding of the text under consideration.

## PERFORMANCE TASK



**Writing Activity: Essay** In “The Mixer,” Blackie is mistaken about why the Shy Man seems so quiet. Write a one-page essay that explains the Shy Man’s motivation for not speaking.

- Review the story. Make notes about events and situations that help you understand the man’s character.
- Describe the man’s character, using evidence from the text.
- Tell how the man responds to Blackie and to other characters in the story.
- Give concrete examples that illustrate why the man does not speak.
- Use appropriate transitions such as *furthermore*, *one reason*, and *in addition* to clarify relationships among your ideas.
- Provide a concluding statement that supports your explanation.