



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Overview



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Case Study:

The Most Beautiful Roof in the World and the Work of Rainforest Scientist Meg Lowman

Unit 2: Case Study: *The Most Beautiful Roof in the World* and the Work of Rainforest Scientist Meg Lowman

In this unit, students will continue to build new reading skills and learn about the process scientists use to conduct research in the natural world through a close read of *The Most Beautiful Roof in the World: Exploring the Rainforest Canopy* (L1160), by Kathryn Lasky, with photographs by Christopher G. Knight. They will take an in-depth view of how one scientist, Meg Lowman, became interested in her chosen career, created new ways to study the natural world, and communicates her findings to others. Students will compare and contrast Meg Lowman's work to that of other rainforest scientists while navigating the terrain of various forms of informational text (articles, interviews, videos). The class also will read the short story "The Wings of a Butterfly," fiction modeled after an indigenous tribe's folktale of animal encounters with humans in the Amazon rainforest. This will allow the students further opportunity

to practice fluency when reading as well as compare literature to informational text. For the mid-unit assessment, students will demonstrate skills learned for determining the meaning of new vocabulary and the main ideas in informational text through the completion of a text-dependent short-answer quiz. In the end of unit assessment, students will continue to demonstrate their ability to summarize, use quotes to explain the meaning of text, and determine the meaning of new words in context. In preparation for individual research to be conducted in Unit 3, the members of the class will hone in specifically on the research Meg Lowman did during extended stays in the canopy of the rainforest. Students will write an essay in which they analyze Lowman's research of biodiversity in the rainforests, providing examples of what and how she researches to clarify their analysis.

Guiding Questions And Big Ideas

- **How do scientists communicate what they learn about the natural world?**
- **What is unique about living things in the rainforest?**
- *Scientists observe closely and record those observations in various ways.*
- *Authors organize informational text in specific ways to convey scientific ideas and concepts.*



Case Study:

The Most Beautiful Roof in the World and the Work of Rainforest Scientist Meg Lowman

Mid-Unit Assessment	Mid-Unit 2 Assessment: <i>The Most Beautiful Roof in the World</i> Quiz This on-demand assessment centers on standards NYSP12 ELA CCLS RI.5.1, RI.5.2, RI.5.4, and L.5.4. Students will read and analyze a new section of text from <i>The Most Beautiful Roof in the World</i> and then complete a short-answer and multiple-choice text-dependent questions quiz.
End of Unit Assessment	On-Demand Analysis of Meg Lowman’s Research in the Rainforest This assessment centers on standards NYSP12 ELA CCLS W.5.2, W.5.4, and W.5.9. After reading and analyzing <i>The Most Beautiful Roof in the World</i> , students will write an essay in which they analyze Meg Lowman’s research of biodiversity in the rainforests, providing examples of what and how she researches to clarify their analysis.



Case Study:

The Most Beautiful Roof in the World and the Work of Rainforest Scientist Meg Lowman

Content Connections

This module is designed to address English Language Arts standards. However, the module intentionally incorporates Social Studies and Science content that many teachers may be teaching during other parts of the day. These intentional connections are described below.

NYS Social Studies Core Curriculum:

- Geographic reasoning: people, places regions, environment, and interactions in Brazil/Latin America

NYS Science:

- Standard 4, Living Environment:
- Key Idea 6: Plants and animals depend on each other and their physical environment.
- Key Idea 7: Human decisions and activities have had a profound impact on the physical and living environment.

Central Texts

1. Kathryn Lasky, *The Most Beautiful Roof in the World: Exploring the Rainforest Canopy*, photographed by Christopher G. Knight (New York: Gulliver Green/Harcourt, 1997), ISBN: 978-1-4352-6563-9 (hardcover); (New York: Sandpiper/Harcourt, 1997), ISBN: 978-0-15-200897-0 (paperback).
2. Aaron Shepard, "The Wings of the Butterfly," in *Cricket*, Mar 2011, 38:6.



Calendared Curriculum Map:
Unit-at-a-Glance

This unit is approximately 3 weeks or 15 sessions of instruction.

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment
Lesson 1	Introduction to <i>The Most Beautiful Roof in the World</i> : Why Does Meg Lowman Research the Rainforest? (Pages 2–4)	<ul style="list-style-type: none"> I can make inferences using quotes from the text. (RI.5.1) I can determine the main idea(s) of an informational text based on key details. (RI.5.2) I can determine the meaning of academic words or phrases in an informational text. (RI.5.4) I can determine the meaning of content words or phrases in an informational text. (RI.5.4) I can compare and contrast the organizational structure of different informational texts. (RI.5.5) I can follow our class norms when I participate in a conversation. (SL.5.1) 	<ul style="list-style-type: none"> I can make inferences about Meg Lowman. I can explain which features of <i>The Most Beautiful Roof in the World</i> make it an informational text. I can determine what motivated Meg Lowman to become a rainforest scientist using details from the text as evidence. I can determine the meaning of new words in <i>The Most Beautiful Roof in the World</i>. I can actively listen to my group members during discussions. 	<ul style="list-style-type: none"> Journal (Meg Lowman KWL chart) Meg Lowman Note-catcher
Lesson 2	Reading and Writing about How to Perform a Process: How Meg Lowman Studies the Rainforest (Pages 4–8)	<ul style="list-style-type: none"> I can determine the main idea(s) of an informational text based on key details. (RI.5.2) I can summarize an informational text. (RI.5.2) I can explain how authors use evidence and reasons to support their points in informational texts. (RI.5.8) I can produce clear and coherent writing that is appropriate to task, purpose, and audience. (W.5.4) I can use context (e.g., cause/effect relationships, comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4) I can connect my questions and responses to what others say. (SL.5.1) 	<ul style="list-style-type: none"> I can determine the process Meg Lowman uses to preserve specimens. I can list the steps to preserving a specimen from the natural world. I can contribute to my group's discussion by giving suggestions that are on topic. I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>. I can follow steps for collecting and preserving specimens. 	<ul style="list-style-type: none"> Journal (Meg Lowman chart, glossaries) Steps to Preserve a Specimen Note-catcher Preserved specimen



Calendared Curriculum Map:
Unit-at-a-Glance

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment
Lesson 3	Supporting an Opinion: Why Is the Rainforest Canopy a Difficult Place to Research? (Pages 9–10)	<ul style="list-style-type: none"> I can determine the main idea(s) of an informational text based on key details. (RI.5.2) I can summarize an informational text. (RI.5.2) I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3) I can write an opinion piece that supports a point of view with reasons and information. (W.5.1) I can make inferences using quotes from the text. (RI.5.1) 	<ul style="list-style-type: none"> I can explain why the canopy is a difficult place to research. I can identify the skills needed by scientists in order to study the rainforest canopy. I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>. I can write an opinion about being a rainforest scientist that is supported by reasons from the text. I can infer what skills Meg Lowman must have in order to be a rainforest scientist. 	<ul style="list-style-type: none"> Journal (Meg Lowman KWL chart, Close Read Note-catcher, glossaries)
Lesson 4	Close Reading: Blue Creek, a Rainforest in Belize (Page 12)	<ul style="list-style-type: none"> I can determine the main idea(s) of an informational text based on key details. (RI.5.2) I can summarize an informational text. (RI.5.2) I can determine the meaning of academic words or phrases in an informational text. (RI.5.4) I can determine the meaning of content words or phrases in an informational text. (RI.5.4) I can explain how authors use evidence and reasons to support their points in informational texts. (RI.5.8) 	<ul style="list-style-type: none"> I can explain how the Blue Creek rainforest is biodiverse. I can explain how Kathryn Lasky uses language to paint a picture for the reader about biodiversity in the Blue Creek rainforest. I can determine the meaning of new words in <i>The Most Beautiful Roof in the World</i>. 	<ul style="list-style-type: none"> Journal (AQUA Biodiversity anchor chart, glossaries) Text-dependent questions



Calendared Curriculum Map:
Unit-at-a-Glance

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment
Lesson 5	Close Reading in Expert Groups: What Is It Like in the Rainforest Canopy? (Pages 13–16)	<ul style="list-style-type: none"> I can determine the main idea(s) of an informational text based on key details. (RI.5.2) I can summarize an informational text. (RI.5.2) I can use context (e.g., cause/effect relationships, comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4) I can summarize information that is presented in pictures. (SL.5.2) 	<ul style="list-style-type: none"> I can write a gist statement for a chunk of texts from <i>The Most Beautiful Roof in the World</i>. I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>. I can sketch the gist of a chunk of text from <i>The Most Beautiful Roof in the World</i>. I can match a gist statement to a picture of the same chunk of text. 	<ul style="list-style-type: none"> Journal (Meg Lowman KWL chart, Biodiversity AQUA chart, glossaries) Gist statements Gist sketches
Lesson 6	Reading Informational Text for Details: Meg’s Rainforest Experiment (Pages 17–20)	<ul style="list-style-type: none"> I can determine the main idea(s) of an informational text based on key details. (RI.5.2) I can summarize an informational text. (RI.5.2) I can use context (e.g., cause/effect relationships, comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4) I can summarize text that is read aloud to me. (SL.5.2) 	<ul style="list-style-type: none"> I can explain Meg Lowman’s process for conducting experiments in the rainforest. I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>. 	<ul style="list-style-type: none"> Journal (Meg Lowman KWL chart, glossaries) Experiment Note-catcher



Calendared Curriculum Map:
Unit-at-a-Glance

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment
Lesson 7	Mid-Unit Assessment: Text-Dependent Multiple-Choice and Short-Answer Assessment	<ul style="list-style-type: none"> I can explain what a text says using quotes from the text. (RI.5.1) I can determine the main idea(s) of an informational text based on key details. (RI.5.2) I can summarize an informational text. (RI.5.2) I can determine the meaning of academic words or phrases in an informational text. (RI.5.4) I can determine the meaning of content words or phrases in an informational text. (RI.5.4) I can use context (e.g., cause/effect relationships, comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4) 	<ul style="list-style-type: none"> I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>. I can determine the main ideas of a selection of text from <i>The Most Beautiful Roof in the World</i>. I can justify my answers using quotes and evidence from the text. 	<ul style="list-style-type: none"> Mid-Unit 2 Assessment Tracking My Progress, Mid-Unit 2 recording form
Lesson 8	Close Read: Epiphytes of the Rainforest and the Creatures That Call Them Home (Pages 24–26)	<ul style="list-style-type: none"> I can explain what a text says using quotes from the text. (RI.5.1) I can determine the main idea(s) of an informational text based on key details. (RI.5.2) I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3) I can use context (e.g., cause/effect relationships, comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4) 	<ul style="list-style-type: none"> I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>. I can explain the relationship between animals and plants in the rainforest using evidence from the text. I can synthesize what I read in <i>The Most Beautiful Roof in the World</i>. 	<ul style="list-style-type: none"> Journal (Close Read Note-catcher, AQUA Biodiversity chart, synthesis statement)



Calendared Curriculum Map:
Unit-at-a-Glance

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment
Lesson 9	A Rainforest Folktale: Determining the Message of “The Wings of the Butterfly,” a Tukuna People Tale	<ul style="list-style-type: none"> • I can summarize text that is read aloud to me. (SL.5.2) • I can determine a theme based on details in a literary text. (RL.5.2) • I can summarize a literary text. (RL.5.2) • I can determine the meaning of literal and figurative language (metaphors and similes) in text. (RL.5.4) • I can describe how a narrator’s point of view influences the description of events. (RL.5.6) 	<ul style="list-style-type: none"> • I can summarize the story of “The Wings of a Butterfly.” • I can explain the message of “The Wings of a Butterfly.” • I can determine the meaning of new words in “The Wings of a Butterfly.” • I can compare and contrast examples of biodiversity from a story to what we have learned from informational text. 	<ul style="list-style-type: none"> • Journal (Meg Lowman KWL chart, glossary) • Double-Bubble map
Lesson 10	Reading for Details: Taking an Inventory in the Rainforest (Pages 28–31)	<ul style="list-style-type: none"> • I can determine the main idea(s) of an informational text based on key details. (RI.5.2) • I can summarize an informational text. (RI.5.2) • I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3) • I can use context (e.g., cause/effect relationships, comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4) • I can draw on information to explore ideas in the discussion. (SL.5.1) 	<ul style="list-style-type: none"> • I can explain the purpose of a column study in the rainforest. • I can identify the types and numbers of species counted during the column study done by Meg Lowman. • I can use my group members’ ideas to help me determine the inventory count of the column study. • I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>. 	<ul style="list-style-type: none"> • Journal (Meg Lowman KWL chart, AQUA Biodiversity chart, glossaries) • Inventory Count Note-catcher



Calendared Curriculum Map:
Unit-at-a-Glance

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment
Lesson 11	Reading for Fluency: Readers Theater about the Rainforest (Page 33)	<ul style="list-style-type: none"> I can read fifth-grade texts with purpose and understanding. (RF.5.4) I can read fifth-grade texts with fluency. (RF.5.4) I can write narrative texts about real or imagined experiences or events. (W.5.3) I can show the actions, thoughts, and feelings of my characters through dialogue, description, and careful pacing. (W.5.3) I can speak clearly and at an understandable pace. (SL.5.4) I can adapt my speech for a variety of contexts and tasks, using formal English when appropriate. (SL.5.6) 	<ul style="list-style-type: none"> I can read my speaker's lines with fluency. I can write lines for my character using the text from <i>The Most Beautiful Roof in the World</i>. I can speak clearly and with appropriate emotion for my character. 	<ul style="list-style-type: none"> Journal (Meg Lowman KWL chart, AQUA Biodiversity chart, glossaries) Mini Readers Theater Triad Feedback rubric
Lesson 12	Comparing Two Main Ideas in an Informational Text: Meg Lowman's Methods for Researching the Rainforest (Pages 35–36)	<ul style="list-style-type: none"> I can explain what a text says using quotes from the text. (RI.5.1) I can determine the main idea(s) of an informational text based on key details. (RI.5.2) I can summarize an informational text. (RI.5.2) I can determine the meaning of academic words or phrases in an informational text. (RI.5.4) I can determine the meaning of content words or phrases in an informational text. (RI.5.4) 	<ul style="list-style-type: none"> I can compare and contrast different research methods that Meg Lowman has used. I can use quotes from the text as evidence in my answers to questions. I can determine the meaning of new words in <i>The Most Beautiful Roof in the World</i>. 	<ul style="list-style-type: none"> Journal (Meg Lowman KWL chart, AQUA Biodiversity chart, glossaries) Text-dependent Questions Four Corners exit ticket



Calendared Curriculum Map:
Unit-at-a-Glance

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment
Lesson 13	Interviewing Meg Lowman: What Does It Mean to Be a Responsible Scientist? (Pages 37–39)	<ul style="list-style-type: none"> I can make inferences using quotes from the text. (RI.5.1) I can determine the main idea(s) of an informational text based on key details. (RI.5.2) I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3) I can develop the topic with facts, definitions, details, and quotations. (W.5.2) I can use precise, content-specific vocabulary to inform or explain about a topic. (W.5.2) I can produce clear and coherent writing that is appropriate to task, purpose, and audience. (W.5.4) 	<ul style="list-style-type: none"> I can explain what happened during the night walk. I can write interview questions for Meg Lowman about the rainforest spider from the point of view of a scientist, using scientific vocabulary. I can create answers to interview questions by inferring how Meg Lowman would answer them. I can revise interview question and answers, given feedback from my peers. 	<ul style="list-style-type: none"> Journal (Meg Lowman KWL chart, AQUA Biodiversity chart, glossaries) Interview
Lesson 14	Analyzing How Rainforest Scientists Communicate Their Research (Pages 39–42)	<ul style="list-style-type: none"> I can explain what a text says using quotes from the text. (RI.5.1) I can determine the main idea(s) of an informational text based on key details. (RI.5.2) I can summarize an informational text. (RI.5.2) I can determine the meaning of academic words or phrases in an informational text. (RI.5.4) I can determine the meaning of content words or phrases in an informational text. (RI.5.4) 	<ul style="list-style-type: none"> I can explain how Meg Lowman communicates her research. I can explain biodiversity by using quotes from the text. I can determine ways to explain biodiversity to others. I can determine the meaning of new words in <i>The Most Beautiful Roof in the World</i>. 	<ul style="list-style-type: none"> Journal (Meg Lowman KWL chart, AQUA Biodiversity anchor chart, glossaries)



Calendared Curriculum Map:
Unit-at-a-Glance

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment
Lesson 15	<ul style="list-style-type: none"> End of Unit Assessment: On-Demand Analysis of Meg Lowman’s Research in the Rainforest 	<ul style="list-style-type: none"> I can write informative/explanatory texts. (W.5.2) I can use precise, content-specific vocabulary to inform or explain about a topic. (W.5.2) I can choose evidence from informational texts to support analysis, reflection, and research. (W.5.9) (W.5.4) 	<ul style="list-style-type: none"> I can analyze Meg Lowman’s research in the rainforest. I can justify my analysis by citing evidence from the text. I can use academic and scientific vocabulary accurately in my writing. I can reflect on my learning. 	<ul style="list-style-type: none"> End of Unit 2: On-Demand Analysis of Meg Lowman’s Research in the Rainforest Tracking My Progress, End of Unit 2 recording form

Optional: Experts, Fieldwork, And Service

- Experts:**
- Invite scientists (biologists, naturalists, environmentalists, etc.) to come speak to the class about their work.
- Fieldwork:**
- As a class, observe the natural world outdoors, at a nature center or in an arboretum.
- Service:**
- Design a campaign to promote biodiversity locally or internationally.

Optional: Extensions

- Research other women naturalists: Harriet Tubman (c. 1820–1913) and field naturalists such as Maria Sibylla Merian (1647–1717), Anna Botsford Comstock (1854–1930), Frances Hamerstrom (1907–1998), Rachel Carson (1907–1964), Miriam Rothschild (1908–2005), and Jane Goodall (b. 1934).



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Grade 5: Module 2A: Unit 2: Recommended Texts



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In Unit 2, students explore a specific scientific researcher who studies rainforest ecosystems. The list below includes a wide range of texts to read about rainforest flora and fauna, as well as about how scientists research the natural world. The list below includes texts with a range of Lexile text measures on this topic. This provides appropriate independent reading for each student to help build content knowledge.

It is imperative that students read a high volume of texts at their reading level to continue to build the academic vocabulary and fluency that the CCLS demand.

Common Core Band Level Text Difficulty Ranges:

(As provided in the NYSED Passage Selection Guidelines for Assessing CCSS ELA)

- Grade 2–3: 420–820L
- Grade 4–5: 740–1010L
- Grade 6–8: 925–1185L

Where possible, texts in languages other than English are also provided. Texts are categorized into three Lexile ranges that correspond to Common Core Bands: below-grade band, within band, and above-grade band. Note, however that, Lexile measures are just one indicator of text complexity, and teachers must use their professional judgment and consider qualitative factors as well. For more information, see Appendix 1 of the Common Core State Standards.

Title	Author And Illustrator	Text Type	Lexile Measure
Lexile text measures below band level (under 740L)			
<i>Rain Forest Plants</i>	Pamela Dell (author)	Informational	640
<i>Rain Forest Animals</i>	Francine Galko (author)	Informational	660
Lexile text measures within band level (740–1010L)			
<i>Morpha: A Rain Forest Story</i>	Michael Tennyson (author), Jennifer H. Yoswa (illustrator)	Literature	750*
<i>Encantado: Pink Dolphin of the Amazon</i>	Sy Montgomery (author), Dianne Taylor-Snow (photographer)	Informational	870*
<i>Up a Rainforest Tree</i>	Carole Telford and Rod Theodorou (authors)	Informational	870
<i>The Tarantula Scientist</i>	Sy Montgomery (author), Nic Bishop (photographer)	Informational	890



Title	Author And Illustrator	Text Type	Lexile Measure
Lexile text measures within band level (740–1010L)			
<i>Rain Forest Animals</i>	Carolyn Franklin (author)	Informational	960
Lexile text measures within Grade 6–8 band level (925–1185L)			
<i>Young Charles Darwin and the Voyage of the BEAGLE</i>	Ruth Ashby (author)	Informational	1020
<i>The Search for Cures from the Rainforest</i>	Carol Ballard (author)	Informational	1075*
<i>How Monkeys Make Chocolate: Unlocking the Mysteries of the Rainforest</i>	Adrian Forsyth (author)	Informational	1120
<i>The Case of the Monkeys That Fell from the Trees: And Other Mysteries in Tropical Nature</i>	Susan E. Quinlan (author)	Informational	1210

*Lexile based on a conversion from Accelerated Reading level

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Grade 5: Module 2A: Unit 2: Lesson 1

Introduction to *The Most Beautiful Roof in the World*: Why does Meg Lowman Research the Rainforest? (Pages 2–4)



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Introduction to *The Most Beautiful Roof in the World*:
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can make inferences using quotes from the text. (RI.5.1)
- I can determine the main idea(s) of an informational text based on key details. (RI.5.2)
- I can determine the meaning of academic words or phrases in an informational text. (RI.5.4)
- I can determine the meaning of content words or phrases in an informational text. (RI.5.4)
- I can compare and contrast the organizational structure of different informational texts. (RI.5.5)
- I can follow our class norms when I participate in a conversation. (SL.5.1)

Supporting Learning Targets

- I can make inferences about Meg Lowman, a rainforest scientist.
- I can explain which features of *The Most Beautiful Roof in the World* make it an informational text.
- I can determine what motivated Meg Lowman to become a rainforest scientist using details from the text as evidence.
- I can determine the meaning of new words in *The Most Beautiful Roof in the World*.
- I can actively listen to my group members during discussions.

Ongoing Assessment

- Journal (Meg Lowman KWL chart)
- Meg Lowman Note-catcher



Introduction to *The Most Beautiful Roof in the World*:
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Agenda	Teaching Notes
<p>1. Opening</p> <ul style="list-style-type: none">A. Engaging the Reader: Interviewing Meg Lowman (10 minutes)B. Introduce Learning Targets (5 minutes) <p>2. Work Time</p> <ul style="list-style-type: none">A. Text Structure: Scanning <i>The Most Beautiful Roof in the World</i> (10 minutes)B. Group Read and Discussion: Who Is Meg Lowman? (15 minutes)C. Key Vocabulary to Deepen Understanding (15 minutes) <p>3. Closing and Assessment</p> <ul style="list-style-type: none">A. Debrief and Review Learning Targets (5 minutes) <p>4. Homework</p>	<ul style="list-style-type: none">• Because this lesson involves setting up so many routines for this unit, it may take more than 60 minutes. Consider building in time during the “slush” parts of the day.• In advance: Read and become familiar with the book <i>The Most Beautiful Roof in the World</i> by Kathryn Lasky.• This lesson opens with a quick activity about Meg Lowman and her research. This activity is intended to build students’ background knowledge, but more importantly to pique their curiosity. Do not worry if their knowledge about Meg Lowman is quite limited during the initial KWL charting. They revisit the KWL many times throughout the unit, and rely on their KWL notes during their end of unit assessment.• Review: Concentric Circles protocol (see Appendix 1).• Students will be partnered with another student in the Concentric Circles protocol. If the class does not have an even number of students, have one group of three students work together and direct students in that triad to take turns playing each role. If the circles seem too complicated, consider simply having students stand and talk in pairs.• Throughout this unit, students will remain in the same groups of four for reading time. Group students heterogeneously, and be intentional about grouping students together who may benefit from extra support from peers.• <i>The Most Beautiful Roof in the World</i> does not have numbered pages. For ease of accessing the text during each lesson, ask students to number each page with a pencil or a sticky note with the number written on it. Begin with the number 1 on the page with the photograph of Meg Lowman and the first section titled “Pioneer in the Rainforest.” Be sure students number every single page, including the pages with photos. Starting with this page (in other words, do not include the copyright pages and other “front matter”), there are 43 pages of text total, ending with the glossary.• Throughout this unit, students will participate in routine close reads and interactive vocabulary activities. Become familiar with passages and/or vocabulary addressed in each lesson in order to support students during Work Time.



Introduction to *The Most Beautiful Roof in the World*:
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

	Teaching Notes (continued)
	<ul style="list-style-type: none"> • In this unit, students regularly work with both scientific (domain-specific) vocabulary and more general academic vocabulary. Remember, students need to learn more than just the science terms; they also need to learn the general academic words that will help them make sense of the text as a whole. Each specific lesson prioritizes academic vocabulary from the specific section of the texts students are working with that day. Lessons prioritize specific academic vocabulary words that both will help students navigate the specific section of text and will transfer to when students encounter other complex texts. • In this lesson, these important concepts about the vocabulary work in this unit are presented during Part C of Work Time. Review this closely in advance. Students keep two separate glossaries, for science words and academic words. • It is very important that students realize they are not expected to learn or memorize every single word they are exposed to in these lessons. Rather, the vocabulary instruction in this unit is designed to heighten students' awareness of vocabulary in general, and to teach some high-leverage words. Do not quiz students on long lists of vocabulary words or do other "rote memorization" activities that might undermine the deeper intent of vocabulary work in this module.

Lesson Vocabulary	Materials
features, determine, inferences, gadgets, biodiversity, eureka, samples, canopy, relationships, herbivory, conservation (2); base, treetops, environmentalist, intrigued, fascinated (4)	<ul style="list-style-type: none"> • Meg Lowman Interview Questions and Answers (one per student; students read this text in partnerships) • Highlighters (two colors per student) • Meg Lowman, Rainforest Scientist KWL anchor chart (new; teacher-created; see supporting materials) • <i>The Most Beautiful Roof in the World</i> (book; one per student) • Features of Informational Text anchor chart (from Unit 1, Lesson 3) • Listening Criteria rubric (one per student) • Meg Lowman Note-catcher (one per student)



Introduction to *The Most Beautiful Roof in the World:*
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Interviewing Meg Lowman (10 minutes)</p> <ul style="list-style-type: none"> • Launch the unit by revisiting key points from Unit 1: “We studied several rainforest scientists in Unit 1, and learned about the ways they communicate their research.” Invite several students to share what they remember about who those scientists were, where they researched, and/or what they studied (e.g., Bryson Voirin in Panama studying sloths, Eve Nilson in Brazil studying frogs). • Tell students that in this unit, they are going to go much more in-depth about one rainforest scientist, named Meg Lowman. Today, they will begin by reading two very short excerpts from interviews with Dr. Lowman. Distribute the Meg Lowman Interview Questions and Answers and highlighters to students. • Review the Concentric Circles protocol with students (see supporting materials): <ul style="list-style-type: none"> * Place students in two concentric circles (an even number of students in an inner and an outer circle). * Be sure every student is facing a partner in the other circle. * Assign students in the outer circle to be the interviewer. * Assign students in the inner circle to be Meg Lowman. • Ask students to focus just on questions and answers A and B. • Give them 1 minute to preview the text, highlighting what they will read out loud. • Then ask students to take 1 to 2 minutes to “interview” their partner, reading aloud A and B. • Next, ask students to shift two places to the left to face a new partner. • Ask students to repeat the same process for questions C and D. This time, they reverse roles: <ul style="list-style-type: none"> * Students in the outer circle are Meg Lowman. * Students in the inner circle are the interviewer. • Ask students to share with their new partner: <ul style="list-style-type: none"> * “What do you now know about Meg Lowman?” 	<ul style="list-style-type: none"> • Consider providing smaller chunks of text (sometimes just a few sentences) for some students. Teachers can check in on students’ thinking as they write or speak about their text. • ELL language acquisition is facilitated by interacting with native speakers of English who provide models of language. • Students needing additional supports may benefit from a partially filled-in Meg Lowman, Rainforest Scientist KWL chart.



Introduction to *The Most Beautiful Roof in the World:*
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Opening (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask students to return to their seats and open to three new pages in their journal. Display the Meg Lowman, Rainforest Scientist KWL anchor chart (see example in supporting materials). Ask students to create this chart in their journals: one page each for K, W, and L.• Say: “Now that you have read excerpts from two interviews with Meg Lowman, what do you know about her?” Invite several students to share out their ideas. Listen for responses such as: “She works in tree canopies; she invents gadgets to help her get to treetops; she studies insects; she won second place in a science fair when she was younger; she discovered half of biodiversity on earth lives in treetops,” etc. Record students’ responses in the K column of the KWL while they record ideas into their journals.• Then ask students: “What else do you want to know about Meg Lowman?” Record students’ questions in the W column of the KWL, as students record questions in their journals.• Tell them that they will be learning a lot about Meg Lowman and her rainforest research in the coming weeks. They will keep adding to the KWL chart. It is important that students keep good notes, since they will get to use these during the end of unit assessment.	



Introduction to *The Most Beautiful Roof in the World*:
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Opening (continued)	Meeting Students' Needs
<p>B. Introduce Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Introduce the learning targets: “I can make inferences about Meg Lowman, a rainforest scientist,” “I can explain which features of <i>The Most Beautiful Roof in the World</i> make it an informational text,” and “I can determine what motivated Meg Lowman to become a rainforest scientist using details from the text as evidence.”• Review the word <i>inferences</i> with students (which they should be very familiar with based on their study of <i>Esperanza Rising</i> in Module 1). Ask for suggestions about the meaning of this word. Listen for students to share ideas such as: “Coming to a conclusion based on evidence or reasoning; coming to a conclusion without the answer explicitly stated in the text,” or similar ideas. Clarify the meaning of this term for students as necessary. Ask students to recall the meaning of the words <i>features</i> (specific parts, element, quality) and <i>determine</i> (decide, figure out, conclude). Ask students to show a thumbs-up if they completely understand the targets, a thumbs-sideways if they understand some of the targets, or a thumbs-down if they need a lot more explanation. Notice the number of students who show a thumbs-down and thumbs-sideways to determine whether or not another explanation of the targets is needed.	<ul style="list-style-type: none">• Provide nonlinguistic symbols to assist struggling readers in making connections with vocabulary (e.g., a picture of a cluster of tall trees for <i>rainforest</i>, a picture of a person in a lab coat for <i>scientist</i>, a picture of a book or piece of writing for <i>text</i>). These symbols can be used throughout the year. Specifically, they can be used in directions and learning targets.



Introduction to *The Most Beautiful Roof in the World*:
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Work Time	Meeting Students' Needs
<p>A. Text Structure: Scanning <i>The Most Beautiful Roof in the World</i> (10 minutes)</p> <ul style="list-style-type: none">• Tell students: “Now we are going to read an informational book called <i>The Most Beautiful Roof in the World</i>, by Kathryn Lasky, to learn more about Meg Lowman’s work in the rainforests.”• Distribute <i>The Most Beautiful Roof in the World</i>. Conduct a Book Walk with students. Focus on the front and back cover of the book, the text, and the photos. Ask: “What features in this book hint that this is an informational text?” After 3 to 4 minutes, cold call students to share out what <i>features</i> they notice in the book, listening for responses such as: “summary on the back cover; pictures of real people in the rainforest; chapter titles on the pictures; quotes,” etc.• Bring students’ attention back to the Features of Informational Text anchor chart from Unit 1, and write the word <i>book</i> in the Text column of the anchor chart (if it is not already listed). Add students’ ideas to the anchor chart.• Point out to students that it is often helpful, when beginning a new text, to take time to get oriented to how the text is structured. This will make it easier for them to access information quickly and learn more deeply.	<ul style="list-style-type: none">• When possible, provide text or materials in students’ L1. This can help students understand materials presented in English.• Consider placing an ELL in a group with a student who speaks the same L1 when discussion of complex content is required. This can let students have more meaningful discussions and clarify points in their L1.



Introduction to *The Most Beautiful Roof in the World:*
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Work Time (continued)	Meeting Students' Needs
<p>B. Group Read and Discussion: Who Is Meg Lowman? (15 minutes)</p> <ul style="list-style-type: none"> Place students in their reading groups. Tell students they will stay in these same groups throughout this unit. Introduce the learning target: “I can actively listen to my group members during discussions.” Remind students of the listening criteria they used in Module 1, and then display the Listening Criteria rubric. Read through each of the four criteria. Invite several students to restate each criterion in their own words. Ask students if they would like to add other criterion; write these on the blank lines provided. Distribute the Meg Lowman Note-catcher and display it on a document camera or as a chart on the board. Tell students that they will hear the first few pages read aloud. They should follow along and look/listen for ideas that answer two questions: <ul style="list-style-type: none"> * “What does Meg Lowman study in the rainforests?” * “What were Meg Lowman’s interests as a child?” Read pages 2–4 aloud, beginning with “Meg Lowman climbs trees” and ending with the sentence, “Harriet Tubman ... one of the first women field naturalists in this country.” Remind students of the Listening Criteria rubric. Ask students to talk with their group members about what they heard/saw in the text that answers the question: “What does Meg Lowman study in the rainforests?” Ask several students to share their ideas aloud, listening for suggestions like: “plants and insects; herbivory; which insects eat which leaves,” etc. Record students’ ideas on the Meg Lowman Note-catcher, paraphrasing and/or using single words, in the first box under “Main Ideas,” and ask students to record ideas onto their own Note-catchers. Then ask students to work with their group members to look back in their books and find the specific details or evidence that supports each main idea. After a few minutes, ask students to share out. Listen for details such as: “The book says she studied plants and insects, because she wants to know about the relationships between plants and insects in the canopy; herbivory is leaf and plant eating by insects and other animals; studying which insects eat which leaves helps Meg Lowman understand how their feeding affects overall growth of the rainforest,” etc. Record students’ ideas in the first box under “Key Details from the Text,” and ask students to record this information onto their own Note-catchers. 	<ul style="list-style-type: none"> Consider allowing students to draw their observations, ideas, or notes when appropriate. This allows all students to participate in a meaningful way. Consider providing extra time for tasks and answering questions in class discussions. Some students need more time to process and translate information.



Introduction to *The Most Beautiful Roof in the World:*
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> • Repeat this process for the second question: “What were Meg Lowman’s interests as a child?” Give students time to think, discuss in their groups, and then share out whole class. Listen for students to share ideas such as: <ul style="list-style-type: none"> * Main Idea: fascinated with nature since 6 years old. * Supporting Details: “As a child, collected birds’ nests, rocks, shells, insects and butterflies, and buds; won second place in science fair; bedroom full of outdoor treasures.” * Main Idea: Intrigued by two women. * Supporting Details: “Harriet Tubman was a pioneer field naturalist; Rachel Carlson was an environmentalist and created the Web of Life.” • Assign one of the seven sections of text (listed below) to each group. Ask group members to read the passage silently, and then briefly discuss and record any new Main Ideas/Supporting Details on their Note-catchers. <ul style="list-style-type: none"> * Section 1: All of paragraph 1. * Section 2: Paragraph 2, sentences 1-3 (“During the past ten years ...” through “Meg wants to know about the relationship ...”) * Section 3: Paragraph 2, sentences 4-7 (“She is especially interested in ...” through “Meg’s Lab ...”) * Section 4: Paragraph 3, sentences 1-3 (“Meg cannot remember ...” through “As a child ...”) * Section 5: Paragraph 3, sentences 3-6 (“Her bedroom was stuffed ...” through “She made a wildflower collection ...”) * Section 6: Paragraph 4, sentences 1-3 (“When Meg was ten ...” through “Meg read that she often ...”) * Section 7: Paragraph 4, sentences 4-7 (“But it was not only moss ...” through “Harriet Tubman, says Meg, was a pioneer ...”) • As students read, circulate to support as needed. <p>After students have completed reading their sections and taking notes, invite each group to share out very briefly what they added to their Note-catchers. (Record students’ ideas on the Meg Lowman Note-catcher.)</p>	



Introduction to *The Most Beautiful Roof in the World*:
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Say to students: “Now that we have read and recorded information about what Meg Lowman studies and what her interests were as a child, what <i>inferences</i> can we make about why Meg Lowman conducts research in the rainforests? What details from the text support those <i>inferences</i>?” Allow students a moment to think about this question and return to their Note-catchers to review ideas and supporting text. Then ask group members to discuss their ideas. As students are talking, listen in on conversations for ideas such as: “I think she researches the rainforest she’s interested in the relationship between plants and insects in the canopy and how insect feeding affects the growth of rainforests; she has been interested in nature since she was 6 years old; she had many collections of items from nature; she was inspired by Harriet Tubman and Rachel Carlson, pioneers in studying nature,” etc. <p>Do not have students share whole group; they revisit this question during the debrief.</p>	



Introduction to *The Most Beautiful Roof in the World:*
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Work Time (continued)	Meeting Students' Needs
<p>C. Key Vocabulary to Deepen Understanding (15 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can determine the meaning of new words in <i>The Most Beautiful Roof in the World.</i>” Ask a few students to share out what strategies they have learned to help them determine the meaning of unfamiliar words (e.g., use context clues, and break the word into familiar parts). • Remind students of the glossary they began during Unit 1. During Unit 2, they will work with this in much more depth. They will focus on two different types of words, scientific (words about science) and academic (other words that help them understand concepts). Knowing which words are which types helps them to determine the importance of vocabulary and therefore helps them to understand texts better. • Point out the glossary at the back of the book and ask students what types of words are listed. Invite a student to share his/her ideas, listening for: “about science; about the rainforest; scientific;” etc. • Tell students: “For homework every night, you will choose what you think are the most important academic and scientific vocabulary from the lesson and add them to your glossaries.” • Say: “Now we are going to look back and work with some of the vocabulary from the readings today (interview excerpts and book.)” • Introduce the Word Sort activity by asking students to turn to a new page in their journals, and split it into two columns. At the top of the left-hand column, ask students to write: Scientific Words and in the right-hand column, Academic Words. • Display the following words from the text (without the definitions/synonyms): <ul style="list-style-type: none"> * canopy, base, samples, relationships, herbivory, conservation, treetops, biodiversity, environmentalist, intrigued, fascinated • Tell students that they may not know what all of these words mean. That is fine for now. Give students 5 minutes in their groups to discuss: <ul style="list-style-type: none"> * Which words are “science” words? * Which words are “academic” words? • Remind students that during their discussions with group members, they will need to justify why they believe a certain word should go in a certain category (e.g., “<i>Canopy</i> belongs in scientific words, because the canopy describes the tops of trees in the rainforest and the rainforest is the topic they are studying in science”). 	<ul style="list-style-type: none"> • All students developing academic language will benefit from direct instruction of academic vocabulary. • Consider providing visuals for all identified vocabulary words and allowing students to categorize the pictures.



Introduction to *The Most Beautiful Roof in the World:*
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> • Circulate to listen in and ask probing questions: “Why do you think that word belongs in that category?” • After students have categorized the vocabulary, focus them on the list of words. Remind them that it is fine if they do not know the meaning of every single word: The point is to start recognizing the two categories of words. • Ask several students to share out the meaning of each word. As students share out, listen for: <ul style="list-style-type: none"> * <i>gadgets</i>: tools; equipment (scientific) * <i>eureka</i>: aha! discovery; understanding (academic) * <i>canopy</i>: tops of the trees in rainforests (scientific) * <i>base</i>: bottoms of trees in rainforests (scientific) * <i>samples</i>: pieces; examples (scientific) * <i>relationships</i>: how things work together; how they depend on each other (academic) * <i>herbivory</i>: leaf and plant eating by insects and other animals (scientific) * <i>conservation</i>: preservation of a species of plant or animal (scientific) * <i>treetops</i>: canopy; tops of trees (scientific) * <i>biodiversity</i>: all the living things on earth (scientific) * <i>environmentalist</i>: someone who cares about/researches/preserves nature (scientific) * <i>intrigued</i>: curious; interested (academic) * <i>fascinated</i>: mesmerized; completely focused on; intrigued (academic) • Once all vocabulary has been defined, give groups 1 minute to discuss whether they now think a word belongs in the other category than where they had placed it. • Invite several students to share out words they thought were difficult to categorize and how they worked with their group members to determine in which category to place the word. <p><i>Note: Be sure students know that they do not need to write down all these definitions at this point; they will choose a few words to focus on for their homework.</i></p>	



Introduction to *The Most Beautiful Roof in the World*:
Why does Meg Lowman Research the Rainforest? (Pages 2–4)

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief and Review Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> • Ask: “What have we learned about Meg Lowman as a scientist?” Remind students to think about their group discussion about what they think motivates Dr. Lowman to study the rainforest. • Invite students to share out ideas about what they learned about Meg Lowman. Add these ideas to the L column of the KWL anchor chart. Students should record these ideas in the L column of their journal KWL also. • Read the learning target: “I can actively listen to my group members during discussions” and display the Listening Criteria rubric. Ask students to use the Thumb-O-Meter protocol as each criterion is read aloud to show how they did with each criterion during the book read-aloud and their group discussions. 	<ul style="list-style-type: none"> • For students needing additional supports producing language, consider offering a sentence frame, sentence starter, or cloze sentence to provide the structure required (e.g. “I learned that Meg Lowman ...”).
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> • Reread pages 2–4 of <i>The Most Beautiful Roof in the World</i> to someone (or yourself) at home. Be prepared to share something else you learned about Meg Lowman. • Choose three academic and two scientific vocabulary words to add to your glossaries. Choose from this list: features, determine, inferences, gadgets, biodiversity, eureka, samples, relationships, herbivory, conservation, canopy, base, treetops, environmentalist, intrigued, fascinated. <p><i>Note: Collect specimens from nature for the preserving activity in the next lesson (flowers, leaves, plant parts, etc.). (See Teaching Notes in Lesson 2.)</i></p> <p><i>Review pages 7–8 of The Most Beautiful Roof in the World in order to become familiar with Meg Lowman’s preserving process.</i></p> <p><i>Gather newspaper for pressing specimens, boxes to represent “low-temperature ovens,” cardboard, glue, and acid-free (or blank) paper for students to paste specimens on.</i></p>	<ul style="list-style-type: none"> • For students who may have difficulty determining the most important words to add to their glossaries, consider prioritizing the following words: <i>features</i>, <i>determine</i>, <i>inferences</i> (academic); <i>biodiversity</i>, <i>canopy</i> (scientific). • Audio recordings of text can aid students in comprehension. Students can pause and replay confusing portions while they follow along with the text.



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 1

Supporting Materials



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Meg Lowman Interview Questions and Answers

A. Why spend time in trees?

Almost 50 percent of life on earth is estimated to live in tree canopies, yet this was an unexplored region until about 25 years ago. Much of my work has involved solving the challenge of just getting into the treetops: inventing gadgets, refining hot air balloon design, creating canopy walkways, working from cherry pickers and construction cranes. Once up there, I discovered that insects eat four times more leaf material than we imagined.

B. Is that important?

Lots of things stress forests. And with forests becoming warmer, drier, and more fragmented, insect outbreaks are predictably one of the first responses to climate change.

C. What was your first science project/experience as a child?

In fifth grade, I won second prize in the N.Y. State science fair, surrounded by boys. I was so shy that I did not even dare speak, due to the gender disparity, but it also made me determined to pursue what I loved.

D. What fascinates you the most about canopy ecology?

The amazing “eureka” element. Until recently, when a few of us climbed into the canopy, no human being knew that half of the biodiversity on our terrestrial earth lived in the treetops. For centuries, foresters had assessed forests by looking at the very bottom of the tree. It is almost as if we had been trying to gauge the health of people by just looking at someone’s big toe but ignoring the rest. It is also humbling to realize that a kid can come from a small, underserved town (as I did) and make a cool discovery in science, because there is so much left that remains unknown.

Source:

Questions 1 and 2: “Interview: Margaret Lowman” by Marian Smith Holmes. Smithsonian (December, 2006).

Questions 3 and 4: “24 Questions with NRC Director Dr. Meg Lowman” Copyright © 2012 Greater Raleigh Convention and Visitors Bureau. Reprinted by permission. <http://blog.visitraleigh.com/>



Meg Lowman, Rainforest Scientist KWL Anchor Chart

KNOW K	WANT W	LEARNED L



Listening Criteria Rubric

I focused my attention on what the speaker/reader was saying.

I listened for main ideas.

I took notes about important ideas and details.

I waited until after the speaker was finished before asking questions or making comments.



Meg Lowman Note-catcher

	Main Ideas (paraphrase or list)	Supporting Details for the Text
What does Meg Lowman study in the rainforests?		
What were Meg Lowman's interests as a child?		



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 2

Reading and Writing About How to Perform a Process: How Meg Lowman Studies the Rainforest (Pages 4–8)



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Reading and Writing About How to Perform a Process:
How Meg Lowman Studies the Rainforest (Pages 4–8)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can determine the main idea(s) of an informational text based on key details. (RI.5.2)
- I can summarize an informational text. (RI.5.2)
- I can explain how authors use evidence and reasons to support their points in informational texts. (RI.5.8)
- I can produce clear and coherent writing that is appropriate to task, purpose, and audience. (W.5.4)
- I can use context (e.g., cause/effect relationships and comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4)
- I can connect my questions and responses to what others say. (SL.5.1)

Supporting Learning Targets

- I can determine the process Meg Lowman uses to preserve specimens.
- I can list the steps to preserving a specimen from the natural world.
- I can contribute to my group’s discussion by giving suggestions that are on topic.
- I can determine the meaning of new words from context in *The Most Beautiful Roof in the World*.
- I can follow steps for collecting and preserving specimens.

Ongoing Assessment

- Steps to Preserve a Specimen Note-catcher
- Preserved specimen



Reading and Writing About How to Perform a Process:
How Meg Lowman Studies the Rainforest (Pages 4–8)

Agenda	Teaching Notes
<p>1. Opening</p> <p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <p>B. Introducing Learning Targets (5 minutes)</p> <p>2. Work Time</p> <p>A. Read-aloud and Main Idea: How Meg Lowman Studies the Rainforest (10 minutes)</p> <p>B. Group Read: Rereading and Listing Details (10 minutes)</p> <p>C. Key Vocabulary to Deepen Understanding (10 minutes)</p> <p>D. Following Steps to Preserve a Specimen (15 minutes)</p> <p>3. Closing and Assessment</p> <p>A. Debrief (5 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none"> • This lesson involves students working with specimens from the natural world. • There are two options for preparation: <ul style="list-style-type: none"> * Option 1: Teacher collects specimens (e.g., leaves, flowers, plant parts) from nature for students to use during this lesson. * Option 2: As a class, find another time of the day (prior to the lesson) to take students outside to an area on/near school grounds where students may gather their own specimens from nature. • Review: Quiz-Quiz-Trade (in Vocabulary Strategies, Appendix 1). • Prepare the Quiz-Quiz-Trade vocabulary (see supporting materials). Cut the words into strips, then fold each strip along the vertical line, so the word is visible on one side and the definition is visible on the opposite side. • Review Glass, Bugs, Mud protocol (see Appendix 1). • For many lessons in Unit 2, students reread the passages from the lessons to someone at home for homework. This promotes students' reading fluency. • In this unit, vocabulary instruction occurs daily: It is routine and brief, and heavily emphasizes learning words from context. For those students who perhaps need more supports, see suggestions for teaching vocabulary strategies in Appendix 1.



Reading and Writing About How to Perform a Process:
How Meg Lowman Studies the Rainforest (Pages 4–8)

Lesson Vocabulary	Materials
<p>process, pressing, list, determine, communicates, context, sorts, specimens, collections, permit (4), orchids, bromeliads (7), blossoms, preserve, solution, three-dimensional form, pickled (8), acid-free, herbarium, pluck, sailed aloft, trapezes, foliage, inflatable, ascent, marvelous</p>	<ul style="list-style-type: none">• <i>The Most Beautiful Roof in the World</i> (book; one per student)• Process for Pressing Specimens Note-catcher (one per group)• Quiz-Quiz-Trade vocabulary (cut into individual words/definitions; see Teaching Note)• Materials for preserving a specimen per group:<ul style="list-style-type: none">– One box/other item to represent a “low-temperature oven”– Four sheets of newspaper– Four sheets of cardboard– Acid-free paper (one sheet per student)– Glue– Specimen from nature (one per student)• Meg Lowman, Rainforest Scientist KWL anchor chart (from Lesson 1)



Reading and Writing About How to Perform a Process:
How Meg Lowman Studies the Rainforest (Pages 4–8)

Opening	Meeting Students' Needs
<p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <ul style="list-style-type: none"> • Ask students to take out their journals and share with a partner one more thing they learned about Meg Lowman from their rereading and the vocabulary they chose to add to their glossaries. • To generate excitement, focus students on the specimens that were gathered in advance (either by you or by the class during some other part of the day; see Teaching Notes). Explain that they will read about how Meg Lowman collects and preserves specimens in the rainforest and then will get to follow her process to do the same with their specimens. Collect all the specimens in one area of the classroom and ask students to identify each specimen (e.g., piece of grass, flower petal, leaf from a tree). • Set specimens aside for use in Work Time B. 	<ul style="list-style-type: none"> •
<p>B. Introducing Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning targets: “I can determine the process Meg Lowman uses to preserve specimens,” and “I can outline the steps to preserving a specimen from the natural world.” Ask students what <i>process</i> means, listening for responses such as: “steps to complete a project; a certain order for doing things.” Then ask for suggestions about what a <i>list</i> is. Listen for students to share ideas like: “writing out steps in order; using short phrases or words.” • Review the term <i>determine</i> by asking several students to share what they recall about its meaning: <ul style="list-style-type: none"> * <i>determine</i>: decide; conclude 	<ul style="list-style-type: none"> • ELLs may be unfamiliar with Tier 2 vocabulary words (e.g., <i>preserve</i>, <i>specimens</i>, <i>natural world</i>). Clarify vocabulary with students as needed.



Reading and Writing About How to Perform a Process:
How Meg Lowman Studies the Rainforest (Pages 4–8)

Work Time	Meeting Students' Needs
<p>A. Read-aloud and Main Idea: How Meg Lowman Studies the Rainforest (10 minutes)</p> <ul style="list-style-type: none"> • Ask students to join their groups (from Lesson 1) with their journals and their texts: <i>The Most Beautiful Roof in the World</i>. • Ask students to remind themselves what they pay attention to during a first read. Listen for students to say “gist” or “main idea.” Remind them to do that again today. • Focus students on the paragraph on page 4 that begins with the phrase “When Meg is at Selby Gardens . . .” Read pages 4–8 aloud to students, as they read along silently. (End with “And it has been exciting . . . tops of trees in the tanks of bromeliads.”) • Ask students to briefly discuss the gist of the read-aloud with their group members. Invite several students to share aloud, listening for: “how Meg Lowman prepares/preserves the samples she collects,” or similar ideas. 	<ul style="list-style-type: none"> • ELL language acquisition is facilitated by interacting with native speakers of English who provide models of language. • When possible, provide text or materials in students’ L1. This can help students understand materials presented in English.
<p>B. Group Read: Rereading and Listing Details (10 minutes)</p> <ul style="list-style-type: none"> • Read aloud the learning target: “I can contribute to my group’s discussion by giving suggestions that are on topic.” Ask students to give suggestions for ways they can contribute to their group’s discussion. Listen for suggestions such as: “talking about the text; reading the text carefully; making sure everyone has a turn to speak,” etc. • Distribute the Process for Pressing Specimens Note-catcher, one per group. Ask students to read the single paragraph on page 7 and the first paragraph on page 8 (ending with, “... the herbarium, a plant library”) on their own. Say: “Pay close attention to the process Meg Lowman uses to preserve her specimens, specifically her process for <i>pressing</i>. Make sure to examine the photographs as well. Remember, these are valuable features of informational text that can help readers understand text. After you have finished reading, discuss with your group: ‘What steps does Meg Lowman use for <i>pressing</i> specimens?’” Tell students that they will create an outline of those steps to use for pressing their own specimens. • Invite students to begin reading. As groups begin to create lists, circulate among students to support as necessary. 	<ul style="list-style-type: none"> • Students needing additional supports may benefit from partially filled-in graphic organizers.



Reading and Writing About How to Perform a Process:
How Meg Lowman Studies the Rainforest (Pages 4–8)

Work Time (continued)	Meeting Students' Needs
<p>C. Key Vocabulary to Deepen Understanding (10 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>.” Ask students to recall the meaning of the word <i>context</i> (using the words/sentences around a word to help determine its meaning). • Students likely can figure out many of the Quiz-Quiz-Trade Vocabulary in context. The Quiz-Quiz-Trade Vocabulary is prepared in advance to save time in the lesson. Encourage students to find the meaning of the words themselves, in context, before reading the definition provided on the cards. • Tell students that now they will participate in an activity called Quiz-Quiz-Trade to help them review and/or learn definitions for some of the key vocabulary from the reading. • Explain Quiz-Quiz-Trade (and model if needed). <ul style="list-style-type: none"> * Students will need two materials: <ol style="list-style-type: none"> 1. A strip with a vocabulary word on one side and the definition folded over to the opposite side 2. Their copies of <i>The Most Beautiful Roof in the World</i> (to use for defining unknown words using context clues) <ul style="list-style-type: none"> * Each student finds a partner. * Partner A shows the side of the paper with the word on it. * Partner B says the definition (if he/she knows it), or finds the word in the text and tries to determine the definition, using context clues. * Partner A then reads the definition aloud to confirm or correct the definition that Partner B gave. * Partners switch roles and repeat the steps above. * Partners then trade vocabulary slips and find a new partner. • Begin Quiz-Quiz-Trade. Be sure all students meet with at least two partners. Circulate to listen in on students' definitions of vocabulary and use of context clues to help them define the word. Note which students may need more support/additional vocabulary strategies/practice in order to understand the text. • 	<ul style="list-style-type: none"> • Increase interactions with vocabulary in context. This increases the rate of vocabulary acquisition for ELLs. • Consider writing and breaking down multistep directions into numbered elements. ELLs can return to these guidelines to make sure they are on track.



Reading and Writing About How to Perform a Process:
How Meg Lowman Studies the Rainforest (Pages 4–8)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• After approximately 5–7 minutes, ask students to return to their groups. Make sure to emphasize the following vocabulary to students, as these words will appear frequently throughout the text. Ask students to share the meaning of each word, listening for responses such as:<ul style="list-style-type: none">* <i>ascent</i>: climb; a move upward (academic)* <i>sorts</i>: places into categories; arranges; classifies (academic)* <i>specimens</i>: examples; samples; a type of something (academic)* <i>collection</i>: a set of objects; a group of things (academic)* <i>foliage</i>: plant life (scientific)* <i>bromeliad</i>: a tropical plant with fleshy leaves; often grows on other plants (scientific)* <i>herbarium</i>: a plant library (scientific)• Offer groups the opportunity to revise any steps they listed and described on their Process for Pressing Specimens Note-catcher now that they are more familiar with some of the key vocabulary from the text.	<ul style="list-style-type: none">•



Reading and Writing About How to Perform a Process:
How Meg Lowman Studies the Rainforest (Pages 4–8)

Work Time (continued)	Meeting Students' Needs
<p>C. Following Steps to Preserve a Specimen (15 minutes)</p> <ul style="list-style-type: none">• Distribute materials to each group:<ul style="list-style-type: none">* One box/other item to represent a “low-temperature oven”* Four sheets of newspaper* Four sheets of cardboard* Acid-free paper (one sheet per student)* Glue* Specimen from nature (one per student)• Read aloud the learning target: “I can follow steps for collecting and preserving specimens.”• Tell students that they will now “press” their own specimens. Ask each group to trade their Process for Pressing Specimens Note-catcher with another group.• Each member of the group will follow the steps that the other group wrote on their Note-catcher.• Give students 7 to 8 minutes to follow the steps listed on the Note-catcher and press their specimens. Circulate to support as needed.• Next, ask groups to get back together with the group whose Note-catcher they used. Ask students to discuss:<ul style="list-style-type: none">* “How well were you able to press your specimens based on the steps listed?”• Remind students to share positive feedback with one another first, and then make one suggestion for improving their written steps for a process.• As groups discuss, move among students to offer support and/or clarification as necessary.• Optional: Collect students’ pressed specimens and create a class “herbarium.”	<ul style="list-style-type: none">• Consider providing extra time for tasks. Some students need more time to process and translate information.



Reading and Writing About How to Perform a Process:
How Meg Lowman Studies the Rainforest (Pages 4–8)

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (5 minutes)</p> <ul style="list-style-type: none"> Bring students' attention back to the Meg Lowman, Rainforest Scientist KWL anchor chart from Lesson 1. Ask students to briefly share out what they learned about Meg Lowman from the reading today, and record students' ideas in the L column of the KWL. Remind students to add any new information to the chart in their journals. Reread the first two learning targets aloud, one at a time. Ask students to use the Glass, Bugs, Mud protocol to show their understanding of each target. <p><i>Note any students showing Mud for these learning targets, as they may require more support during activities with multiple steps and/or reading and following multistep instructions.</i></p>	<ul style="list-style-type: none"> Consider allowing students to draw their observations, ideas, or notes when appropriate. This allows all students to participate in a meaningful way.
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> This homework has three parts: <ol style="list-style-type: none"> Reread pages 4–8 to someone (or yourself) at home. Be prepared to share something new you learned about Meg Lowman in class tomorrow. Add to the Meg Lowman KWL chart in your journal. Choose three academic and two scientific vocabulary words that were discussed in the lesson today to add to the glossary in your journal. Choose from this list: process, pressing, list, determine, communicates, context, sorts, specimens, collections, permit (4), orchids, bromeliads (7), blossoms, preserve, solution, three-dimensional form, pickled (8), acid-free, herbarium, pluck, sailed aloft, trapezes, foliage, inflatable, ascent, marvelous. 	<ul style="list-style-type: none"> Audio recordings of text can aid some students in comprehension. Students can pause and replay confusing portions while they follow along with the text. For students who may have difficulty determining important words to add to their glossaries, consider prioritizing the following words for them: =, <i>sorts</i>, <i>collections</i> (academic); <i>foliage</i>, <i>bromeliad</i> (scientific).



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 2

Supporting Materials



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Process for Pressing Specimens Note-catcher

Group Member Names:

Date:

Step (one or two words to name the step)	Description of Step (define or describe the step using details in the text)



Process for Pressing Specimens Note-catcher
(Answers for Teacher Reference)

Group Member Names:

Date:

Step (one or two words to name the step)	Description of Step (define or describe the step using details in the text)
Newspaper	Fold flowers/leaves carefully in newspaper.
Cardboard	Place the newspaper with flowers/leaves between two sheets of cardboard.
Dry	Place specimens in low-temperature oven.
Glue	Glue specimen onto acid-free paper.
Tag/Label	Write the name of the specimen; write information about the specimen on the acid-free paper (below, above, next to the specimen.)
Herbarium	Place specimen in the herbarium – plant library.



Quiz-Quiz-Trade Vocabulary

orchid	a flowering plant; some types grow on other plants
bromeliad	a tropical plant with fleshy leaves; often grow on other plants
blossoms	flowering part of a plant
preserve	treat or store something to protect it; keep it from breaking apart
solution	two or more substances mixed together; used to preserve a specimen
three-dimensional form	an object that has height, width, and volume
acid-free	paper that doesn't use acid; helps specimens last longer
herbarium	a plant library
pluck	remove; pull; pick at; grasp
sailed	glided; floated; moved smoothly
aloft	high above; in the air; up
ascent	climb; move upward
trapeze	a bar attached to the ends of two ropes
foliage	plant life
inflatable	able to be filled with air
marvelous	amazing; spectacular; wonderful
sorts	places into categories; arranges; classifies
specimens	examples; samples; a type of something
collection	a set of objects; a group of things
permit	a license allowing something; giving permission



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 3

Supporting an Opinion: Why is the Rainforest Canopy a Difficult Place to Research? (Pages 9–10)



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Supporting an Opinion:

Why is the Rainforest Canopy a Difficult Place to Research? (Pages 9–10)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can determine the main idea(s) of an informational text based on key details. (RI.5.2)
- I can summarize an informational text. (RI.5.2)
- I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3)
- I can write an opinion piece that supports a point of view with reasons and information. (W.5.1)
- I can make inferences using quotes from the text. (RI.5.1)

Supporting Learning Targets

- I can explain why the canopy is a difficult place to research.
- I can identify the skills needed by scientists in order to study the rainforest canopy.
- I can determine the meaning of new words from context in *The Most Beautiful Roof in the World*.
- I can write an opinion about being a rainforest scientist that is supported by reasons from the text.
- I can infer what skills Meg Lowman must have in order to be a rainforest scientist.

Ongoing Assessment

- Journal (Meg Lowman KWL chart, Close Read Note-catcher, glossaries)



Supporting an Opinion:

Why is the Rainforest Canopy a Difficult Place to Research? (Pages 9–10)

Agenda	Teaching Notes
<p>1. Opening</p> <p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <p>B. Introducing Learning Targets (5 minutes)</p> <p>2. Work Time</p> <p>A. Read-aloud and Main Idea: What Skills Do Scientists in the Rainforest Need? (20 minutes)</p> <p>B. Key Vocabulary to Deepen Understanding (15 minutes)</p> <p>C. Synthesis Writing (10 minutes)</p> <p>3. Closing and Assessment</p> <p>A. Debrief (5 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none"> • In advance: Read pages 9–10 of <i>The Most Beautiful Roof in the World</i>. • During the Group Read (Work Time, Part A), students are assigned two sentences of the text to read alone. In advance, identify the sentences that each student will be assigned. • Review: Close Reading Note-catcher. • Most lessons in this unit include a portion of Work Time devoted to Key Vocabulary to Deepen Understanding. Students revisit their thinking about new words in various ways. This helps all students solidify their understanding of new concepts and of how to figure out words in context. • Throughout Unit 2, students attend carefully to the key excerpts from this beautifully written text. During this initial exposure, lessons focus more on comprehending the text and building content knowledge about Meg Lowman’s research. There is some, though more limited, focus on considering author’s craft. In Unit 3, students will revisit key passages from this text to consider word choice, nuance, and author’s craft. This helps prepare students to write their own field journals.

Lesson Vocabulary	Materials
<p>explain, identify, opinion, skills, supported, ascending, wonder, chatterings, “powerhouse,” biomass (9), frontier, fearless, skillful, cliffs, pioneer (10)</p>	<ul style="list-style-type: none"> • <i>The Most Beautiful Roof in the World</i> (book; one per student) • Close Reading Note-catcher (one per student) • Document camera • Meg Lowman, Rainforest Scientist KWL anchor chart (from Lesson 1)



Supporting an Opinion:

Why is the Rainforest Canopy a Difficult Place to Research? (Pages 9–10)

Opening	Meeting Students' Needs
<p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <ul style="list-style-type: none"> • Ask students to take out their homework from Lesson 2. • Invite them to share with a partner: one interesting detail they added to the L column of their Meg Lowman, Rainforest Scientist KWL in their journals and one new word (and its definition) that they added to one of their two glossaries. • Ask a few students to share out what they learned from their partners. 	<ul style="list-style-type: none"> • ELL language acquisition is facilitated by interacting with native speakers of English who provide models of language.
<p>B. Introducing Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning targets: “I can explain why the canopy is a difficult place to research,” and “I can identify the skills needed by scientists in order to study the rainforest canopy.” • Ask students to recall and share out the meaning of the words <i>explain</i> (describe; give details; clarify) and <i>identify</i> (name; discover; recognize). • Ask students to share out the meaning of <i>skills</i>. Listen for responses such as: “abilities; expertise; ability to do something well; gained through experience or training.” 	<ul style="list-style-type: none"> • Provide nonlinguistic symbols to assist struggling readers in making connections with vocabulary (e.g., cluster of trees with an arrow pointing to the very top for <i>canopy</i>, a person in a lab coat for <i>scientist</i>, a person looking through a magnifying glass for <i>study</i>). These symbols can be used throughout the year. Specifically, they can be used in directions and learning targets.



Supporting an Opinion:

Why is the Rainforest Canopy a Difficult Place to Research? (Pages 9–10)

Work Time	Meeting Students' Needs
<p>A. Read Aloud and Main Idea: What Skills Do Scientists in the Rainforest Need? (20 minutes)</p> <ul style="list-style-type: none"> As usual, ask students to locate their copies of <i>The Most Beautiful Roof in the World</i> and join their groups. Distribute the Close Reading Note-catcher and display using a document camera. Focus students on the first section “Immerse Yourself! First Read.” Say to students: “As I read aloud, follow along silently and record any words or phrases from the text that stand out, or that you think are important, in the left column of your Note-catcher.” Orient students to page 9, the phrase “For a human being...” Read pages 9–10 aloud as students follow along (through “These men and women are pioneers”). Give students time to jot down key words/phrases in the left-hand column of their Note-catchers. Then ask them to share with their group. Then ask students to complete the right-hand column: Write a short statement about the meaning of pages 9–10. Ask several students to share out. Listen for comments such as: “how dangerous the canopy is to explore; the canopy holds the largest amount of rainforest life; technology has helped scientists explore the canopy; scientists need special skills to explore the canopy.” Orient students to the second part of the Close Read Note-catcher, “Dive Deeper: Second Read.” Focus students’ attention on the text in the box: the learning targets and the Strategy Focus. Remind students that pictures are a text feature that can offer valuable clues about the information in the text and help them figure out difficult words and/or phrases. Within each small group, assign each student a different section of text to read: <ul style="list-style-type: none"> Section 1: page 9, sentences 1–3 (“For a human being ...” through “... chatterings of monkeys.”) Section 2: page 9, sentences 4–7 (“They knew that the canopy ...” through “... exploration was easier.”) Section 3: page 10, sentences 1–2 (“The rainforest canopy ...” through “... gravity, ants, and thorns.”) Section 4: Paragraph 10, sentences 3–5 (“Such scientists, however ...” through “... feel their way up to the brightly lit canopy.”) 	<ul style="list-style-type: none"> Provide ELLs bilingual word-for-word translation dictionaries or online translation sources such as Google Translate to assist with comprehension. ELLs should be familiar with how to use glossaries or dictionaries. Students needing additional supports may benefit from a partially filled-in Close Reading Note-catcher. Consider providing smaller chunks of text (sometimes just a sentence) for struggling readers. Teachers can check in on students’ thinking as they write or speak about their text. Provide anchor charts for processes, such as: How to Share with My Group Members. This would include question words with nonlinguistic representations (e.g., a person reading a book for <i>read</i>, two people talking for <i>share</i>, a person writing for <i>write</i>) and a sentence frame (e.g., “Some words that seemed important to me were ...”).



Supporting an Opinion:

Why is the Rainforest Canopy a Difficult Place to Research? (Pages 9–10)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Give directions:<ol style="list-style-type: none">1. In the left-hand column of your Note-catcher, record any specific evidence from the text that addresses the two learning targets.2. In the right column, write a brief explanation about why you think each piece of evidence helps you meet the target.• Clarify any instructions and model if necessary.• Give students approximately 5 minutes to read their short section of the text and fill in their Note-catchers.• Focus students' attention whole group. Remind students of the Listening Criteria rubric (from Lesson 1), focusing on the following:<ul style="list-style-type: none">* Taking notes about important ideas and details that help to answer the questions* Waiting until the speaker is finished before making comments or asking questions• Ask students to share with their group members about what evidence they each found to answer the question(s), and explain why they chose each piece of text. Circulate to offer feedback to individuals and groups about how well group members are meeting these two listening criteria.• As time allows, ask several students to share out the evidence (text and/or visual features) that helped them meet the targets.	<ul style="list-style-type: none">•



Supporting an Opinion:

Why is the Rainforest Canopy a Difficult Place to Research? (Pages 9–10)

Work Time (continued)	Meeting Students' Needs
<p>B. Key Vocabulary to Deepen Understanding (15 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can determine the meaning of new words in <i>The Most Beautiful Roof in the World</i>.” Ask a few students to remind the class what they have been doing toward this target in the past few lessons. • Remind the class of the Word Sort activity completed in Lesson 1 and ask a couple of students to share out what a Word Sort is. • Ask students to turn to a new page in their journals, and draw a line down the middle to split it into a left- and right-hand column. At the top of the left column, ask students to write: Words That Describe the Canopy. At the top of the right-hand column, they should write: Words That Describe Rainforest Scientists. • Display the following words (without the definitions/synonyms): <i>ascending, chatterings, wonder, “powerhouse,” pioneer, frontier, skillful, cliffs, biomass, fearless</i>. • Give students 5 minutes to work with their group to determine which words should go into each category. Encourage students to look back on pages 9–10 of their books for context clues, and/or to use the visual features on these pages to help them determine what difficult/unknown words may mean. Remind students to justify to their group why they believe a specific word should go in a certain category. • Circulate to support and/or clarify as needed. • After about 5 minutes, ask several students to share out the meaning of each word, listening for ideas like: <ul style="list-style-type: none"> * <i>ascending</i>: climbing upward (academic) * <i>chatterings</i>: sounds that monkeys make; animal noises (scientific) * <i>wonder</i>: curiosity; desire to learn about the unknown (academic) * <i>“powerhouse”</i>: where most things happen; central; important (academic) * <i>pioneer</i>: the first person to explore a place; leading the way (academic) * <i>frontier</i>: edge; border; unexplored land (academic) * <i>skillful</i>: expert; practiced; clever (academic) * <i>cliffs</i>: steep drop-offs; overhangs (scientific) 	<ul style="list-style-type: none"> • Consider giving fewer words to struggling readers to work with (just 4 or 5 words). • Provide visual representations of the words for students to sort along with the vocabulary words themselves. • Increase interactions with vocabulary in context. This increases rate of vocabulary acquisition for students.



Supporting an Opinion:

Why is the Rainforest Canopy a Difficult Place to Research? (Pages 9–10)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> * <i>biomass</i>: the living things of the rainforest (scientific) * <i>fearless</i>: unafraid; not scared; brave (academic) • Give students a few minutes to work with group members to move words into a different category, based on new understanding(s). • If time permits, ask students to take 1 minute to look back at pages 9–10 and choose 1 or 2 more words from the text to add to either category. Ask a few students to share out new words they chose to add to a category, and to explain why they think the word should be added. 	<ul style="list-style-type: none"> •
<p>C. Synthesis Writing (10 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can write an opinion about being a rainforest scientist that is supported by reasons from the text.” • Ask several students to share out what they remember about the word <i>opinion</i> (personal belief; judgment; view; perspective). Then ask students what it means to <i>support</i> an opinion with “reasons from the text.” Listen for students to say: “Use specific words/phrases from the book that provide evidence for my opinion,” or similar ideas. • Ask students to begin a new page in their journals and independently respond to the following prompt: <ul style="list-style-type: none"> * “Share your opinion about whether or not you think it would be difficult to be a rainforest scientist. Support your opinion with at least two details from the text.” • Give students 5 minutes to write, and then ask them to Pair-Share what they wrote. Invite several students to share out whole class. 	<ul style="list-style-type: none"> • Consider allowing students who struggle with language to dictate their writing to a partner or teacher. • Consider allowing students to draw their observations, ideas, or notes when appropriate. This allows all students to participate in a meaningful way.



Supporting an Opinion:

Why is the Rainforest Canopy a Difficult Place to Research? (Pages 9–10)

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (5 minutes)</p> <ul style="list-style-type: none"> • Focus students' attention on the Meg Lowman, Rainforest Scientist KWL anchor chart, and say: "Even though pages 9 and 10 do not mention Meg Lowman specifically, what can you infer about her based on what we read about the canopy and rainforest scientists today? What in the text makes you think so?" • Invite students to share out ideas, listening for inferences such as: "She is a pioneer; she must be strong/fearless/physically fit/smart/hardworking," etc. Record students' thinking in the L column of the KWL. Students should record ideas on the KWL in their journals as well. • Read through each of the learning targets, pausing after each for students to show a thumbs-up if they feel they mastered the target, a thumbs-sideways if they feel they've partially mastered the target, or a thumbs-down if they're still working on mastering the target. 	<ul style="list-style-type: none"> • For students needing additional supports producing language, consider offering a sentence frame or starter or a cloze sentence to assist with language production and provide the structure required.
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> • This homework has three parts: <ol style="list-style-type: none"> 1. Reread pages 9–10 to someone (or yourself) at home. Be prepared to share about Meg Lowman as a scientist with a partner tomorrow. 2. Read your synthesis statement to that same person (or yourself). 3. Choose three academic and two scientific vocabulary words discussed in today's lesson to add to your glossaries in your journal. Choose from this list: explain, identify, opinion, skills, supported; ascending, wonder, chatterings, "powerhouse," biomass (9), frontier, fearless, skillful, cliffs, pioneer (10). 	<ul style="list-style-type: none"> • Audio recordings of text can aid students in comprehension. Students can pause and replay confusing portions while they follow along with the text. • For students who may have difficulty determining important words to add to their glossaries, consider prioritizing the following words for them: <i>explain, identify, opinion</i> (academic); <i>cliffs, biomass</i> (scientific).



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Grade 5: Module 2A: Unit 2: Lesson 3

Supporting Materials



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Close Reading Note-catcher

Immerse Yourself! First Read Note-catcher

Words or phrases that stand out or seem important	Based on the words and phrases... My initial thoughts about the meaning of this section of the text

Dive Deeper Second Read Note-catcher

Learning Targets:

I can explain why the canopy is a difficult place to research.

I can identify the skills needed by scientists in order to study the rainforest canopy.

Strategy Focus: I can use visual features to contribute to my understanding of the text.

Evidence from the text	My thinking



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 4

Close Reading: Blue Creek, a Rainforest in Belize

(Page 12)



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Close Reading:
Blue Creek, a Rainforest in Belize (Page 12)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can determine the main idea(s) of an informational text based on key details. (RI.5.2)
- I can summarize an informational text. (RI.5.2)
- I can determine the meaning of academic words or phrases in an informational text. (RI.5.4)
- I can determine the meaning of content words or phrases in an informational text. (RI.5.4)
- I can explain how authors use evidence and reasons to support their points in informational texts. (RI.5.8)

Supporting Learning Targets

- I can explain how the Blue Creek rainforest is biodiverse.
- I can explain how Kathryn Lasky uses language to paint a picture for the reader about biodiversity in the Blue Creek rainforest.
- I can determine the meaning of new words in *The Most Beautiful Roof in the World*.

Ongoing Assessment

- Journal (AQUA Biodiversity anchor chart, glossaries)
- Text-dependent questions



Close Reading:
Blue Creek, a Rainforest in Belize (Page 12)

Agenda	Teaching Notes
<p>1. Opening</p> <p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <p>B. Introducing Learning Targets (5 minutes)</p> <p>2. Work Time</p> <p>A. First Read: The Biodiversity of the Blue Creek Rainforest (15 minutes)</p> <p>B. Creating an AQUA Biodiversity Anchor Chart (5 minutes)</p> <p>C. Second Read: Answering Text-Dependent Questions (20 minutes)</p> <p>3. Closing and Assessment</p> <p>A. Debrief and Review Learning Targets (10 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none">• In advance: Read and become familiar with page 12 of <i>The Most Beautiful Roof in the World</i> and the text-dependent questions for this text selection (see supporting materials).• Consider writing the vocabulary words on a large piece of chart paper ahead of time to save time during the lesson.• Review: Chalk Talk and Thumb-O-Meter protocols (see Appendix 1).• Students begin an AQUA anchor chart in this lesson. This is similar to a KWL, with the added component of thinking about the actions students would take now that they have a new understanding. It will be used to capture students' thinking about biodiversity of rainforests throughout the unit. As with the KWL notes students began in Lesson 1, students will rely on their AQUA notes for their end of unit assessment. Throughout the unit, reinforce the importance of taking good notes.• Following this lesson, students will have several tasks to do for homework. Call students' attention to this and remind them that these tasks are routine and not time-intensive.



Close Reading:
Blue Creek, a Rainforest in Belize (Page 12)

Lesson Vocabulary	Materials
<p>explain, determine, paint a picture, biodiverse; considered, varieties, upward, species, timeless, uncharted, teems, ceaseless, vipers, salamander, bromeliads, decaying, vegetation, thrive, opportunistic, altered habitats (12)</p>	<ul style="list-style-type: none">• Map of North and South America (one to display)• <i>The Most Beautiful Roof in the World</i> (book; one per student)• Chart paper for Chalk Talk (one per team)• Markers (one per student)• AQUA Biodiversity anchor chart (new; teacher-created; see supporting materials)• Text-Dependent Questions, <i>The Most Beautiful Roof in the World</i>, page 12 (one per student)• Homework: Close Reading Note-catcher for pages 13-16 of <i>The Most Beautiful Roof in the World</i> (one per student)



Close Reading:
Blue Creek, a Rainforest in Belize (Page 12)

Opening	Meeting Students' Needs
<p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <ul style="list-style-type: none"> • Invite students to share with a partner one new scientific vocabulary word that they chose to add to their glossary for homework and how it relates to Meg Lowman as a scientist. • Display the Map of North and South America, highlighting where Belize is located. Ask students to Think-Pair-Share: <ul style="list-style-type: none"> * “Where is Belize in relation to other rainforests we have learned about?” • Cold call several students to share out with the whole group. Look for answers such as: “It is close to Panama.” • Ask students again to Think-Pair-Share: <ul style="list-style-type: none"> * “Is Belize located in an area of the world where you think a rainforest would be? What makes you think so?” Ask students to share out their thoughts. Listen for ideas, such as: “It is near the equator. It is in the area of the world known as the tropics.” 	<ul style="list-style-type: none"> • ELLs may be unfamiliar with Tier 2 vocabulary words (e.g., <i>relation</i>, <i>located</i>, <i>area</i>). Clarify vocabulary with students as needed.
<p>B. Introducing Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning targets: “I can explain how the Blue Creek rainforest is biodiverse,” and “I can explain how Kathryn Lasky uses language to paint a picture for the reader about biodiversity in the Blue Creek rainforest.” Ask several students to share the meaning of the word <i>explain</i> (describe; give details; clarify). (Note students work with the word <i>biodiverse</i> during Part B of Work Time.) • Introduce the expression <i>paint a picture</i> to students. Ask them to think about what it means for an author to use language to paint a picture for the reader. Invite several students to share ideas, listening for suggestions such as: “uses descriptive words that help me make a picture in my mind; uses interesting words that describe specific plants, animals, colors, shapes, light,” etc. • Make a distinction for students that this book has many beautiful and informative photographs that can help them better understand the text. For this lesson, they will be focusing on the words the author uses, not the pictures. 	<ul style="list-style-type: none"> • Provide nonlinguistic symbols (e.g., a paintbrush for <i>paint</i>, a photograph for <i>picture</i>) to assist struggling readers in making connections with vocabulary. These symbols can be used throughout the year. Specifically, they can be used in directions and learning targets.



Close Reading:
Blue Creek, a Rainforest in Belize (Page 12)

Work Time	Meeting Students' Needs
<p>A. First Read: The Biodiversity of the Blue Creek Rainforest (20 minutes)</p> <ul style="list-style-type: none"> • Ask students to join their group members, and turn to page 12 of <i>The Most Beautiful Roof in the World</i>. Remind students that when they first read, they will be focusing on the main ideas of the text. As they have other opportunities to reread the text, they will focus on the descriptive words that Kathryn Lasky uses to tell readers about biodiversity. Read page 12 aloud while students follow along silently. • Ask students to briefly discuss what this page is mostly about, with their group members. Listen in on student conversations for comments such as: “It’s about the animals and plants that live in the Blue Creek rainforest” or “There is a lot of plant and animal diversity/<i>biodiversity</i> in the Blue Creek rainforest.” Invite a few students to share out whole group. • Tell students they will now reread a portion of the text on their own. Ask them to consider this question as they reread: “How is Blue Creek <i>biodiverse</i>?” • Ask students to reread starting in the first paragraph with the sentence that starts with: “In this shadowed world . . .” through to the end of the second paragraph, “... in the tanks of bromeliads.” • After 2 to 3 minutes, distribute a piece of chart paper and markers to each group. Ask one student in the group to write the question: “How is Blue Creek <i>biodiverse</i>?” in the center of the sheet and draw a circle around that question. • Explain to students that a Chalk Talk is a “silent conversation.” Review the instructions: <ul style="list-style-type: none"> * No talking. * Each student writes a response to the question. * After approximately 30 seconds, walk around the chart paper to view other group members’ comments. * If you connect to or want to expand on an idea that someone in your group wrote, then write the idea near the original comment and draw a line to connect the two ideas. * Cite evidence directly from the text when writing and/or responding to comments. • Address any clarifying questions and model briefly if necessary. • Give students 5 minutes to do the Chalk Talk. • 	<ul style="list-style-type: none"> • Provide ELLs bilingual word-for-word translation dictionaries or online translation sources such as Google Translate to assist with comprehension. ELLs should be familiar with how to use glossaries or dictionaries. • Consider partnering an ELL with a student who speaks the same L1; they can also write their thoughts in their L1 during the Chalk Talk. This can let students have more meaningful discussions and clarify points in their L1.



Close Reading:
Blue Creek, a Rainforest in Belize (Page 12)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> • Then ask students to read through all comments and search for patterns and/or themes (e.g., names of animals that live in Blue Creek, 200 types of plants, varieties, etc.). • Ask each group to share one pattern and/or theme they noticed from their Chalk Talk. 	<ul style="list-style-type: none"> •
<p>B. Creating an AQUA Biodiversity Anchor Chart (5 minutes)</p> <ul style="list-style-type: none"> • Display the AQUA Biodiversity anchor chart (see example in supporting materials). Ask students to turn to four new pages in their journals. Ask them to lay out the four pages as follows: <ol style="list-style-type: none"> 1. Already Know (A) 2. Questions (Q) 3. Understandings (U) 4. Action (A) • Explain to students that an AQUA chart is similar to a KWL, except it has the added component of an “Action.” Tell students they will be coming back to this fourth column later in the module. • Remind students that the meaning of the word <i>biodiverse</i> can be figured out by thinking about its parts (<i>bio</i>, meaning “life,” and <i>diverse</i>, meaning “different”). Ask several students to share out what they already know (A) about biodiversity in Blue Creek and other rainforests they have read about. Listen for suggestions such as: “There are a lot of plants and animals in rainforests. There are many different types of plants and animals in the rainforest.” Record student ideas. (Students should record ideas in their journals.) • Then invite several students to share questions (Q) they have about biodiversity in Blue Creek and/or other rainforests they have studied. Record student responses. (Students should record ideas in their journals.) • Students will have an opportunity to fill in the understandings (U) and action (A) columns in future lessons. • Keep the AQUA Biodiversity anchor chart posted for ongoing student reference and to add to in subsequent lessons. Remind students that just like with their KWL chart, it is important that they keep good notes on their AQUA chart, since they will get to use these during the end of unit assessment. 	<ul style="list-style-type: none"> • Students needing additional supports may benefit from a partially filled-in AQUA Biodiversity anchor chart. • Use vocabulary learning strategies to support all learners: prefixes, root words, suffixes, cognates, and context.



Close Reading:
Blue Creek, a Rainforest in Belize (Page 12)

Work Time (continued)	Meeting Students' Needs
<p>C. Second Read: Answering Text-Dependent Questions (20 minutes)</p> <ul style="list-style-type: none"> • Distribute the Text-Dependent Questions, <i>The Most Beautiful Roof in the World</i>, page 12 (one per student). • Ask students to read through each of the questions on their own. Then ask students to work with their group for 7 to 8 minutes to go back into the text on page 12 and discuss their responses to each question. • Move throughout the room to offer support and/or clarification as needed. • Then give students 5 minutes to record answers on their individual text-dependent questions sheets. • Next, focus students' attention on key vocabulary from the text. Post the following vocabulary words on the board and ask students to suggest definitions and/or synonyms: <ul style="list-style-type: none"> * <i>varieties</i>: many different kinds; many types (academic) * <i>upward</i>: going up; toward the sky/tops of trees (academic) * <i>species</i>: a group of similar types of plant and/or animal (scientific) * <i>viper</i>: a type of snake (scientific) * <i>salamander</i>: a small animal/reptile that looks like a lizard (scientific) * <i>bromeliad</i>: a tropical plant with fleshy leaves (scientific) * <i>decaying</i>: rotting; crumbling; falling apart (academic) * <i>vegetation</i>: plants; plant life; foliage (scientific) * <i>thrive</i>: succeed; prosper; grow well (academic) * <i>opportunistic</i>: describes a species that fills a gap in the ecosystem (academic) • Once the above terms have been discussed/defined, allow students another 1 or 2 minutes to work with group members. This will allow them to revise their answers to the text-dependent questions, based on new understandings. • Invite several students to share out questions/answers their group revised and how they applied any new understandings about vocabulary to improve/correct their responses. 	<ul style="list-style-type: none"> • Consider giving some students fewer text-dependent questions (one or two). This allows all students to participate in a meaningful way. • Consider giving students who struggle with language fewer vocabulary words to focus on.



Close Reading:
Blue Creek, a Rainforest in Belize (Page 12)

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief and Review Learning Targets (10 minutes)</p> <ul style="list-style-type: none"> • Ask students to consider the following question: <ul style="list-style-type: none"> * “How does the author use language to paint a picture of the biodiversity of the rainforest?” • Give students several minutes to look back at page 12 of <i>The Most Beautiful Roof in the World</i> to identify three to five words that really stood out for them. • Ask students to begin a new page in their journals and write a response to the above question about Kathryn Lasky’s word choice. • Ask a few volunteers to share out. • Read through each of the learning targets, pausing after each one to ask students to use the Thumb-O-Meter protocol to demonstrate to what degree each student believes he/she has mastered the learning target. • Distribute Homework: Close Reading Note-catcher for pages 13-16 of <i>The Most Beautiful Roof in the World</i>. 	<ul style="list-style-type: none"> • Consider allowing students who struggle with written language to dictate their answer to the Debrief question to a partner or teacher.
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> • Reread page 12 to someone (or yourself) at home. Be prepared to share with a partner how Blue Creek is biodiverse. • Choose three academic and two scientific vocabulary words discussed in the lesson to add to your glossaries in your journal. Choose from the following words: explain, determine, paint a picture, biodiverse; considered, varieties, upward, species, timeless, uncharted, teems, ceaseless, vipers, salamander, bromeliads, decaying, vegetation, thrive, opportunistic, altered habitats (12) • Do a first read of pages 13–16. Complete the Close Read Note-catcher. <p><i>Note: Read and become familiar with pages 13–16 of <i>The Most Beautiful Roof in the World</i>.</i></p>	<ul style="list-style-type: none"> • Audio recordings of text can aid students in comprehension. Students can pause and replay confusing portions while they follow along with the text. • For students who may have difficulty determining important words to add to their glossaries, consider prioritizing the following words for them: <i>determine, paint a picture, upward</i> (academic); <i>species, vegetation</i> (scientific).



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 4

Supporting Materials



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Map of North and South America



Public Domain map produced by the Military Education Research Library Network (MERLN). Courtesy of the National Defense University Library.



AQUA Biodiversity Anchor Chart
(Sample for Teacher Reference)

Already Know A	Questions Q	Understandings U	Action A

Text-Dependent Questions, *The Most Beautiful Roof in the World*, page 12
(“Deep in Belize...”)

Name:

Date:

1. The text says that in Blue Creek there “are more *varieties* of living things than perhaps any other place on earth.” What does the word *varieties* mean in this text? What details from the first paragraph on page 12 support this statement?

2. According to the second paragraph, what types of animals live in the Blue Creek rainforest? Support your answer with evidence from the text.

3. The third paragraph describes how “When a tree falls ... new creatures move in and take over the *altered habitats*.” What does the phrase *altered habitats* mean in this sentence? Support your answer with evidence from the text.



Teacher Resource: Text-Dependent Questions,
The Most Beautiful Roof in the World, page 12
("Deep in Belize...")

1. The text says that in Blue Creek there "are more *varieties* of living things than perhaps any other place on earth." What does the word *varieties* mean in this text? What details from the first paragraph on page 12 support this statement?

The word *varieties* means many types. The details in Paragraph 1 that support this statement are, "Within a 16-foot (five-meter) square there can be upward of two hundred different species of plants."

4. According to the second paragraph, what types of animals live in the Blue Creek rainforest? Support your answer with evidence from the text.

Bats – "swoop through the canopy"; vipers – "coil in roots"; tree salamanders – "in petals of an orchid"; poison dart frog tadpoles – "in tanks of bromeliads."

5. The third paragraph describes how "When a tree falls ... new creatures move in and take over the *altered habitats*." What does the phrase *altered habitats* mean in this sentence? Support your answer with evidence from the text.

It means a place where animals live that has been changed in some way; the text describes how the tree changes by falling; then the trunk rots and bark loosens before new animals move in.



Homework: Close Reading Note-catcher for
Pages 13–16 of *The Most Beautiful Roof in the World*

Directions:

1. Read pages 13-16.
2. Complete the Note-catcher below.

Immerse Yourself!
First Read

Words or phrases that stand out or seem important	Based on the words and phrases... My initial thoughts about the meaning of this section of the text



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 5

Close Reading in Expert Groups: What is it Like in the Rainforest Canopy? (Pages 13–16)



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Close Reading in Expert Groups:
What is it Like in the Rainforest Canopy? (Pages 13–16)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can determine the main idea(s) of an informational text based on key details. (RI.5.2)

I can summarize an informational text. (RI.5.2)

I can use context (e.g., cause/effect relationships and comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4)

I can summarize information that is presented in pictures. (SL.5.2)

Supporting Learning Targets

- I can write a gist statement for a chunk of texts from *The Most Beautiful Roof in the World*.
- I can determine the meaning of new words from context in *The Most Beautiful Roof in the World*.
- I can sketch the gist of a chunk of text from *The Most Beautiful Roof in the World*.
- I can match a gist statement to a picture of the same chunk of text.

Ongoing Assessment

- Journal (Meg Lowman KWL chart, Biodiversity AQUA chart, glossaries)
- Gist statements
- Gist sketches



Close Reading in Expert Groups:
What is it Like in the Rainforest Canopy? (Pages 13–16)

Agenda	Teaching Notes
<p>1. Opening</p> <p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <p>2. Work Time</p> <p>A. Group Read: Determining the Gist of Pages 13–16 (25 minutes)</p> <p>B. Jigsaw, Part 1: Sketching the Gist (10 minutes)</p> <p>C. Jigsaw, Part 2: Matching Gist Statements and Sketches (15 minutes)</p> <p>3. Closing and Assessment</p> <p>A. Debrief and Review Learning Targets (5 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none">• In advance: Read and become familiar with pages 13–16 of <i>The Most Beautiful Roof in the World</i>.• Review: Go-Around and Fist to Five protocols in Checking for Understanding Strategies (see Appendix 1).• This lesson follows a basic Jigsaw structure, in which students first become experts on a chunk of text and then share their expertise with others. Review the Jigsaw protocol (see Appendix 1).• Read through each of the seven chunks of text (listed on the task cards) to predetermine which sections of text will be most appropriate for each student group, based on level of vocabulary, length, etc.• Refer to Key Vocabulary and Definitions, Pages 13–16 (for Teacher Reference; see Supporting Materials) when working with groups on reading for gist.• As in Module 1, students are asked to sketch their understanding of the main idea of a small chunk of text during the Work Time of this lesson. Sketching is one way to help students solidify their understanding of complex text and links to CCLS RI.5.2. Using art is one way to provide students with multiple means of engagement and representation (based on Universal Design for Learning principles).



Close Reading in Expert Groups:
What is it Like in the Rainforest Canopy? (Pages 13–16)

Lesson Vocabulary	Materials
<p>sketch, match, chunk, gist statement, justify</p> <p>Chunk 1: functions, impact, recently, invincible, track, previous</p> <p>Chunk 2: viewed, emergent growth, crowns, pavilion, floor, walkway</p> <p>Chunk 3: gear, Mayan, vary, jumars, ascenders, device, descend, manually</p> <p>Chunk 4: base, accompanied, tag, explore</p> <p>Chunk 5: Ormosia, fixed, project, unpracticed, securely, mosaic, negotiating</p> <p>Chunk 6: spans, bank, diverge, observation platform, junction, provide</p> <p>Chunk 7: maze, tangled, horizontally, influences, lianas, commuting</p>	<ul style="list-style-type: none">• <i>The Most Beautiful Roof in the World</i> (book; one per student)• The Rainforest Canopy task cards (1–7)• Key Vocabulary and Definitions, Pages 13–16 (for Teacher Reference)• Expert Groups Gist Note-catcher (one per student)• Index cards (two per student)



Close Reading in Expert Groups:

What is it Like in the Rainforest Canopy? (Pages 13–16)

Opening	Meeting Students' Needs
<p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <ul style="list-style-type: none">• Ask students to take out their journals.• Invite students to think about one key detail that seemed important from last night's reading about how difficult it is to study the canopy of a rainforest (pages 13–16). Use a Go-Around to have each student share.	<ul style="list-style-type: none">• For students needing additional supports producing language, consider offering a sentence frame, sentence starter, or cloze sentence to provide the structure required.



Close Reading in Expert Groups:
What is it Like in the Rainforest Canopy? (Pages 13–16)

Work Time	Meeting Students' Needs
<p>A. Group Read: Determining the Gist of Pages 13–16 (25 minutes)</p> <ul style="list-style-type: none"> As usual, ask students to join their groups (from Lessons 1–4). Students need their text <i>The Most Beautiful Roof in the World</i>. Introduce the learning targets: “I can write a gist statement for a chunk of text from <i>The Most Beautiful Roof in the World</i>,” and “I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>.” Ask students to remember and share out the meaning of the words <i>chunk</i> (a piece; a section of the whole) and <i>gist statement</i> (main idea; what text is mainly about). Ask students to open their books to page 13 and follow along silently. Read pages 13–16 aloud (start with “Meg Lowman believes that science is the machinery ...” and read through “... a web for commuting life.” Ask students to turn and talk to a partner about what they think this part of the text is mostly about. Distribute one of the Rainforest Canopy task cards to each group. Give students 5 minutes to read (independently) the chunk of text named on their task card. Then ask students to briefly discuss with their groups: “What was this chunk of text mostly about?” Ask students to keep in mind their initial thinking about the gist of their chunk of text. Tell them that they are going to focus on some important vocabulary terms that may help them be even clearer about the gist. Ask students to reread the text and look for the key vocabulary words listed on their task cards. Say: “As you reread your chunk of text, make sure to use <i>context</i> clues to help you figure out the meaning of key words listed on your task card. Understanding the meaning of these words will help you get even clearer about the gist of your text.” Allow students approximately 10 minutes to work with their groups. Circulate, looking for groups to identify and define the words. Use the Key Vocabulary and Definitions, Pages 13–16 (for Teacher Reference) to support groups with vocabulary as needed. Once they have reread their chunk of text and determined the meaning of key words from their task cards, ask them to recall their initial thinking about the gist. Then ask groups to discuss what they think the gist of the text is now that they have focused on key vocabulary (2 minutes). 	<ul style="list-style-type: none"> Provide anchor charts for processes such as How to Write a Gist Statement. This would include steps: <ol style="list-style-type: none"> Read the text. Think about what it is mostly about. Write one sentence about the main idea of the text. Consider prioritizing vocabulary words for students who may need fewer words to choose from on task cards. ELL language acquisition is facilitated by interacting with native speakers of English who provide models of language.



Close Reading in Expert Groups:
What is it Like in the Rainforest Canopy? (Pages 13–16)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> • Distribute the Expert Groups Gist Note-catcher, one per student. • Ask students to write a gist statement on their Expert Groups Gist Note-catcher, next to the number of their chunk of text. 	<ul style="list-style-type: none"> •
<p>B. Jigsaw, Part 1: Sketching the Gist (10 minutes)</p> <ul style="list-style-type: none"> • Read aloud the learning target: “I can sketch the gist of a chunk of text from <i>The Most Beautiful Roof in the World</i>.” • Ask students what they think it means to <i>sketch</i> the gist of their text. Listen for students to respond: “make a picture that shows what the chunk was mostly about; no words, just images,” or similar ideas. • Give each student two index cards and explain: “In a few minutes we are going to do a matching activity. You will be given two index cards each. On one index card, write the number of the chunk of text you read (1–7) and the gist statement about that chunk that you wrote on the Note-catcher. On the second index card, sketch a picture of your gist statement; <i>do not</i> write the chunk number or any words on this card. Only pictures that show the ideas and details of your gist statement. Remember, other students will need to be able to match up your two cards, so think about which details are most important to include in your drawing.” 	<ul style="list-style-type: none"> • For students who struggle producing written language, consider providing extra time for tasks and answering questions in class discussions. These students often need more time to process and translate information.



Close Reading in Expert Groups:
What is it Like in the Rainforest Canopy? (Pages 13–16)

Work Time (continued)	Meeting Students' Needs
<p>C. Jigsaw, Part 2: Matching Gist Statements and Sketches (15 minutes)</p> <ul style="list-style-type: none">• Introduce the learning target: “I can match a gist statement to a picture of the same chunk of text.”• Ask students for suggestions about the meaning of the word <i>match</i>, listening for ideas like: “go together; pair up,” etc.• Ask students to gather their book, Expert Groups Gist Note-catcher, and two index cards. Regroup students into groups of seven, with one student to read each chunk of the text.• Give directions:<ul style="list-style-type: none">* Each student place your two index cards on the table (total of 14 cards).* Mix the cards up.* Match gist statements with drawings.* Be sure to read gist statements aloud and <i>justify</i> (give reasons) why you think a drawing matches the statement with evidence from the drawing.• Circulate to support as needed.• Once students have matched each gist statement with each drawing, ask them to fill in the remaining rows of their Expert Groups Gist Note-catcher for the other six chunks of text they did not read closely today. Remind students to use the gist statements on the index cards, as well as allow each student the opportunity to share the key vocabulary they used to write their gist statement with the other group members as they write them on their Note-catchers.• As time permits, invite several students to share out gist statements from their Note-catchers.	<ul style="list-style-type: none">• Consider providing a protocol to require students to share speaking and listening “air time” during the matching activity.



Close Reading in Expert Groups:
What is it Like in the Rainforest Canopy? (Pages 13–16)

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief and Review Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Ask students to Pair-Share their response to the following:<ul style="list-style-type: none">* “Which helped you understand the gist of someone else’s chunk of text better, the <i>written</i> gist statement or the <i>drawing</i> of the gist? Why?”• Ask a few students to share out whole group.• Review the first learning target, and ask students to use the Fist to Five protocol to show how well they think they are able to use context to determine the meaning of unfamiliar words:<ul style="list-style-type: none">* Five: I can figure out most words from the context.* Three: I can figure out some words from the context.* Fist: I can’t figure out very many/any words from context.• Be sure to note which students assess themselves a fist; they will need additional strategies and/or support with vocabulary acquisition.	<ul style="list-style-type: none">• Consider partnering an ELL with a student who speaks the same L1 when discussion of complex content is required. This can let students have more meaningful discussions and clarify points in their L1.



Close Reading in Expert Groups:
What is it Like in the Rainforest Canopy? (Pages 13–16)

Homework	Meeting Students' Needs
<ul style="list-style-type: none"> • Reread aloud pages 13–16 to someone (or yourself) at home. • Add to the Meg Lowman KWL chart in your journal. Be prepared to share with a partner tomorrow. • Choose two new academic and two new scientific vocabulary words, from pages 13–16 and/or your Note-catcher, to add to the glossaries in your journal. Choose from this list: sketch, match, chunk, gist statement, justify; functions, impact, recently, invincible, track, previous (Chunk 1); viewed, emergent growth, crowns, pavilion, floor, walkway (Chunk 2); gear, Mayan, vary, jumars, ascenders, device, descend, manually (Chunk 3); base, accompanied, tag, explore (Chunk 4); Ormosia, fixed, project, unpracticed, securely, mosaic, negotiating (Chunk 5); spans, bank, diverge, observation platform, junction, provide (Chunk 6); maze, tangled, horizontally, influences, lianas, commuting (Chunk 7). <p><i>Note: Prepare the Quiz-Quiz-Trade vocabulary slips for Lesson 6 (cut apart and fold).</i> <i>Preview and become familiar with the following video (used in Lesson 6): “Climate Change Experiment Tracks Lizards and Butterflies” (1:49) www.youtube.com/watch?v=bgVG6wmFCEE&feature=relmfu</i></p>	<ul style="list-style-type: none"> • Audio recordings of text can aid students in comprehension. Students can pause and replay confusing portions while they follow along with the text. • For students who may have difficulty determining important words to add to their glossaries, consider prioritizing the following words for them: <i>sketch, match, gist statement</i> (academic), <i>base, floor</i> (scientific).



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 5

Supporting Materials



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The Rainforest Canopy, Task Cards (Chunks 1–7)

TASK CARD: Chunk #1

READ p. 13, paragraphs 1 and 2

Start with the phrase, “Meg Lowman believes ...” and read through “How many species can be removed ...”

KEY VOCABULARY, p. 13

functions (academic)

impact (academic)

recently (academic)

invincible (academic)

track (academic)

previous (academic)

TASK CARD: Chunk #2

READ p. 13, paragraph 3

Start with the phrase, “Viewed from an airplane ...” and read through “At Blue Creek a canopy walkway ...”

KEY VOCABULARY, p. 13

viewed (academic)

emergent growth (scientific)

crowns (scientific)

pavilion (scientific)

floor (scientific)

walkway (academic)

TASK CARD: Chunk #3

READ p. 14, paragraph 1

Start with the phrase “Meg is up at first light” and read through “To descend, the climber must ...”

KEY VOCABULARY, p. 14

gear (academic)

Mayan (scientific)

vary (academic)

Jumars (scientific)

ascenders (scientific)

descend (academic)

manually (academic)



The Rainforest Canopy, Task Cards (Chunks 1–7)

TASK CARD: Chunk #4

READ p. 14, last two sentences and p. 15, paragraph 1

Start with the phrase “Bye Mom” and read through “In the meantime, they can swim.”

KEY VOCABULARY, pp. 14–15

base (scientific)

accompanied (academic)

tag (academic)

explore (academic)

TASK CARD: Chunk #5

READ p. 15, paragraph 2

Start with the phrase “Meg is fast” and read through “Now she is at the beginning of the walkway.”

KEY VOCABULARY, p. 15

Ormosia (scientific)

fixed (academic)

project (academic)

unpracticed (academic)

securely (academic)

mosaic (academic)

negotiating (academic)

TASK CARD: Chunk #6

READ p. 15, last sentence and continue to p. 16, first paragraph

Start with the phrase “The walkway itself ...” and read through “There is a major observation platform.”

KEY VOCABULARY, pp. 15–16

spans (academic)

bank (scientific)

diverge (academic)

observation platform (scientific)

junction (academic)

provide (academic)



The Rainforest Canopy, Task Cards (Chunks 1–7)

TASK CARD: Chunk #7

READ p. 16, paragraph 2

Start with the phrase “When viewed from below...” and read through “For those creatures that swing or glide or climb...”

KEY VOCABULARY, pp. 16

maze (academic)

tangled (academic)

horizontally (academic)

influences (academic)

lianas (scientific)

commuting (academic)



Teacher Resource: Key Vocabulary and Definitions, Pages 13–16

Chunk 1, page 13:

functions: works; performs (academic)

impact: influence; effect (academic)

recently: just a while ago; lately (academic)

invincible: too difficult to overcome; unbeatable; indestructible (academic)

track: follow; pursue (academic)

previous: before; prior; earlier (academic)

Chunk 2, page 13:

viewed: seen; observed (academic)

emergent growth: very tall trees with a “crown” that extends above the canopy (scientific)

crowns: topmost foliage and branches on a tree (scientific)

pavilion: highest layer of growth in the rainforests; the crowns of trees above the canopy (scientific)

floor: ground level (scientific)

walkway: path; route (academic)

Chunk 3, page 14:

gear: equipment; tools (academic)

Mayan: member of the Maya people (scientific)

vary: differ; contrast (academic)

jumars: “ascenders”; metal U-shaped device with hinges, used for climbing (scientific)

ascenders: climbing equipment to help a person go up (scientific)

descend: go down (academic)

manually: by hand; physically (academic)

Chunk 4, page 14, last sentence, and page 15:

base: bottom of a tree (scientific)

accompanied: went with; joined (academic)

tag: label; mark (academic)

explore: discover; look around; investigate (academic)

Chunk 5, page 15:

Ormosia: a type of tree found in the Blue Creek rainforest (scientific)

fixed: attached permanently to one spot/area (academic)

project: stick out; extend (academic)

unpracticed: inexperienced; untrained; lacking the know-how (academic)

securely: firmly; strongly (academic)

mosaic: mixture; variety (academic)

negotiating: navigating; going around; getting past (academic)



Teacher Resource: Key Vocabulary and Definitions, Pages 13–16

Chunk 6, page 15, last sentence, and page 16:

spans: distances; lengths (academic)

bank: shore; edge (scientific)

diverge: separate; split (academic)

observation platform: raised area where a scientist can view/make observations of the rainforest (scientific)

junction: connection; intersection; place where things join (academic)

provide: supply; give (academic)

Chunk 7, page 16:

maze: confusing network of paths; web (academic)

tangled: scrambled; knotted; jumbled (academic)

horizontally: on the same level; straight across (academic)

influences: affects; changes (academic)

lianas: high climbing vines seen throughout the rainforest (scientific)

commuting: traveling; going back and forth (academic)



Close Reading in Expert Groups:
What is it Like in the Rainforest Canopy? (Pages 13–16)

Expert Groups Gist Note-catcher

Chunk of Text	GIST What is the main idea of what you read?
1	
2	
3	
4	
5	
6	
7	



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 6

Reading Informational Text for Details: Meg's Rainforest Experiment (Pages 17–20)



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Reading Informational Text for Details:
Meg's Rainforest Experiment (Pages 17–20)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can determine the main idea(s) of an informational text based on key details. (RI.5.2)

I can summarize an informational text. (RI.5.2)

I can use context (e.g., cause/effect relationships, comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4)

I can summarize text that is read aloud to me. (SL.5.2)

Supporting Learning Targets

- I can explain Meg Lowman's process for conducting experiments in the rainforest.
- I can determine the meaning of new words from context in *The Most Beautiful Roof in the World*.

Ongoing Assessment

- Journal (Meg Lowman KWL chart, glossaries)
- Experiment Note-catcher



Reading Informational Text for Details:
Meg's Rainforest Experiment (Pages 17–20)

Agenda	Teaching Notes
<p>1. Opening</p> <p>A. Reviewing Homework and Engaging the Reader (10 minutes)</p> <p>2. Work Time</p> <p>A. Read-aloud and Taking Notes: Meg Lowman Experiments in the Rainforest (15 minutes)</p> <p>B. Group Read: Rereading, Revising, and Sharing to Music (20 minutes)</p> <p>C. Key Vocabulary to Deepen Understanding (10 minutes)</p> <p>3. Closing and Assessment</p> <p>A. Debrief and Review Learning Targets (5 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none">• In advance: View and become familiar with the video used in the Engaging the Reader segment of this lesson. Prepare technology in advance to play the video for students.• The video is about French researchers studying the rainforest. It is shown for two purposes: to continue to build students' background knowledge and interest about the rainforest, and also to help students think about how rainforest scientists conduct experiments.• Read and become familiar with Meg Lowman's process for conducting an experiment (pages 17–20).• Have music ready for the Milling to Music activity in Work Time B.• Review: Quiz-Quiz-Trade in Vocabulary Strategies (see Appendix 1).• Review: Milling to Music (see Appendix 1).• Students likely can figure out many of the Quiz-Quiz-Trade vocabulary words in context. Encourage this. The Quiz-Quiz-Trade cards are prepared in advance to save time in the lesson.



Reading Informational Text for Details:
Meg's Rainforest Experiment (Pages 17–20)

Lesson Vocabulary	Materials
experiment, conducted, process; platform, balances, snapshots (17), minings, surface, acquires, notations, populations, synchronized, theory, mesh, ongoing processes, exclusion (19), variable, control, barrier, consume, stimulate (20)	<ul style="list-style-type: none">• “Climate Change Experiment Tracks Lizards and Butterflies” video:• http://www.youtube.com/watch?v=bgVG6wmFCEE&feature=relmfu• Experiment Note-catcher (one per student and one for display)• Experiment Note-catcher (Example, for Teacher Reference)• <i>The Most Beautiful Roof in the World</i> (book; one per student)• Quiz-Quiz-Trade strips (see Teaching Note)



Reading Informational Text for Details:
Meg's Rainforest Experiment (Pages 17–20)

Opening	Meeting Students' Needs
<p>A. Reviewing Homework and Engaging the Reader (10 minutes)</p> <ul style="list-style-type: none">• Ask students to take out their journals. Invite students to share information that has been added to the Meg Lowman KWL chart and one new vocabulary word in each glossary with a partner.• Tell students they will watch a short video about scientists in France tracking lizards and butterflies. The French scientists are conducting an experiment in the natural world. Explain that all scientists follow a typical process when conducting experiments. They will learn something about that process as they watch the video. After they watch the video, they will get to read about some experiments that Meg Lowman conducts as a part of her work.• Set a clear purpose before students watch the video:<ul style="list-style-type: none">* “Listen to how these scientists conducted experiments on lizards and butterflies.”• Play the video:<ul style="list-style-type: none">* “Climate Change Experiment Tracks Lizards and Butterflies” (1:49) www.youtube.com/watch?v=bgVG6wmFCEE&feature=relmfu• After viewing the video, ask students to Think-Pair-Share:<ul style="list-style-type: none">* “What did you see and hear about how these scientists conducted experiments on lizards and butterflies?”• Invite several students to share out ideas with the whole group.	<ul style="list-style-type: none">• When playing videos, use the English subtitles if available. Providing a visual can assist struggling learners in understanding the content of the video.



Reading Informational Text for Details:
Meg's Rainforest Experiment (Pages 17–20)

Work Time	Meeting Students' Needs
<p>A. Read-aloud and Taking Notes: Meg Lowman Experiments in the Rainforest (15 minutes)</p> <ul style="list-style-type: none"> • Ask students to join their groups (from Lessons 1–5). • Introduce the learning target: “I can explain Meg Lowman’s process for conducting experiments in the rainforest.” • Review key vocabulary: <ul style="list-style-type: none"> * Ask students to share their ideas about the meaning of the words <i>conducting</i> (to do something; perform) and <i>experiments</i> (tests; research). * Ask students to share what they remember about the word <i>process</i> (steps; method; procedure). • Display and distribute the Experiment Note-catcher. Say: “As I read aloud, follow along silently and pay attention to what the text tells us about Meg Lowman’s process for conducting experiments in the rainforest. I will stop after each chunk of text and let you fill in your Note-catcher.” • Review the Note-catcher. Explain that in the left column, they will list the process or “steps” Meg followed in just one or two words. Then in the right column, they will write a brief description of the purpose of each step: Why does Meg do this step? Answer any clarifying questions about the Note-catcher. • Note: Students will have the opportunity to reread a section of this text and refine their Note-catchers during Work Time B. So, it is fine at this point if students are not clear on the steps of the experiment process. • Invite students to open their copies of <i>The Most Beautiful Roof in the World</i> to page 17. Read aloud starting with the first sentence: “Meg has now crossed the creek,” and pause after reading the last sentence on page 17: “She now checks to see how much of each leaf has been eaten.” • Ask students: “What was the first step of Meg Lowman’s process?” Listen for: “snapshots.” Model writing the term snapshots in the first left-side box of the Note-catcher (and students can record on their own Note-catchers). • Then ask: “What was Meg Lowman’s purpose? Why did she follow this step?” Listen for students to respond: “to observe leaves; look at leaves to see how much has been eaten,” or similar ideas. Model writing the “purpose” for the step in the first right-side box of the Note-catcher (with students recording it in their own Note-catchers). • Continue reading aloud. Pause after reading the first two sentences on page 19: “Leaf number five . . .” through “... who writes the figures down in a notebook.” Ask students to record the next step of Meg Lowman’s process and the purpose for the step. 	<ul style="list-style-type: none"> • Students needing additional supports may benefit from a partially filled-in Note-catcher. • Provide ELLs bilingual word-for-word translation dictionaries or online translation sources such as Google Translate to assist with comprehension. ELLs should be familiar with how to use glossaries or dictionaries.



Reading Informational Text for Details:
Meg’s Rainforest Experiment (Pages 17–20)

Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none"> • Continue to read aloud and pause at the following points for students to record each step and its purpose: <ul style="list-style-type: none"> * Page 19—paragraph 1, sentences 3–5: “Mining occurs ...” through “... about the hatching periods of certain insect populations.” * Page 19—remainder of paragraph 1 and paragraph 2, sentences 1–3: “She has a hunch ...” through “... the often interrupt natural processes.” * Page 19—remainder of last paragraph, and all of page 20: “With the mesh bags ...” through “... stimulate the tree to produce more?” 	<ul style="list-style-type: none"> •
<p>B. Group Read: Rereading, Revising, and Sharing to Music (20 minutes)</p> <ul style="list-style-type: none"> • Tell students they will reread a portion of the text. Their purpose is still to focus on determining what Meg Lowman’s process is for conducting experiments in the rainforest. Then they will be able to discuss their thoughts and revise their Note-catchers with their group members after they read. • Give students 7 to 8 minutes to reread independently from the last paragraph on page 17 (“Meg begins taking ‘snapshots’ . . .”) through to the last full sentence on page 19 (“With the mesh bags Meg is going to begin an exclusion experiment”). • After students have finished reading, ask them to talk with their group members about the process/steps Meg Lowman uses to conduct her experiments. Prompt students to pay close attention to any information they listed initially in their Note-catchers that they now want to revise based on new understandings gained through rereading and peer discussions. • Give students several minutes to revise their Experiment Note-catchers. Circulate to support students as needed. • Use the Milling to Music strategy to allow students to share their Note-catchers with other students in the class. Students should share the steps they wrote, as well as any revisions they made and why. Start and stop the music at least twice to allow students the opportunity to talk with at least two other peers about their Note-catchers. 	<ul style="list-style-type: none"> • ELL language acquisition is facilitated by interacting with native speakers of English who provide models of language. • Consider writing and breaking down multistep directions into numbered elements. Students can return to these guidelines to make sure they are on track.



Reading Informational Text for Details:
Meg's Rainforest Experiment (Pages 17–20)

Work Time (continued)	Meeting Students' Needs
<p>C. Key Vocabulary to Deepen Understanding (10 minutes)</p> <ul style="list-style-type: none"> • Distribute the Quiz-Quiz-Trade strips and briefly remind students of the process for participation: <ul style="list-style-type: none"> * Each student finds a partner. * Partner A shows the side of the paper with the word on it. * Partner B says the definition or uses <i>context</i> clues to determine meaning. * Partner A then reads the definition aloud to confirm or correct the definition that Partner B gave. * Partners switch roles and repeat the steps above. * Partners then trade vocabulary slips and find a new partner. • Clarify any instructions and then distribute one vocabulary strip per student. • Begin Quiz-Quiz-Trade. Be sure all students meet with at least two partners. Circulate to listen in on students' definitions of vocabulary and use of context clues to help them define the word. Note which students may need more support/additional vocabulary strategies/practice in order to understand the text. • After approximately 5 minutes, ask students to return to their groups. Emphasize the following vocabulary (which may have been difficult to define from context and/or appear frequently in the text). Ask students to share the meaning of these words. Listen for responses such as: <ul style="list-style-type: none"> * <i>acquires</i>: gets; gains; obtains * <i>theory</i>: idea or belief about something based on knowledge; experience * <i>ongoing processes</i>: constant/unending experiments and/or steps in an experiment * <i>exclusion</i>: leave something out * <i>barrier</i>: obstacle that blocks access to something * <i>consume</i>: eat; chomp through * <i>stimulate</i>: increase; speed up • Ask students to add any new/unfamiliar words from this list to their Academic Words Glossary in their journals. 	<ul style="list-style-type: none"> • Provide anchor charts for vocabulary activities such as How to Play Quiz-Quiz-Trade. This would include question words with nonlinguistic representations (e.g., pair of people for <i>partner</i>, double-sided arrow for <i>switch</i>). • Consider narrowing the list of vocabulary words for students who struggle with language by providing only half of the Quiz-Quiz-Trade cards.



Reading Informational Text for Details:
Meg’s Rainforest Experiment (Pages 17–20)

Closing and Assessment	Meeting Students’ Needs
<p>A. Debrief and Review Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> • Pose the following question to students: “What have we learned about Meg Lowman as a scientist?” • Ask students to add to their Meg Lowman KWL chart and choose a few to share out ideas. • Review the learning targets, pausing after each to ask students to show a thumbs-up if they feel they mastered the target, a thumbs-sideways if they feel they haven’t completely mastered the target, or a thumbs-down to show they’re still working on it. 	<ul style="list-style-type: none"> • For students needing additional supports producing language, consider offering a sentence frame, sentence starter, or cloze sentence to provide the structure required.
Homework	Meeting Students’ Needs
<ul style="list-style-type: none"> • Reread pages 17–20 to someone (or yourself) at home. • Add to the Meg Lowman KWL chart in your journal. Be prepared to share with a partner tomorrow. • Choose three new academic and two new scientific words discussed today to add a definition, synonym, and/or picture for in your glossaries. Choose from this list: experiment, conducted, process; platform, balances, snapshots (17), minings, surface, acquires, notations, populations, synchronized, theory, mesh, ongoing processes, exclusion (19), variable, control, barrier, consume, stimulate (20). 	<ul style="list-style-type: none"> • Audio recordings of text can aid ELLs in comprehension. Students can pause and replay confusing portions while they follow along with the text. • For students who may have difficulty determining important words to add to their glossaries, consider prioritizing the following words for them: <i>experiment, conducted, process</i> (academic); <i>snapshots, barrier</i> (scientific).



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 6

Supporting Materials



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Experiment Note-catcher

Group Member Names:

Date:

PROCESS/STEP (Short phrases that name the step)	PURPOSE (Why does Meg do this step?)



Experiment Note-catcher
(Example, for Teacher Reference)

PROCESS/STEP (Short phrases that name the step)	PURPOSE (Why does Meg do this step?)
take a “snapshot”	observe/look at leaves to see how much has been eaten
record figures	keep track of how much/percentage of leaf that has been eaten; minings
compare figures	to compare the figures to what she already knows about the times that insects hatch
ask new questions	to learn more about insects/leaves; set up new experiments
begin new experiment	“Exclusion Experiment”—using mesh bags



Quiz-Quiz-Trade Vocabulary

surface	outside; face
acquires	gets; gains; obtains
notations	notes about ideas and important information
populations	inhabitants; groups of living things in an area
synchronized	made things work at the same time; coordinated
theory	idea or belief about something based on knowledge, experience
ongoing processes	constant/unending experiments and/or steps in an experiment
exclusion	something left out
variable	something that can change and/or be changed
control	a standard or unchanging part of an experiment that results are compared to
barrier	obstacle that blocks access to something
consume	eat; chomp through
stimulate	increase; speed up



Quiz-Quiz-Trade Vocabulary

surface	outside; face
acquires	gets; gains; obtains
notations	notes about ideas and important information
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exclusion	something left out
variable	something that can change and/or be changed
control	a standard or unchanging part of an experiment that results are compared to
barrier	obstacle that blocks access to something
consume	eat; chomp through
stimulate	increase; speed up



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 7

Mid-Unit Assessment: Text-Dependent Multiple-Choice and Short Answer Assessment



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Mid-Unit Assessment:
Text-Dependent Multiple-Choice and Short Answer Assessment

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can explain what a text says using quotes from the text. (RI.5.1)
- I can determine the main idea(s) of an informational text based on key details. (RI.5.2)
- I can summarize an informational text. (RI.5.2)
- I can determine the meaning of academic words or phrases in an informational text. (RI.5.4)
- I can determine the meaning of content words or phrases in an informational text. (RI.5.4)
- I can use context (e.g., cause/effect relationships and comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4)

Supporting Learning Targets

- I can determine the meaning of new words from context in *The Most Beautiful Roof in the World*.
- I can determine the main ideas of a selection of text from *The Most Beautiful Roof in the World*.
- I can justify my answers using quotes and evidence from the text.

Ongoing Assessment

- Mid-Unit 2 Assessment
- Tracking My Progress, Mid-Unit 2 recording form



Mid-Unit Assessment:
Text-Dependent Multiple-Choice and Short Answer Assessment

Agenda	Teaching Notes
<p>1. Opening</p> <p>A. Reviewing Homework and Engaging the Reader (10 minutes)</p> <p>2. Work Time</p> <p>A. Mid-Unit Assessment: Text-Dependent Short-Answer Quiz (30 minutes)</p> <p>B. Learning Target Reflection (10 minutes)</p> <p>3. Closing and Assessment</p> <p>A. Debrief (10 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none">• Use the 2-Point Rubric: Writing from Sources/Short Response (see Supporting Materials) to score students responses on their assessments.



Mid-Unit Assessment:
Text-Dependent Multiple-Choice and Short Answer Assessment

Lesson Vocabulary	Materials
<p>determine, context, gist, selection, justify, quotes, evidence</p>	<ul style="list-style-type: none"> • Meg Lowman, Rainforest Scientist KWL anchor chart (from Lesson 1) • <i>The Most Beautiful Roof in the World</i> (book; one per student) • Mid-Unit 2 Assessment: <i>The Most Beautiful Roof in the World</i> Quiz (one per student) • Tracking My Progress, Mid-Unit 2 recording form (one per student) • AQUA Biodiversity anchor chart (from Lesson 4) • Mid-Unit 2 Assessment: <i>The Most Beautiful Roof in the World</i> Quiz (Answers, for Teacher Reference) • 2-Point Rubric: Writing from Sources/Short Response (for teacher reference)

Opening	Meeting Students' Needs
<p>A. Reviewing Homework and Engaging the Reader (10 minutes)</p> <ul style="list-style-type: none"> • Ask students to take out their journals. • Direct students to first look at the Meg Lowman, Rainforest Scientist KWL anchor chart. Ask students to Pair-Share: one new thing they learned about Meg Lowman and one new vocabulary word that is related to what they learned from their homework. • Invite a few students to share out whole group. 	<ul style="list-style-type: none"> • For students needing additional support producing language, consider offering a sentence frame, sentence starter, or cloze sentence to provide the structure required.



Mid-Unit Assessment:
Text-Dependent Multiple-Choice and Short Answer Assessment

Work Time	Meeting Students' Needs
<p>A. Mid-Unit Assessment: Text-Dependent Short-Answer Quiz (30 minutes)</p> <ul style="list-style-type: none"> Review the learning targets: “I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>,” “I can determine the main ideas of a selection of text from <i>The Most Beautiful Roof in the World</i>,” and “I can justify my answers using quotes and evidence from the text.” Remind students they have been working on all of these targets throughout this unit. Ask several students to restate each target in their own words. Ask students to take out <i>The Most Beautiful Roof in the World</i>. Distribute the Mid-Unit 2 Assessment: <i>The Most Beautiful Roof in the World</i> Quiz. Invite students to quickly scan the assessment. Address any clarifying questions. Tell students they will have 30 minutes to read pages 22–23 and complete the questions on the mid-unit assessment. Prompt students to open their books to page 22. (“Meg climbs higher into the canopy.”) Clarify any instructions as necessary. Give students 30 minutes to work independently. Circulate to supervise; since this is a formal on-demand assessment, do not provide support other than formally approved accommodations. If students finish the assessment early, ask them to add to the U column of their AQUA anchor charts, with new information they learned from pages 22–23 of <i>The Most Beautiful Roof in the World</i>. And/or invite students to work on the glossaries in their journals adding any new words they believe are important that they may not have had a chance to add yet. Remind students to add synonyms, phrases, and/or pictures to any words they have not had time to complete. 	<ul style="list-style-type: none"> Consider providing extra time for tasks and answering questions in class discussions. Some students need more time to process and translate information. ELLs receive extended time as an accommodation on New York State assessments. Consider providing smaller chunks of text (sometimes just a few sentences) and a modified assessment with fewer questions for struggling students.



Mid-Unit Assessment:
Text-Dependent Multiple-Choice and Short Answer Assessment

Work Time (continued)	Meeting Students' Needs
<p>B. Learning Target Reflection (10 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can reflect on my learning.” Remind students of the reflection they did during the last unit on their learning targets. Ask a few students to remind the class of that process. • Focus on the word <i>reflect</i>, and ask students for suggestions about what this means. Listen for students to share ideas like: “look back at my work to think about what I did; how I did; what I am having trouble with; what I am doing well,” etc. • Distribute the Tracking My Progress, Mid-Unit 2 recording form to students. Explain that this is a self-assessment, exactly like the progress trackers they completed at the end of the Unit 1 mid-unit and end of unit assessments. They will reflect on their progress toward the learning targets. Read through the tracker and provide clarification as necessary for students. • Ask students to independently complete their recording form. Ask them to hold on to this sheet to refer to during the lesson debrief. 	<ul style="list-style-type: none"> • Consider allowing students who struggle with written language to dictate their reflections to a partner or teacher.
Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (10 minutes)</p> <ul style="list-style-type: none"> • Pair students up. Ask them to share the reflections on their Mid-Unit Tracking My Progress. • Invite several students to share out with the whole group. • Collect students' forms to review. • As time allows, invite students to share out any new “learning” from the reading today they want to add to the L column of the Meg Lowman, Rainforest Scientist KWL anchor chart or the U column of the AQUA Biodiversity anchor chart. Record students' ideas. Remind students to add to the KWL in their journals. 	<ul style="list-style-type: none"> • Consider partnering an ELL with a student who speaks the same L1 when discussion of complex content is required. This can let students have more meaningful discussions and clarify points in their L1.
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> •



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 7

Supporting Materials



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Mid-Unit 2 Assessment: *The Most Beautiful Roof in the World Quiz*

Name:

Date:

Instructions:

Read pages 22–23 of *The Most Beautiful Roof in the World*.

Consider the gist of these pages—what they are mostly about.

Skim the assessment questions below.

Reread the pages, thinking about the assessment questions.

Answer the questions in complete sentences.

Be sure to cite evidence from the text to support your answers.

1. Circle the letter next to the name of the tree or plant that is not found in the area Meg Lowman is studying.

- A. lianas
- B. Nargusta tree
- C. Christmas cactus
- D. bromeliads
- E. Kapok tree

2. In the sentence, “From this platform she has a good view of four ant gardens she is *monitoring*,” what does the word *monitoring* mean? Support your answer with evidence from the text.

3. Fill in the blank: Epiphytes are _____ vines and lianas because they usually start growing from the canopy down.



Mid-Unit 2 Assessment: *The Most Beautiful Roof in the World Quiz*

4. The text tells us that *epiphytes* root on the bark or soil found on a tree. Number each step (1–6) to show the order of epiphyte growth.

____ Seeds sprout

____ Plants deposit sugars.

____ The plant takes root.

____ A bird excretes a seed from overhead, or ants drag in bits of plant material.

____ Ants feed off the glucose proteins of the plants' succaries.

____ Ant farmers tend the sprouts.

5. The author states: "Scientists think that the ant gardens themselves may be of *benefit* to more than just the ants." What does the word *benefit* mean in this sentence? In what way(s) do the ant gardens *benefit* more than just the ants? Quote the text in your answer.



Mid-Unit 2 Assessment: *The Most Beautiful Roof in the World Quiz*
(Answers, for Teacher Reference)

1. Circle the letter next to the name of the tree or plant that is not found in the area Meg Lowman is studying. (RI.5.2)

- A. lianas
- B. Nargusta tree
- C. **Christmas cactus**
- D. bromeliads
- E. Kapok tree

2. In the sentence, “From this platform she has a good view of four ant gardens she is *monitoring*,” what does the word *monitoring* mean? Support your answer with evidence from the text. (RI.5.1, RI.5.4, and L.5.4)

Monitoring means keeping a watch over/looking/observing; because it says “she has a good view of the four ant gardens she is monitoring, as well as two very special bromeliads” and ‘view’ means to see/it describes two things she sees.

3. Fill in the blank: Epiphytes are _____ **unlike** vines and lianas because they usually start growing from the canopy down. (RI.5.4 and L.5.4)



Mid-Unit 2 Assessment: *The Most Beautiful Roof in the World Quiz*
(Answers, for Teacher Reference)

4. The text tells us that *epiphytes* root on the bark or soil found on a tree. Number each step (1–6) to show the order of epiphyte growth. (RI.5.2)

3 _____ Seeds sprout

5 _____ Plants deposit sugars.

2 _____ The plant takes root.

1 _____ A bird excretes a seed from overhead, or ants drag in bits of plant material.

6 _____ Ants feed off the glucose proteins of the plants' succaries.

4 _____ Ant farmers tend the sprouts.

5. The author states: "Scientists think that the ant gardens themselves may be of *benefit* to more than just the ants." What does the word *benefit* mean in this sentence? In what way(s) do the ant gardens *benefit* more than just the ants? Quote the text in your answer. (RI.5.1, L.5.4)

Benefit means help. It says the "gardens help the tree capture more solar energy," and "trap the atmospheric nutrients that might slip off a bare trunk."

Tracking My Progress, Mid-Unit 2

Name:

Date:

Learning Target: I can determine the meaning of new words from context in
The Most Beautiful Roof in the World.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:

Tracking My Progress, Mid-Unit 2

Name: _____

Date: _____

Learning Target: I can determine the main ideas of a selection of text from
The Most Beautiful Roof in the World.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:

Tracking My Progress, Mid-Unit 2

Name: _____

Date: _____

Learning Target: I can justify my answers using quotes and evidence from the text.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:

2-Point Rubric: Writing from Sources/Short Response¹
(for Teacher Reference)

Use the below rubric for determining scores on short answers in this assessment.

<p>2-point Response</p>	<p>The features of a 2-point response are:</p> <ul style="list-style-type: none"> • Valid inferences and/or claims from the text where required by the prompt • Evidence of analysis of the text where required by the prompt • Relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt • Sufficient number of facts, definitions, concrete details, and/or other information from the text as required by the prompt • Complete sentences where errors do not impact readability
<p>1-point Response</p>	<p>The features of a 1-point response are:</p> <ul style="list-style-type: none"> • A mostly literal recounting of events or details from the text as required by the prompt • Some relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt • Incomplete sentences or bullets
<p>0-point Response</p>	<p>The features of a 0-point response are:</p> <ul style="list-style-type: none"> • A response that does not address any of the requirements of the prompt or is totally inaccurate • No response (blank answer) • A response that is not written in English • A response that is unintelligible or indecipherable

¹From New York State Department of Education, October 6, 2012.



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 8

Close Read: Epiphytes of the Rainforest and the
Creatures That Call Them Home (Pages 24–26)



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Close Read:

Epiphytes of the Rainforest and the Creatures That Call Them Home (Pages 24–26)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can explain what a text says using quotes from the text. (RI.5.1)
- I can determine the main idea(s) of an informational text based on key details. (RI.5.2)
- I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3)
- I can use context (e.g., cause/effect relationships and comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4)

Supporting Learning Targets

- I can determine the meaning of new words from context in *The Most Beautiful Roof in the World*.
- I can explain the relationship between animals and plants in the rainforest using evidence from the text.
- I can synthesize what I read in *The Most Beautiful Roof in the World*.

Ongoing Assessment

- Journal (Close Read Note-catcher, AQUA Biodiversity chart, synthesis statement)



Close Read:

Epiphytes of the Rainforest and the Creatures That Call Them Home (Pages 24–26)

Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Reviewing Homework and Engaging the Reader (8 minutes) 2. Work Time <ol style="list-style-type: none"> A. Read-aloud: Relationships between Plants and Animals of the Rainforest (12 minutes) B. Group Read and Discussion: Plant and Animal Interdependence (15 minutes) C. Key Vocabulary to Deepen Understanding (10 minutes) D. Synthesis Writing (10 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Debrief and Review of Learning Targets (5 minutes) 4. Homework 	<ul style="list-style-type: none"> • In advance: Become familiar with pages 24–26 of <i>The Most Beautiful Roof in the World</i>. • The Opening of this lesson involves a review activity called Hot Seat. If you review Questioning Strategies to Engage All Learners (Appendix 1), you’ll see that Hot Seat is one of many strategies listed. In Hot Seat, students find a question or card underneath or on their seats. They then respond to a question or define a vocabulary word by either sketching it or acting it out. • Review Fist to Five protocol (Appendix 1). • Prepare the Hot Seat questions (cut apart, one question per square) and place squares facedown on students’ seats. • Some Hot Seat questions ask students to draw or act out their answers. Provide white boards or blank paper for drawing. • Answers to Hot Seat questions are provided for Teacher Reference (see supporting materials). • The vocabulary section of this lesson is intentionally only 10 minutes. The focus is more on using context clues and word roots than on defining every single word. Be sure students understand this intent; otherwise, they may feel quite anxious about this long list of words. • In advance: Write the vocabulary words on a large piece of chart paper to save time during the lesson.



Close Read:

Epiphytes of the Rainforest and the Creatures That Call Them Home (Pages 24–26)

Lesson Vocabulary	Materials
<p>relationship, synthesize; disturbed, fungus, trudging, hoist, fraction, discarded (24), bromeliad, hovering, larvae, lurk, overlapping, venomous, disturbance (25), rare, lungless, inaccessibility, inhabitants (26)</p>	<ul style="list-style-type: none"> • Hot Seat questions (cut apart into squares) • White boards and markers or blank paper • AQUA Biodiversity anchor chart (from Lesson 4) • <i>The Most Beautiful Roof in the World</i> (book; one per student) • Bromeliads and Rainforest Creatures Note-catcher (one per student)

Opening	Meeting Students' Needs
<p>A. Reviewing Homework and Engaging the Reader (8 minutes) <i>Note: Be sure that the Hot Seat questions are already placed under or on student seats (see Teaching Note).</i></p> <ul style="list-style-type: none"> • Have students join their groups (from previous lessons). • Tell students they are going to review their understandings about biodiversity by playing Hot Seat. Explain to the class that in Hot Seat, some students (about half of the class) will be asked to answer a question or define a vocabulary word by either sketching it using the white boards and markers or blank paper provided, or by acting it out. Remind students of work they did in Module 1 acting out and sketching the articles of the UDHR. Tell them that they may refer to the AQUA Biodiversity anchor chart, their copies of <i>The Most Beautiful Roof in the World</i>, and their journals during this activity. Say: “Take the paper out from under your seats and answer the questions or define the vocabulary word aloud one at a time with your group members. Students in your group who do not have a Hot Seat question must say if they agree or disagree with a response and explain their thinking.” • Circulate to support as needed. • After groups finish answering the Hot Seat questions, invite several students to define or give examples of rainforest biodiversity. 	<ul style="list-style-type: none"> • ELL language acquisition is facilitated by interacting with native speakers of English who provide models of language.



Close Read:

Epiphytes of the Rainforest and the Creatures That Call Them Home (Pages 24–26)

Work Time	Meeting Students' Needs
<p>A. Read-aloud: Relationships between Plants and Animals of the Rainforest (12 minutes)</p> <ul style="list-style-type: none"> • Ask students to remain in their groups. • Introduce the learning target: “I can explain the relationship between animals and plants in the rainforest using evidence from the text.” Ask students to define <i>relationship</i>. Listen for responses such as: “connection; link; similarity between two or more things,” etc. Briefly point out the word root <i>relation</i>, which means “connection.” • Ask students to open their books to page 24 and locate the sentence that begins: “There are many such interlocking relationships.” Read aloud pages 24–26 as students read along silently. Stop at the sentence on page 26: “This is the surprise she has been looking for to show her boys.” • Invite several students to share out the gist of pages 24–26. Listen for: “how creatures of the rainforest and plants/trees depend on each other; there are many types of living things in/on plants and trees of the rainforest; the relationship between plants and animals in the rainforest,” or similar ideas. Ask: <ul style="list-style-type: none"> * “What is the relationship between the animals and the plants of the rainforest?” • Give students 5–7 minutes to reread page 24 independently with this question in mind. Have them read from “There are many such interlocking relationships ...” through “... the right kind of leaf.” • Invite group members to take 3 minutes to discuss the question. Circulate to listen in on students’ conversations for details such as: “Ants protect the tree; the tree provides sugar/fungus for the ants,” etc. • Ask several students to share out whole group. 	<ul style="list-style-type: none"> • Provide nonlinguistic symbols (e.g., a rainforest animal for animal, a rainforest plant for <i>plant</i>, a book for <i>text</i>, etc.) to assist ELLs and other struggling readers in making connections with vocabulary. These symbols can be used throughout the year. Specifically, they can be used in directions and learning targets. • When possible, provide text or materials in students’ L1. This can help students understand materials presented in English.



Close Read:

Epiphytes of the Rainforest and the Creatures That Call Them Home (Pages 24–26)

Work Time (continued)	Meeting Students' Needs
<p>B. Group Read and Discussion: Plant and Animal Interdependence (15 minutes)</p> <ul style="list-style-type: none">• Remind students they are still working on the first learning target.• Distribute the Bromeliads and Rainforest Creatures Note-catcher, one per student.• Say: “Now you will reread pages 25 and 26 independently to think more about how animals and plants depend on each other in the rainforest. You will use your Note-catcher to record your thinking. Make sure to use evidence from the text that shows how these creatures depend on bromeliads.” Clarify any instructions as necessary.• Orient students to page 25, starting with “Meg carefully edges her way toward a bromeliad ...” through page 26: “This is the surprise she has been looking for to show her boys.”• Give students 8 to 10 minutes to read and complete their Note-catchers. Circulate to support as needed.• Then ask students to discuss the information they found and recorded with their group members.• Offer students a moment to revise their Note-catchers, based on new evidence or understandings from their group conversations.• As time allows, invite several students to share out what they learned about how creatures of the rainforest depend on bromeliads. Remind students that studying the interdependence of animals and plants in areas that have a lot of biodiversity is what Meg Lowman does because it is important to know how everything works together.	<ul style="list-style-type: none">• Consider providing smaller chunks of text (sometimes just a few sentences) for students who struggle with language. Teachers can check in on students' thinking as they write or speak about their text.• Students needing additional supports may benefit from a partially filled-in Note-catcher.



Close Read:

Epiphytes of the Rainforest and the Creatures That Call Them Home (Pages 24–26)

Work Time (continued)	Meeting Students' Needs
<p>C. Key Vocabulary to Deepen Understanding (10 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>.” Remind students that they have been working on this target a lot, particularly since this scientific text has so many challenging words, and they should continue to think about what they already know, look at the parts of words, or read on to help them determine the meaning of new words. • List the following vocabulary on the board: <ul style="list-style-type: none"> * <i>disturbed</i>, fungus, trudging, hoist, fraction, discarded (24), bromeliad, hovering, larvae, lurk, overlapping, venomous, disturbance (25), rare, lungless, inaccessibility, inhabitants (26) • Ask students to take 5 minutes on their own or with a partner to look back at pages 24–26 and try to determine the meaning of some of these words from context. Remind them that it is not as important that they understand every single word as it is that they are learning how to figure out words in context or using word roots (which they focused on in Module 1). Tell students that they do not need to write down every word on this list. • As time permits, ask students to share definitions and, more importantly, how they figured out the words. It is fine if you do not make it through the entire list. As students share out, listen for: <ul style="list-style-type: none"> * <i>disturbed</i>: bothered; annoyed (academic) * <i>fungus</i>: mold; mildew * <i>trudging</i>: marching; hiking; moving slowly (academic) * <i>hoist</i>: lift; raise; pull (academic) * <i>fraction</i>: very small part/portion/piece (academic) * <i>discarded</i>: threw away; tossed out (academic) * <i>bromeliad</i>: a plant found in the rainforest; an epiphytic plant * <i>hovering</i>: floating in air; balancing; perching (academic) * <i>larvae</i>: immature insects; insects in an early stage of their lives * <i>lurk</i>: lie in wait (academic) 	<ul style="list-style-type: none"> • All students developing academic language will benefit from direct instruction of academic vocabulary. • Consider providing fewer vocabulary words (sometimes just 4 or 5) for students who struggle with language. Teachers can check in on students’ thinking as they write or speak about their text.



Close Read:

Epiphytes of the Rainforest and the Creatures That Call Them Home (Pages 24–26)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> * <i>overlapping</i>: partly covering; lying on top of (academic) * <i>venomous</i>: poisonous; toxic * <i>disturbance</i>: trouble; commotion; annoyance (academic) * <i>rare</i>: unusual; uncommon (academic) * <i>lungless</i>: without lungs * <i>inaccessibility</i>: the state of not being easy to get to; the condition of being hard to reach (academic) * <i>inhabitants</i>: the creatures that live in a place; occupants <ul style="list-style-type: none"> • After sharing out, allow students a few minutes to revise the evidence on their Bromeliads and Rainforest Creatures Note-catchers based on new understandings of vocabulary. Remind students that they are continuing to work on key vocabulary to help them learn more as readers about the rainforest. <p>Ask groups to pair up and share what they learned about the relationship between bromeliads and creatures of the rainforest.</p>	<ul style="list-style-type: none"> •



Close Read:

Epiphytes of the Rainforest and the Creatures That Call Them Home (Pages 24–26)

Work Time (continued)	Meeting Students' Needs
<p>D. Synthesis Writing (10 minutes)</p> <ul style="list-style-type: none">• Ask students to return to their seats for independent writing.• Introduce the learning target: “I can synthesize what I read in <i>The Most Beautiful Roof in the World</i>.” Ask several students to share the meaning of the word <i>synthesize</i>. (Responses might include: “combine ideas,” or “summarize using details.”)• Ask students to turn to a new page in their journals and write a synthesis statement in response to the following prompt: “Describe the relationship between the animals and the plants of the rainforest and why that relationship is important.” Remind students that they wrote a synthesis statement about biodiversity for the End of Unit 1 Assessment. Say to students: “Remember to think about all of the things you have read and learned about plants and animals of the rainforest and how they interact with each other. A strong synthesis statement will combine all of those ideas in a brief summary with details.”• Give students 5 to 7 minutes to write their synthesis statements.• Ask students to Pair-Share their synthesis statements. Invite several students to share out whole group.• <p><i>Note: Do not collect students' synthesis statements; they need them for their homework.</i></p>	<ul style="list-style-type: none">• Consider allowing students who struggle with written language to dictate their synthesis statement to a partner or teacher.



Close Read:

Epiphytes of the Rainforest and the Creatures That Call Them Home (Pages 24–26)

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief and Review of Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> • Focus students' attention back on the AQUA Biodiversity anchor chart. Use a Go-Around for students to share new understandings about biodiversity in the rainforests. Record responses in the U column of the chart. • Read through the learning targets, pausing after each to ask students to use the Fist to Five protocol to show their level of mastery toward the target (fist for 0 or no mastery; 1 to 5 fingers for higher levels of confidence or agreement). <p><i>Note students who show a fist, or only 1 to 2 fingers, as they may need additional support.</i></p>	<ul style="list-style-type: none"> • For students needing additional supports producing language, consider offering a sentence frame, sentence starter, or cloze sentence to provide the structure required.
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> • Read your synthesis statement to someone (or yourself) at home. • Choose three new academic and two new scientific vocabulary words from pages 24 to 26 to add to the glossaries in your journal. Choose from this list: relationship, synthesize; disturbed, fungus, trudging, hoist, fraction, discarded (24), bromeliad, hovering, larvae, lurk, overlapping, venomous, disturbance (25), rare, lungless, inaccessibility, inhabitants (26). <p><i>Note: Locate and read the short story "The Wings of the Butterfly" on the NovelNY site: http://search.ebscohost.com.dmvgateway.nysed.gov/login.aspx?direct=true&db=prh&AN=58511294&site=ehost-live. This is used in Lesson 9.</i></p>	<ul style="list-style-type: none"> • Audio recordings of text can aid students in comprehension. Students can pause and replay confusing portions while they follow along with the text. • For students who struggle with determining the importance of vocabulary words, consider prioritizing for them the following words: <i>relationship, synthesize, rare</i> (academic), <i>larvae</i> (scientific)



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 8

Supporting Materials



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Hot Seat Questions

<p>1 What is biodiversity?</p>	<p>2 Give an example of biodiversity.</p>	<p>3 What is the highest level of growth in the rainforest called?</p>
<p>4 What are bromeliads?</p>	<p>5 What layer of growth is just above the canopy?</p>	<p>6 ACT IT OUT! ascend</p>
<p>7 ACT IT OUT! descend</p>	<p>8 What is a conservationist?</p>	<p>9 What country is the Blue Creek rainforest in?</p>



Hot Seat Questions

<p>10 Give an example of biodiversity.</p>	<p>11 DRAW IT! epiphyte</p>	<p>12 DRAW IT! walkway</p>
<p>13 DRAW IT! bromeliad</p>	<p>14 DRAW IT! diverge</p>	<p>15 DRAW IT! observation platform</p>
<p>16 ACT IT OUT! synchronized</p>	<p>17 ACT IT OUT! Macaws “foraging for food to bring to their young.”</p>	<p>18 Give an example of biodiversity.</p>



Teacher Resource: Answers to Hot Seat Questions

1. The number of living things in an area; all living things
2. Answers vary (plants and animals found in the rainforest)
3. Pavilion (the crowns of emergent growth)
4. A type of epiphytic plant; a plant in the rainforest
5. Emergent growth
6. Move upward; imitate climbing
7. Move downward
8. Someone who works to preserve/save/study the rainforests/nature.
9. Belize
10. Answers vary (plants and animals found in the rainforest)
11. Drawing should have leaves/vines growing from canopy down (p. 23 picture)
12. Drawing should look similar to a bridge (pictures throughout p. 18 on)
13. Drawing should include some type of flowering and leaves
14. Drawing should show a pathway/line splitting
15. Drawing should show a stage/stand in a fixed position (in canopy/trees)
16. Two or more students should move in the same way at the same time
17. Move about pretending to pick up things (seeds)
18. Answers vary (plants and animals found in the rainforest)



Bromeliads and Rainforest Creatures Note-catcher

	Rainforest Creature What lives in this part of the bromeliad?	Creature Relationship to Bromeliad How does the creature depend on the bromeliad?
<i>Inner levels</i> of bromeliads		
<i>Overlapping</i> leaves of bromeliads		



Bromeliads and Rainforest Creatures Note-catcher
(Answers for Teacher Reference)

	Rainforest Creature What lives in this part of the bromeliad?	Creature Relationship to Bromeliad How does the creature depend on the bromeliad?
<i>Inner levels</i> of bromeliads	Larvae of mosquitoes Frog tadpoles	Both use the inner ponds of the bromeliad as a nursery.
<i>Overlapping</i> leaves of bromeliads	Venomous snakes Tarantula (Rare lungless) tree salamander	Snakes find food (tadpoles and frogs) on bromeliads. Tarantulas and tree salamanders live in the leaves of the bromeliad (home/shelter).



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 9

A Rainforest Folktale: Determining the Message of “The Wings of the Butterfly,” a Tukuna People Tale



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A Rainforest Folktale:

Determining the Message of “The Wings of the Butterfly,” a Tukuna People Tale

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can summarize text that is read aloud to me. (SL.5.2)
- I can determine a theme based on details in a literary text. (RL.5.2)
- I can summarize a literary text. (RL.5.2)
- I can determine the meaning of literal and figurative language (metaphors and similes) in text. (RL.5.4)
- I can describe how a narrator’s point of view influences the description of events. (RL.5.6)

Supporting Learning Targets

- I can summarize “The Wings of the Butterfly.”
- I can explain the message of “The Wings of the Butterfly.”
- I can determine the meaning of new words in “The Wings of the Butterfly.”
- I can compare and contrast examples of biodiversity from a story to what we have learned from informational text.

Ongoing Assessment

- Journal (AQUA Biodiversity chart, glossaries)
- Double-Bubble map



A Rainforest Folktale:

Determining the Message of “The Wings of the Butterfly,” a Tukuna People Tale

Agenda	Teaching Notes
<p>1. Opening</p> <p>A. Reviewing Homework and Engaging the Reader (15 minutes)</p> <p>2. Work Time</p> <p>A. Read-aloud: What Is the Message of “The Wings of the Butterfly”? (15 minutes)</p> <p>B. Key Vocabulary to Deepen Understanding (10 minutes)</p> <p>C. Taking Notes: Comparing Biodiversity in “The Wings of the Butterfly” and <i>The Most Beautiful Roof in the World</i> (15 minutes)</p> <p>3. Closing and Assessment</p> <p>A. Debrief and Review of Learning Targets (5 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none"> • In advance: Read the folktale “The Wings of the Butterfly: A Tale of the Amazon Rainforest” (see supporting materials). • The folktale is read aloud in order for students to enjoy the flow of the story. This lesson purposefully does not involve an in-depth analysis of the folktale, given that the overall focus of the unit is much more on informational text. • Prepare 2 copies of the Tea Party protocol cards (cut into strips); prepare an extra strip if you have an odd number of students and have to give out 3 of the same strip. • Review: Tea Party protocol and Thumb-o-Meter checking for understanding strategy (see Appendix 1). • Prepare Tea Party protocol cards (in supporting materials). • The vocabulary in Part B of Work Time comes from the quotes and phrases on students’ Tea Party protocol cards. Encourage students to refer back to these cards for context clues to determine word meanings. Again, remember that the goal is not for students to learn or memorize all these terms; rather, it is to heighten their awareness of academic vocabulary and give them an opportunity to practice strategies to help them build their vocabulary over time.



A Rainforest Folktale:

Determining the Message of “The Wings of the Butterfly,” a Tukuna People Tale

Lesson Vocabulary	Materials
summarize, message, compare, contrast, literature; fierce, indignantly, conceited, sorrowfully, uninvited, wonder, behave, understand, within	<ul style="list-style-type: none">• Tea Party protocol cards (one per student, with at least two students each receiving the same card)• “The Wings of the Butterfly: A Tale of the Amazon Rainforest” (one per student)• Double Bubble map (one per student and one for display)• AQUA Biodiversity anchor chart (from Lesson 4)



A Rainforest Folktale:

Determining the Message of “The Wings of the Butterfly,” a Tukuna People Tale

Opening	Meeting Students’ Needs
<p>A. Reviewing Homework and Engaging the Reader (15 minutes)</p> <ul style="list-style-type: none"> • Ask students to take out their journals. Have students share with a partner their synthesis statement and two of the words they added to their glossaries for homework. • Say: “We have been learning a lot about the importance of biodiversity through informational texts. Today we will read a short story about the Tukuna people from the Amazon rainforest called ‘The Wings of the Butterfly,’ to help us think about what we can learn about biodiversity from literature as well.” • Ask students to share with a partner the meaning of the word <i>message</i>, as in the “message of a story” (moral; main idea; point). • Tell students they will now participate in a Tea Party protocol. Explain that each student will receive a card with a quote or phrase from the story “The Wings of the Butterfly.” • Distribute the Tea Party protocol cards. (Make sure at least two students each receive the same card.) • Give directions: <ul style="list-style-type: none"> * On your own, read the quote or phrase on your card. * Then make a prediction about what the <i>message</i> of the story might be. * Write your prediction on the back of your card. • Give students 3 to 4 minutes to read their cards and write predictions. • Next students mingle around the room, reading to one another and discussing predictions. Direct students to first find the individual who has the same quote or phrase, and compare and contrast predictions. Then meet with at least one other peer who has a different quote or phrase. (2 to 3 minutes) • Ask students to return to their groups and discuss what they predict the <i>message</i> of “The Wings of the Butterfly” will be. • Ask several students to share out their predictions. • Ask students to hold on to their Tea Party protocol cards for use in Part A of Work Time. 	<ul style="list-style-type: none"> • Consider writing and breaking down multistep directions for the Tea party protocol into numbered elements. Students can return to these guidelines to make sure they are on track. • Consider reading aloud the text on the Tea Party protocol cards to students who struggle to allow them to fully participate in the protocol. • ELL language acquisition is facilitated by interacting with native speakers of English who provide models of language.



A Rainforest Folktale:

Determining the Message of “The Wings of the Butterfly,” a Tukuna People Tale

Work Time	Meeting Students’ Needs
<p>A. Read-aloud: What Is the Message of “The Wings of the Butterfly”? (15 minutes)</p> <ul style="list-style-type: none"> • Ask students to sit with their groups. • Introduce the learning targets: “I can summarize the story of “The Wings of the Butterfly”” and “I can explain the message of “The Wings of the Butterfly.”” • Ask students what it means to <i>summarize</i>. Listen for definitions such as: “state the main points; review what the story is mainly about,” and similar ideas. • Explain to students that as they listen to “The Wings of the Butterfly” read aloud, they should think about: <ul style="list-style-type: none"> * “What is this story mostly about?” (summary) * “What is the author’s message?” • Distribute students’ texts “The Wings of the Butterfly: A Tale of the Amazon Rainforest”. Ask students to follow along silently as the story is read aloud. Read the entire story aloud, beginning with “On the banks of the Amazon River . . .” and reading until the end. • Allow students to briefly discuss: <ul style="list-style-type: none"> * “What is this story mostly about?” (summarize). • Then ask students to consider: <ul style="list-style-type: none"> * “What is the author’s message? What message is the author trying to convey about biodiversity?” • As students discuss the message of the story, listen for comments such as: “People haven’t respected animals in the rainforest; the animals in the rainforest are angry about how people have treated them/their land; people and animals need to respect one another/work together,” or similar ideas. • Cold call several students to share out whole group. • Invite students to reread the quote or phrase on their Tea Party protocol card and then to review the prediction each wrote on the back of her or his card. Ask: <ul style="list-style-type: none"> * “How was your prediction about the <i>message</i> of this story accurate or inaccurate?” • As students discuss in groups, circulate to support as needed. 	<ul style="list-style-type: none"> • When possible, provide text or materials in students’ L1. This can help students understand materials presented in English. • Visuals can help ELLs and other students comprehend questions and discussions. Chart main points in answers and post all questions asked to students.



A Rainforest Folktale:

Determining the Message of “The Wings of the Butterfly,” a Tukuna People Tale

Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none"> • Cold call several students to share out. 	<ul style="list-style-type: none"> •
<p>B. Key Vocabulary to Deepen Understanding (10 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can determine the meaning of new words in “The Wings of the Butterfly.” • Point out to students that the more they understand key vocabulary about a topic, the better they are able to understand the topic in general. • Remind students that they have been practicing how to figure out words from context, or based on word roots. Remind students it is less important that they memorize every word than it is that they are learning how to figure out new words in the context of what they read. Ask students to discuss with their groups possible definitions or synonyms for the following key words from the story (also located on their Tea Party protocol cards): <ul style="list-style-type: none"> * <i>fierce</i>: violent; furious; vicious * <i>indignantly</i>: angrily; furiously * <i>conceited</i>: self-important; proud; arrogant; vain * <i>sorrowfully</i>: sadly, unhappily * <i>maloca</i>: a big pavilion-house where a family lives * <i>uninvited</i>: not welcome; not wanted * <i>wonder</i>: be in awe; marvel * <i>behave</i>: act; perform * <i>understand</i>: know; comprehend; be aware of * <i>within</i>: a part of; inside mind/body • Briefly discuss some of these words as a whole group. • Then ask students to consider the following questions: <ul style="list-style-type: none"> * “What words in the story helped you better determine the message of the story?” * “How did those words help you determine the message of the story?” 	<ul style="list-style-type: none"> • All students developing academic language will benefit from direct instruction of academic vocabulary..



A Rainforest Folktale:

Determining the Message of “The Wings of the Butterfly,” a Tukuna People Tale

Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none"> • Invite several students to share out their answer. 	<ul style="list-style-type: none"> •
<p>C. Taking Notes: Comparing Biodiversity in “The Wings of a Butterfly” and <i>The Most Beautiful Roof in the World</i> (15 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can compare and contrast examples of biodiversity from the story and what we have learned from informational text.” • Ask a few students to share out the meaning of the words <i>compare</i> (identify similarities) and <i>contrast</i> (identify differences). • Say: “In this unit, we have been closely reading the informational text <i>The Most Beautiful Roof in the World</i>. Now we have also read a short story called “The Wings of the Butterfly.” • Remind the class that even though short stories are fiction, they can still teach readers a lot about real-life places, events, and things. Ask students to take 5 minutes in their groups to look back through “The Wings of the Butterfly.” Ask them to locate examples of biodiversity (plants and animals) mentioned in the story. Students should circle the words or phrases they find. • Gather the attention of the entire class. Display the Double Bubble map and distribute one per student. Explain that a Double Bubble map is similar to a Venn diagram. It is used to compare and contrast two things. • Say: “The Double Bubble map is another way, besides a Venn diagram, to organize your thinking about how things are similar and different. You will use the Double Bubble map today to help you focus on identifying a specific number of similarities and differences between the examples of biodiversity mentioned in the story versus what you have learned about biodiversity from informational texts.” • Draw students’ attention to the AQUA Biodiversity anchor chart (from Lesson 4). Tell students that they will use the Double Bubble map to compare and contrast examples of biodiversity listed on the AQUA chart to the examples of biodiversity they identified in the story “The Wings of the Butterfly.” • Model for students how to fill in the Double Bubble map. Orient students to the bubble with “The Wings of the Butterfly” typed in the center. Ask: “What examples of biodiversity are in the story, but are not on our AQUA chart?” Listen for suggestions such as: “woodpecker; tinamou bird; sorva fruit,” etc. Write students’ responses in the three leftmost bubbles on the map (connected by lines to the bubble with “The Wings of the Butterfly” typed in the center). Allow students a moment 	<ul style="list-style-type: none"> • Students needing additional supports may benefit from partially filled-in Double Bubble maps. • Consider allowing students who struggle with written language the opportunity to dictate their ideas to a partner or teacher. • Consider providing extra time for tasks and answering questions in class discussions. Some students need more time to process and translate information.



A Rainforest Folktale:

Determining the Message of “The Wings of the Butterfly,” a Tukuna People Tale

Work Time (continued)	Meeting Students’ Needs
<p>to record examples in the same bubbles of their own maps.</p> <ul style="list-style-type: none">• Then orient students to the bubble with <i>The Most Beautiful Roof in the World</i> typed in the center. Ask: “What examples of biodiversity were in the story that are similar to ones we have listed on our AQUA chart about <i>The Most Beautiful Roof in the World</i>?” Listen for responses such as: “butterflies; monkeys; (fierce) animals; people (native peoples),” etc.• Write students’ responses in the three bubbles that are vertically in the center of the map (between the two bubbles with the names of the texts). Allow students a moment to record examples in the same bubbles on their own maps.• Prompt students to complete their maps working with their group members.• Direct students to write their ideas in the last three empty circles on their map (rightmost side, connected by lines to the title of the book).• After students have completed filling in their maps, ask several individuals to share out examples of biodiversity with the whole group.	<ul style="list-style-type: none">•



A Rainforest Folktale:

Determining the Message of “The Wings of the Butterfly,” a Tukuna People Tale

Closing and Assessment	Meeting Students’ Needs
<p>A. Debrief and Review of Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> • Ask students to consider: “How does Kathryn Lasky try to convey the same message in her writing as the message of the Takuna tale?” Ask students to Pair-Share their ideas. • Invite several students to share with the whole group something their partner said. • Read through each of the learning targets, pausing after each to have students show their level of mastery of the target using the Thumb-O-Meter protocol. <p><i>Note students who point thumbs-sideways or thumbs-down, because they may need additional support with understanding the text and/or new vocabulary.</i></p>	<ul style="list-style-type: none"> • Consider partnering an ELL with a student who speaks the same L1 when discussion of complex content is required. This can let students have more meaningful discussions and clarify points in their L1.
Homework	Meeting Students’ Needs
<ul style="list-style-type: none"> • Reread “The Wings of the Butterfly” to someone (or yourself) at home. Think about what new things you are learning about biodiversity as you read. • Choose four new academic vocabulary words from the story “The Wings of the Butterfly” to add to the Academic Word Glossary in your journal. Choose from this list: summarize, message, compare, contrast, literature; fierce, indignantly, conceited, sorrowfully, uninvited, wonder, behave, understand, within. <p><i>Note: Read and become familiar with the Red Light, Green Light protocol in Checking for Understanding Techniques to Engage All Learners (Appendix 1). Prepare popsicle sticks (red, yellow, green) or other material for students to use during the debrief in Lesson 10.</i></p>	<ul style="list-style-type: none"> • Audio recordings of text can aid students in comprehension. Students can pause and replay confusing portions while they follow along with the text. • For students who may have difficulty determining important words to add to their glossaries, consider prioritizing the following words for them: <i>compare, contrast, understand, within.</i>



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 9

Supporting Materials



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“The Wings of the Butterfly: A Tale of the Amazon Rainforest” (short story)

By Aaron Shepard

The *mind* sees this forest better than the eye. The mind is not deceived by what merely shows.

—H.M. Tomlinson

On the banks of the Amazon River, in a clearing in the forest, there once lived a girl named Chimidyue. She dwelt with her family and relatives in a big pavilion-house called a maloca.

While the boys of the maloca fished and hunted with the men, Chimidyue and the other girls helped the women with household chores or in the farm plots nearby. Like the other girls, Chimidyue never stepped far into the forest. She knew how full it was of fierce animals and harmful spirits, and how easy it was to get lost in.

Still, she would listen wide-eyed when the elders told stories about that other world. And sometimes she would go just a little way in, gazing among the giant trees and wondering what she might find farther on.

One day as Chimidyue was making a basket, she looked up and saw a big morpho butterfly hovering right before her. Sunlight danced on its shimmering blue wings.

“You are the most magical creature in the world,” Chimidyue said dreamily. “I wish I could be like you.”

The butterfly dipped as if in answer, then flew toward the edge of the clearing.

Chimidyue set down her basket and started after it, imitating its lazy flight. Among the trees she followed, swooping and circling and flapping her arms.

She played like this for a long time, until the butterfly passed between some vines and disappeared. Suddenly Chimidyue realized she had gone too far into the forest. There was no path, and the leaves of the tall trees made a canopy that hid the sun. She could not tell which way she had come.

“Mother! Father! Anyone!” she shouted. But no one came.

“Oh no,” she said softly. “How will I find my way back?”

Chimidyue wandered anxiously about, hoping to find a path. After a while she heard a tap-tap-tapping. “Someone must be working in the forest,” she said hopefully, and she followed the sound. But when she got close, she saw it was just a woodpecker.

Chimidyue sadly shook her head. “If only you were human,” she said, “you could show me the way home.”

“Why would I have to be human?” asked the woodpecker indignantly. “I could show you just as I am!”

Startled but glad to hear it talk, Chimidyue said eagerly, “Oh, would you?”

“Can’t you see I’m busy?” said the woodpecker. “You humans are so conceited, you think everyone else is here to serve you. But in the forest, a woodpecker is just as important as a human.” And it flew off.

“The Wings of the Butterfly: A Tale of the Amazon Rainforest” (short story)
By Aaron Shepard

“I didn’t mean anything bad,” said Chimidyue to herself. “I just want to go home.”

More uneasy than ever, Chimidyue walked farther. All at once she came upon a maloca, and sitting within it was a woman weaving a hammock.

“Oh, grandmother!” cried Chimidyue joyfully, addressing the woman with the term proper for an elder. “I’m so glad to find someone here. I was afraid I would die in the forest!”

But just as she stepped into the maloca, the roof began to flap, and the maloca and the woman together rose into the air. Then Chimidyue saw it was really a tinamou bird that had taken a magical form. It flew to a branch above.

“Don’t you ‘grandmother’ me!” screeched the bird. “How many of my people have your relatives hunted and killed? How many have you cooked and eaten? Don’t you dare ask for my help.” And it too flew away.

“The animals here all seem to hate me,” said Chimidyue sorrowfully. “But I can’t help being a human!”

Chimidyue wandered on, feeling more and more hopeless, and hungry now as well. Suddenly, a sorva fruit dropped to the ground. She picked it up and ate it greedily. Then another dropped nearby.

Chimidyue looked up and saw why. A band of spider monkeys was feeding in the forest canopy high above, and now and then a fruit would slip from their hands.

“I’ll just follow the monkeys,” Chimidyue told herself. “Then at least I won’t starve.” And for the rest of that day she walked along beneath them, eating any fruit they dropped. But her fears grew fresh as daylight faded and night came to the forest.

In the deepening darkness, Chimidyue saw the monkeys start to climb down, and she hid herself to watch. To her amazement, as the monkeys reached the ground, each one changed to the form of a human.

Chimidyue could not help but gasp, and within a moment the monkey people had surrounded her.

“Why, it’s Chimidyue!” said a monkey man with a friendly voice. “What are you doing here?”

Chimidyue stammered, “I followed a butterfly into the forest, and I can’t find my way home.”

“You poor girl!” said a monkey woman. “Don’t worry. We’ll bring you there tomorrow.”

“Oh, thank you!” cried Chimidyue. “But where will I stay tonight?”

“Why don’t you come with us to the festival?” asked the monkey man. “We’ve been invited by the Lord of Monkeys.”

They soon arrived at a big maloca. When the Monkey Lord saw Chimidyue, he demanded, “Human, why have you come uninvited?”

“We found her and brought her along,” the monkey woman told him.

“The Wings of the Butterfly: A Tale of the Amazon Rainforest” (short story),
By Aaron Shepard

The Monkey Lord grunted and said nothing more. But he eyed the girl in a way that made her shiver.

Many more monkey people had arrived, all in human form. Some wore animal costumes of bark cloth with wooden masks. Others had designs painted on their faces with black genipa dye. Everyone drank from gourds full of manioc beer.

Then some of the monkey people rose to begin the dance. With the Monkey Lord at their head, they marched in torchlight around the inside of the maloca, beating drums and shaking rattle sticks. Others sang softly or played bone flutes.

Chimidyue watched it all in wonder. She told her friend the monkey woman, “This is just like the festivals of my own people!”

Late that night, when all had retired to their hammocks, Chimidyue was kept awake by the snoring of the Monkey Lord. After a while, something about it caught her ear. “That’s strange,” she told herself. “It sounds almost like words.”

The girl listened carefully and heard, “I will devour Chimidyue. I will devour Chimidyue.”

“Grandfather!” she cried in terror.

“What? Who’s that?” said the Monkey Lord, starting from his sleep.

“It’s Chimidyue,” said the girl. “You said in your sleep you would devour me!”

“How could I say that?” he demanded. “Monkeys don’t eat people. No, that was just foolish talk of this mouth of mine. Pay no attention!” He took a long swig of manioc beer and went back to sleep.

Soon the girl heard again, “I will devour Chimidyue. I will devour Chimidyue.” But this time the snores were more like growls. Chimidyue looked over at the Monkey Lord’s hammock. To her horror, she saw not a human form but a powerful animal with black spots.

The Lord of Monkeys was not a monkey at all. He was a jaguar!

Chimidyue’s heart beat wildly. As quietly as she could, she slipped from her hammock and grabbed a torch. Then she ran headlong through the night.

When Chimidyue stopped at last to rest, daylight had begun to filter through the forest canopy. She sat down among the root buttresses of a kapok tree and began to cry.

“I hate this forest!” she said fiercely. “Nothing here makes any sense!”

“Are you sure?” asked a tiny voice.

Quickly wiping her eyes, Chimidyue looked up. On a branch of the kapok was a morpho butterfly, the largest she had ever seen. It waved at her with brilliant blue wings.

“Oh, grandmother,” said Chimidyue, “nothing here is what it seems. Everything changes into something else!”

“Dear Chimidyue,” said the butterfly gently, “that is the way of the forest. Among your own people, things change slowly and are mostly what they seem. But your human world is a tiny one. All around it lies a much larger world, and you can’t expect it to behave the same.

“The Wings of the Butterfly: A Tale of the Amazon Rainforest” (short story)

By Aaron Shepard

“But if I can’t understand the forest,” cried Chimidyue, “how will I ever get home?”

“I will lead you there myself,” said the butterfly.

“Oh, grandmother, will you?” said Chimidyue.

“Certainly,” said the butterfly. “Just follow me.”

It wasn’t long till they came to the banks of the Amazon. Then Chimidyue saw with astonishment that the boat landing of her people was on the other side.

“I crossed the river without knowing it!” she cried. “But that’s impossible!”

“Impossible?” said the butterfly.

“I mean,” said Chimidyue carefully, “I don’t understand how it happened. But now, how will I get back across?”

“That’s simple,” said the morpho. “I’ll change you to a butterfly.” And it began to chant over and over,

Wings of blue, drinks the dew.

Wings of blue, drinks the dew.

Wings of blue, drinks the dew.

Chimidyue felt herself grow smaller, while her arms grew wide and thin. Soon she was fluttering and hovering beside the other.

“I’m a butterfly!” she cried.

They started across the wide water, their wings glistening in the sun. “I feel so light and graceful,” said Chimidyue. “I wish this would never end.”

Before long they reached the landing, where a path to the maloca led into the forest. The instant Chimidyue touched the ground, she was changed back to human form.

“I will leave you here,” said the butterfly. “Farewell, Chimidyue.”

“Oh, grandmother,” cried the girl, “take me with you. I want to be a butterfly forever!”

“That would not be right,” said the butterfly. “You belong with your people, who love you and care for you. But never mind, Chimidyue. Now that you have been one of us, you will always have something of the forest within you.”

The girl waved as the butterfly flew off. “Good-bye, grandmother!”

Then Chimidyue turned home, with a heart that had wings of a butterfly.



Tea Party Protocol Cards

Teacher directions:

Make two copies of these pages with quotes from the story.
Then cut the pages into strips, so each quote is on its own strip.
Two students will receive strips with the same quote.

Chimidyue never stepped far into the forest. She knew how full it was of fierce animals and harmful spirits, and how easy it was to get lost in.

One day as Chimidyue was making a basket, she looked up and saw a big morpho butterfly hovering right before her. Sunlight danced on its shimmering blue wings.

Chimidyue sadly shook her head. "If only you were human," she said, "you could show me the way home."

"Can't you see I'm busy?" said the woodpecker. "You humans are so conceited, you think everyone else is here to serve you. But in the forest, a woodpecker is just as important as a human."

"Oh, grandmother!" cried Chimidyue joyfully, addressing the woman with the term proper for an elder. "I'm so glad to find someone here. I was afraid I would die in the forest!"



Tea Party Protocol Cards

“Don’t you ‘grandmother’ me!” screeched the bird. “How many of my people have your relatives hunted and killed? How many have you cooked and eaten? Don’t you dare ask for my help.”

“The animals here all seem to hate me,” said Chimidyue sorrowfully. “But I can’t help being a human!”

“I’ll just follow the monkeys,” Chimidyue told herself. “Then at least I won’t starve.” And for the rest of that day she walked along beneath them, eating any fruit they dropped. But her fears grew fresh as daylight faded and night came to the forest.

Chimidyue stammered, “I followed a butterfly into the forest, and I can’t find my way home.”

They soon arrived at a big maloca. When the Monkey Lord saw Chimidyue, he demanded, “Human, why have you come uninvited?”



Tea Party Protocol Cards

Chimidyue watched it all in wonder. She told her friend the monkey woman, “This is just like the festivals of my own people!”

“I hate this forest!” she said fiercely. “Nothing here makes any sense!” “Are you sure?” asked a tiny voice.

“Dear Chimidyue,” said the butterfly gently, “that is the way of the forest. Among your own people, things change slowly and are mostly what they seem. But your human world is a tiny one. All around it lies a much larger world, and you can’t expect it to behave the same.”

“But if I can’t understand the forest,” cried Chimidyue, “how will I ever get home?” “I will lead you there myself,” said the butterfly.

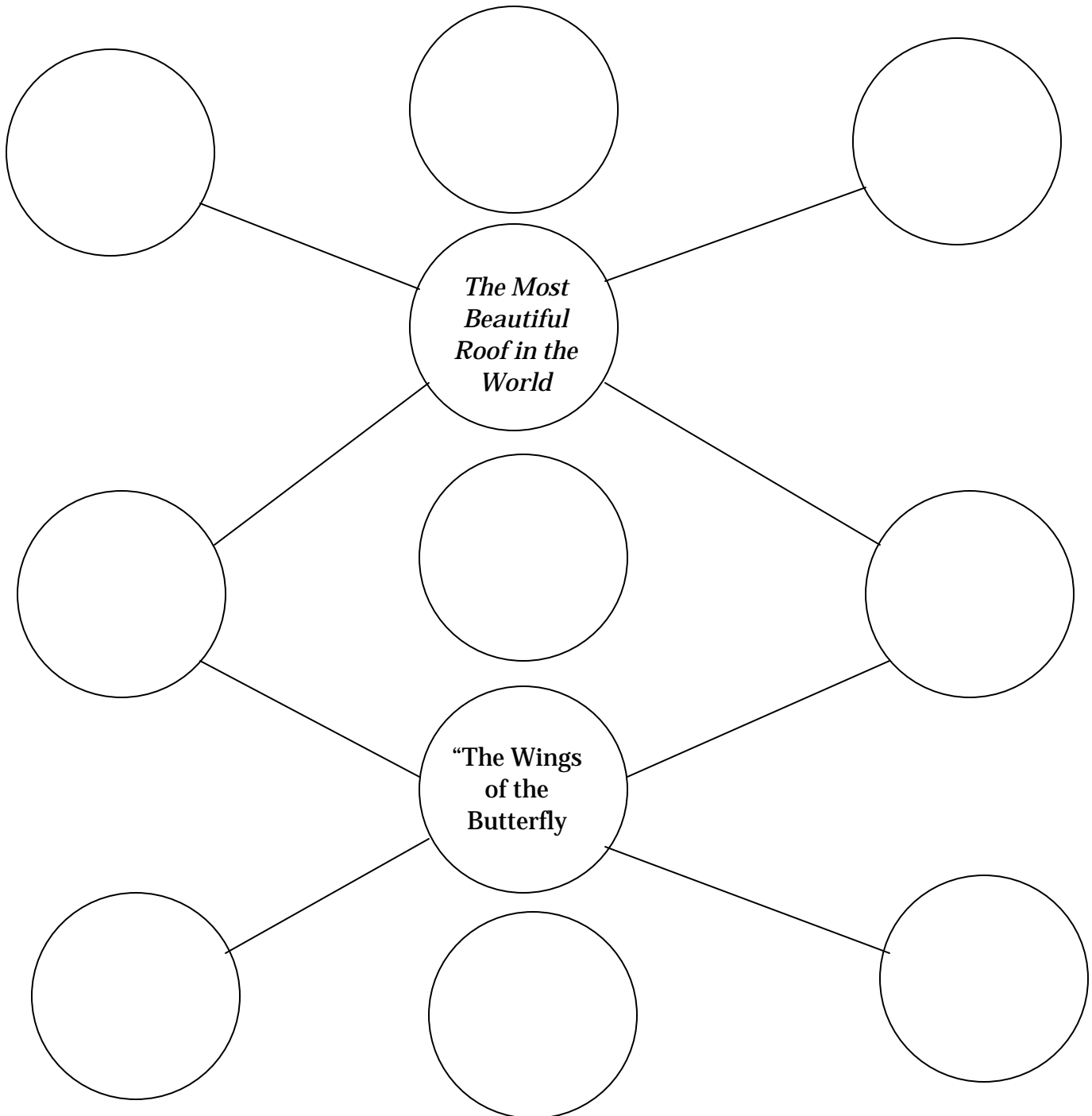
“That would not be right,” said the butterfly. “You belong with your people, who love you and care for you. But never mind, Chimidyue. Now that you have been one of us, you will always have something of the forest within you.”



Double Bubble Map (for Comparing Similarities and Contrasting Differences)

Name: _____

Date: _____





EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 10

Reading for Details: Taking an Inventory in the Rainforest (Pages 28–31)



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Reading for Details:

Taking an Inventory in the Rainforest (Pages 28–31)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can determine the main idea(s) of an informational text based on key details. (RI.5.2)

I can summarize an informational text. (RI.5.2)

I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3)

I can use context (e.g., cause/effect relationships and comparisons in text) to help me understand the meaning of a word or phrase. (L.5.4)

I can draw on information to explore ideas in the discussion. (SL.5.1)

Supporting Learning Targets

- I can explain the purpose of a column study in the rainforest.
- I can identify the types and numbers of species counted during the column study done by Meg Lowman.
- I can use my group members' ideas to help me determine the inventory count of the column study.
- I can determine the meaning of new words from context in *The Most Beautiful Roof in the World*.

Ongoing Assessment

- Journal (Meg Lowman KWL chart, AQUA Biodiversity chart, glossaries, answers to the questions)
- Inventory Count Note-catcher



Reading for Details:

Taking an Inventory in the Rainforest (Pages 28–31)

Agenda	Teaching Notes
<p>1. Opening</p> <p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <p>2. Work Time</p> <p>A. Guided Practice and Discussion: What Is a Column Study? (15 minutes)</p> <p>B. Rereading and Taking Notes: Taking an Inventory (20 minutes)</p> <p>C. Key Vocabulary to Deepen Understanding (10 minutes)</p> <p>3. Closing and Assessment</p> <p>A. Debrief (10 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none">• Review Red Light, Green Light protocol (in Checking for Understanding Techniques to Engage All Learners) and Word Sort (in Vocabulary Strategies); both in Appendix 1.• Consider writing the vocabulary words on a large piece of chart paper before the lesson to save time during the lesson.



Reading for Details:

Taking an Inventory in the Rainforest (Pages 28–31)

Lesson Vocabulary	Materials
<p>purpose, identify, justify; column, biological diversity, situated (28), inventory, portion, emerge (29), estimates (30), sweeps (31)</p>	<ul style="list-style-type: none"> • AQUA Biodiversity anchor chart (from Lesson 4 and onward) • <i>The Most Beautiful Roof in the World</i> (book; one per student) • Inventory Count Note-catcher (one per student) • Meg Lowman, Rainforest Scientist KWL anchor chart (from Lesson 1) • Red, yellow and green popsicle sticks (one of each per student)

Opening	Meeting Students' Needs
<p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <ul style="list-style-type: none"> • Ask students to take out their journals. Invite students to join their group and share one new thing they learned from reading “The Wings of the Butterfly” that they can add to their AQUA Biodiversity anchor chart. Ask a few students to share aloud their suggestions and add them to the U column of the anchor chart. • Ask students to choose one example of biodiversity from their charts to perform or act out silently for their group members to guess. • Invite a few students to act out their example of biodiversity for the whole class to guess. 	<ul style="list-style-type: none"> • Consider partnering an ELL with a student who speaks the same L1 when discussion of complex content is required. This can let students have more meaningful discussions and clarify points in their L1.



Reading for Details:

Taking an Inventory in the Rainforest (Pages 28–31)

Work Time	Meeting Students' Needs
<p>A. Guided Practice and Discussion: What Is a Column Study? (15 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can explain the purpose of a column study in the rainforest.” Ask several students to share what they recall about the meaning of the word <i>purpose</i> (reason). • Orient students to page 28 in <i>The Most Beautiful Roof in the World</i>, with the sentence that begins: “Meg and her sons...” Ask students to follow along as you read aloud. Continue through the sentence that ends: “... plants and insects, starting from the ground up.” Ask students what they think it means to <i>inventory</i> something. Listen for students to figure out it means to count. Point out that the word “inventory” can be used as a verb (“to count”) or as a noun (a list of things that have been counted). It is used in both ways in the text students read during this lesson. • Prompt students to briefly talk in their groups about the gist of this page. Listen for thoughts such as: “Meg Lowman setting up a column study,” or similar ideas. • Ask students to share out what they think a <i>column</i> is. Listen for definitions such as: “something that goes from top to bottom or bottom to top; like a post or a pillar,” or similar ideas. • Direct students’ attention to the third (last) paragraph on page 28, beginning: “The boys help their mom ferry equipment . . .” • Ask students to take 5 minutes to reread this last paragraph on their own to determine: <ul style="list-style-type: none"> * “What is a <i>column</i> study?” * “Why does Meg Lowman do column studies?” • Circulate to support as needed. • After students have finished reading, ask groups to briefly discuss. • Ask several students to share out whole group. For the first question, listen for ideas such as: “A column study is specific areas marked off to study biological diversity or different species of plants and animals; columns of areas from ground up that Meg Lowman studies,” etc. • Ask several students to share out whole group. For the second question, listen for ideas such as: “She wants to count different species of plant and insects in the rainforest from the ground up,” etc. • Tell students to turn to a new page in their journals to write their response to the two questions. 	<ul style="list-style-type: none"> • ELLs may be unfamiliar with Tier 2 vocabulary words (e.g., <i>purpose</i>, <i>column</i>, <i>study</i>). Clarify vocabulary with students as needed. • Visuals can help students comprehend questions and discussions. Chart main points in answers and post all questions asked to students.



Reading for Details:

Taking an Inventory in the Rainforest (Pages 28–31)

Work Time (continued)	Meeting Students' Needs
<p>B. Rereading and Taking Notes: Taking an Inventory (20 minutes)</p> <ul style="list-style-type: none">• Introduce the learning target: “I can identify the types and numbers of species counted during the column study done by Meg Lowman.” Ask a few students to share what they remember about the meaning of the word <i>identify</i> (name; determine).• Reread page 31, paragraph 3 to students (“The sweeps, the beating trays . . .”) as students follow along silently. Ask students to pay close attention to: <i>what</i> Meg Lowman did during her column study and <i>why</i>.• Display the Inventory Count Note-catcher, and distribute one per student. Explain to students they will work in their groups to read page 29, starting with: “There have been many methods devised . . .” through the end of the third paragraph on page 31 (“... snapshots of diverse rainforest life.”) They will then work with their group to determine the inventory count of the column study.• Point out to students that in this section of the text, the word <i>inventory</i> is used as a noun. Ask students to explain the word’s meaning (explained earlier): list; what is being counted. Explain to students that they will read to <i>identify</i> what inventory Meg Lowman counted in different parts of the column study area. Then they will record the inventory they identify on their Inventory Count Note-catchers. Clarify any instructions as necessary.• Ask students to take 2 to 3 minutes to skim the text again for information about the column study.• Then prompt students to reread more closely to identify the species and counts of inventory to record on their Note-catchers. (10 to 15 minutes)• Circulate to support as needed.	<ul style="list-style-type: none">• Students needing additional supports may benefit from a partially filled-in Note-catcher.• ELL language acquisition is facilitated by interacting with native speakers of English who provide models of language.



Reading for Details:

Taking an Inventory in the Rainforest (Pages 28–31)

Work Time (continued)	Meeting Students' Needs
<p>C. Key Vocabulary to Deepen Understanding (10 minutes)</p> <ul style="list-style-type: none">• Introduce the learning target: “I can determine the meaning of new words from context in <i>The Most Beautiful Roof in the World</i>.” Invite a few students to restate this target in their own words.• Remind students of the Word Sort activity they have done in previous lessons. Ask students to share what they do during a Word Sort. Listen for answers such as: “place words into categories; be able to justify why we put words into certain categories,” and similar statements.• List the following words on the board:<ul style="list-style-type: none">* column, biological diversity, situated, inventory, portion, emerge, estimates, sweeps• Ask students to turn to a new page in their journals and divide the page into two columns. Ask them to label the left-hand column: What Meg Lowman Studies in the Rainforest. Ask them to label the right-hand column: How Meg Lowman Studies in the Rainforest. Clarify the distinction between these two columns if needed.• Tell students that they will work with their group to think about how to sort the words into the two categories. This will provide students a way to reflect upon and process the key vocabulary related to what they read about the column study.• Remind students that they need to <i>justify</i> their choice: This means that they need to explain to their group members why they think a word belongs in one category or the other. This means they will have to explain to their group what the word means. Model with one word as needed• Give students 3 to 4 minutes to work in their groups. Circulate to support as needed.• Invite a few groups to share with the entire class their categories and their reasons for sorting words into each category.	<ul style="list-style-type: none">• Consider giving students who struggle with language fewer vocabulary words to sort.• Provide a visual with each word to be sorted to allow students who struggle with vocabulary to fully participate.



Reading for Details:

Taking an Inventory in the Rainforest (Pages 28–31)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• After students have shared out, ask for them to suggest meanings for each word. Again remind students that what is most important is that they are practicing figuring out hard words in context. They do not need to memorize every single word on this list:<ul style="list-style-type: none">* <i>column</i>: a post; pillar; pole; or a shape like a post, pillar, or pole* <i>biological diversity</i>: various and different living things that are found within a community or a particular area of land* <i>situated</i>: positioned; placed* <i>to inventory</i> (v): to list; to count; to record* <i>inventory</i> (n): supply; account; record* <i>portion</i>: piece; select area* <i>emerge</i>: appear; come out* <i>estimates</i>: close guesses; educated guesses* <i>set of sweeps</i>: a technique for sampling insects; using a net to capture insects in the air• Let students briefly revise their Word Sorts based on new understandings about vocabulary.	<ul style="list-style-type: none">• Consider giving students who struggle with language fewer vocabulary words to sort.• Provide a visual with each word to be sorted to allow students who struggle with vocabulary to fully participate.



Reading for Details:

Taking an Inventory in the Rainforest (Pages 28–31)

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (5 minutes)</p> <ul style="list-style-type: none">• Direct students to the Meg Lowman, Rainforest Scientist KWL anchor chart. Ask: “What have we learned about Meg Lowman that we can add to our KWL?” Record students’ responses in the L column of the chart. (Students add to the KWL in their journals.)• Explain to students that they will participate in a new activity called Red Light, Green Light to show how close they got to mastering today’s learning targets.<ul style="list-style-type: none">* Red: Didn’t get it* Yellow: Got some of it* Green: I got it!• Distribute one red, yellow, and green popsicle stick to each student. Read each learning target aloud, pausing after each to allow students to show red, yellow, or green. <p><i>Note students who display red or yellow, because they may need more support or additional strategies to understand the text and/or new vocabulary.</i></p>	<ul style="list-style-type: none">• For students needing additional supports producing language, consider offering a sentence frame, sentence starter, or cloze sentence to provide the structure required.



Reading for Details:

Taking an Inventory in the Rainforest (Pages 28–31)

Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Reread pages 28–31 and the Inventory Count Note-catcher to someone (or yourself) at home.• Choose two new academic and two new scientific vocabulary words from pages 28–31 to add to the glossaries in your journal. Choose from this list: purpose, identify, justify, column, biological diversity, situated (28), inventory, portion, emerge (29), estimates (30), sweeps (31).• Do a first draft read of pages 31–33. Think about Meg Lowman's sons' reaction to their first canopy ascent, and be ready to share your thoughts with a partner tomorrow.	<ul style="list-style-type: none">• Audio recordings of text can aid students in comprehension. Students can pause and replay confusing portions while they follow along with the text.• For students who may have difficulty determining important words to add to their glossaries, consider prioritizing the following words for them: <i>purpose</i>, <i>identify</i> (academic); <i>inventory</i> (scientific)



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 10

Supporting Materials



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Inventory Count Note-catcher

Name: _____

Date: _____

Visualize how Meg Lowman starts at the tops of trees, in the understory, and works her way down the column to the air just above the forest floor. What does she see?

Part of Column	List the Species and Counts of the Inventory

Teacher Resource: Inventory Count Note-catcher

Name: _____

Date: _____

Visualize how Meg Lowman starts at the tops of trees, in the understory, and works her way down the column to the air just above the forest floor. What does she see?

Part of Column	List the Species and Counts of the Inventory
Understory	4 kinds of Trees: 1 grias, 1 palm, 1 acacia, 1 “unknown”
Layer down from the understory	41 saplings/5 species 197 seedlings 10 ferns/3 species 41 lycopods (mosses)/5 species lichens/3 kinds 37 epiphytes
Shrubbery	a leaf hopper ants cockroaches springtails spiders a caterpillar
Air above the ground (floor)	a leaf hopper 3 diptera (flies) 3 beetles



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 11

Reading for Fluency: Readers Theater about the Rainforest (Page 33)



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Reading for Fluency:
Readers Theater about the Rainforest (Page 33)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can read fifth-grade texts with purpose and understanding. (RF.5.4)
- I can read fifth-grade texts with fluency. (RF.5.4)
- I can write narrative texts about real or imagined experiences or events. (W.5.3)
- I can show the actions, thoughts, and feelings of my characters through dialogue, description, and careful pacing. (W.5.3)
- I can speak clearly and at an understandable pace. (SL.5.4)
- I can adapt my speech for a variety of contexts and tasks, using formal English when appropriate. (SL.5.6)

Supporting Learning Targets

- I can read my speaker's lines with fluency.
- I can write lines for my character using the text from *The Most Beautiful Roof in the World*.
- I can speak clearly and with appropriate emotion for my character.

Ongoing Assessment

- Journal (Meg Lowman KWL chart, AQUA Biodiversity chart, glossaries)
- Mini Readers Theater
- Triad Feedback rubric



Reading for Fluency:
Readers Theater about the Rainforest (Page 33)

Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Reviewing Homework and Engaging the Reader (10 minutes) 2. Work Time <ol style="list-style-type: none"> A. Review Readers Theater (10 minutes) B. Create Mini Readers Theater Scripts (20 minutes) C. Performance and Feedback (15 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Debrief (5 minutes) 4. Homework 	<ul style="list-style-type: none"> • In the Opening of this lesson, students are introduced to a poem about being a rainforest researcher. The purpose is to briefly expose students to another form of literature and engage them in an opportunity to practice fluency as a warm-up for their Readers Theater. Students work with this poem again as part of their homework. • In this lesson, students create a mini Readers Theater about one event described in <i>The Most Beautiful Roof in the World</i>. Students will be familiar with Readers Theater based on their Module 1 performance task, in which they created Readers Theater scenes based on Esperanza Rising. • Students create their mini Readers Theater in triads. Use intentional grouping to allow students who struggle with language the opportunity to fully participate.

Lesson Vocabulary	Materials
<p>lines, speaker, fluency, clearly, components, appropriate, emotion</p>	<ul style="list-style-type: none"> • “I Want to Be a Rainforest Scientist” poem (one per student) • <i>The Most Beautiful Roof in the World</i> (book; one per student) • Readers Theater rubric (one per student) • Sticky notes (small or tab-sized) • Highlighters (three different colors per group) • AQUA Biodiversity anchor chart (from Lesson 4) • Red, yellow, and green light sticks (or, alternatively, sticks with three different shapes; see note in Debrief)



Reading for Fluency:
Readers Theater about the Rainforest (Page 33)

Opening	Meeting Students' Needs
<p>A. Reviewing Homework and Engaging the Reader (10 minutes)</p> <ul style="list-style-type: none">• Ask students to take out their journals. Invite students to share with a new partner their thoughts on Meg Lowman's sons' first ascent to the canopy. Remind them to also share one new added vocabulary word from pages 28–31 in glossaries.• Say to students: "Now you are going to read a poem aloud with a partner. This poem will help you think more about what Meg Lowman's life as a rainforest scientist is like. It also allows you the opportunity to practice reading aloud with a partner, as you will do with interview questions you create later in the lesson."• Place students in pairs. Display the "I Want to Be a Rainforest Scientist" poem and distribute one per student.• Explain the directions to students:<ul style="list-style-type: none">* Partners assign alternating stanzas.* Each partner reads his/her stanzas silently, to become familiar with the text.* As a pair, read the poem aloud, alternating stanzas.* Pay attention to how you read with fluency.• Briefly review the learning target: "I can read my speaker's lines with fluency."• Remind students of all the great work they did fluently reading their Readers Theater scripts for <i>Esperanza Rising</i>. Ask a few students to share out elements of reading with fluency (tone, facial expression, pace, etc.).• Give students 2 minutes to read their stanzas silently.• Then ask students to begin.• After students read the poem aloud once, ask them to talk with their partners about one way they could improve their fluency. Ask several students to share out whole group. Listen for statements such as: "Read more slowly; pronounce all words clearly; add expression to my voice; increase or decrease the volume of my voice," etc.• Invite students to read the poem aloud in pairs for a second time, focusing on fluency.	<ul style="list-style-type: none">• ELL language acquisition is facilitated by interacting with native speakers of English who provide models of language.• Consider pre-chunking the text for students who may have difficulty dividing the text.



Reading for Fluency:
Readers Theater about the Rainforest (Page 33)

Work Time	Meeting Students' Needs
<p>A. Review Readers Theater (10 minutes)</p> <ul style="list-style-type: none">• Remind students of the Readers Theater they participated in during Unit 3 of Module 1 about <i>Esperanza Rising</i>. Ask students to briefly talk in their groups about what a Readers Theater script needs to include and what its components are.• Invite several students to share out whole group. Listen for suggestions such as: “speaking parts; narrator; dialogue; lines,” etc. List students’ ideas on the board for reference during Part B of Work Time.• Next prompt students to talk briefly in groups again:<ul style="list-style-type: none">* “What is the process for writing a Readers Theater script?”• Invite several students to share out whole group. Listen for statements such as: “narrow the dialogue or choose only a few lines and quotes from the text; the script has a narrator introduction that tells where the scene takes place; the lines clearly name each character; the lines are in an order that makes sense; there are several character and narrator lines in the script,” etc.• List students’ ideas on the board (as well as any of the above that students did not mention) for reference in Part B of Work Time. Explain to students that today they will create a mini Readers Theater script from page 33 of <i>The Most Beautiful Roof in the World</i>.	<ul style="list-style-type: none">• Visuals can help students comprehend processes. Chart main points in what students share about the components of and steps to create a Readers Theater.



Reading for Fluency:
Readers Theater about the Rainforest (Page 33)

Work Time (continued)	Meeting Students' Needs
<p>B. Create Mini Readers Theater Scripts (20 minutes)</p> <ul style="list-style-type: none"> • Place students in triads. Introduce the learning target: "I can write lines for my speaker using the text from <i>The Most Beautiful Roof in the World</i>." • Ask several students to share out what they recall about the words <i>speaker</i> (a character with a speaking part in a book or play) and <i>lines</i> (words the characters say). • Prompt students to turn to page 33 of <i>The Most Beautiful Roof in the World</i>. Encourage students to pay attention to who is speaking on this page. Invite students to follow along silently as page 33 is read aloud. (Start from "Oh man, oh man!" through "His mom saw one once when she was working in Cameroon, West Africa.") • After reading the page aloud, ask students to talk in their triads: <ul style="list-style-type: none"> * "Who was speaking on this page? How could you tell?" • Invite several students to share out whole group. Listen for students to identify quotes from James and Meg Lowman. • Tell students they will now work in their triad to write a short Readers Theater script from page 33 of their books. Tell them that they will have to work quickly, and it is fine if their scripts are not as perfect as the ones from <i>Esperanza Rising</i>. The main purpose is to take a closer look at what it's like to research in the rainforest. • Their scripts will have three characters. Ask students to choose who will play each part: <ul style="list-style-type: none"> * Meg Lowman * James (one of Meg Lowman's sons) * Narrator • Display the Readers Theater rubric. Remind students they used all these criteria during Module 1. Today, focus them on Cooperation with Group and On-Task Participation as they work in their triads. • Distribute sticky notes to triads. Ask students to do the following: <ol style="list-style-type: none"> 1. Read through page 33 on your own. 2. Put a sticky note to mark your individual lines of dialogue or narration. 3. Work together to write one script using the lines of text you identified. 	<ul style="list-style-type: none"> • Consider intentionally assigning one of the characters for the Readers Theater to each triad member instead of letting them choose. • Consider writing and breaking down multistep directions into numbered elements. Students can return to these guidelines to make sure that they are on track. • Consider providing ELLs extra time for tasks and answering questions in class discussions. Some students need more time to process and translate information.



Reading for Fluency:
Readers Theater about the Rainforest (Page 33)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Distribute different color highlighters to each group for highlighting individual character lines.• As students work, circulate to offer feedback about how well they are cooperating and staying on task.	<ul style="list-style-type: none">•



Reading for Fluency:
Readers Theater about the Rainforest (Page 33)

Work Time (continued)	Meeting Students' Needs
<p>C. Performance and Feedback (15 minutes)</p> <ul style="list-style-type: none">• Review the learning targets: “I can read my speaker’s lines with fluency,” and “I can speak clearly and with appropriate emotion for my character.”• Ask several students to share out the meaning of the words:<ul style="list-style-type: none">* <i>speaking clearly</i>: the audience can understand what I am saying; each word is pronounced correctly* <i>appropriate emotion</i>: my facial expressions, hand gestures, body movements match what my character is saying• Allow students a few minutes to practice in triads reading their scripts. Tell group members to give one another feedback as they practice, based on:<ul style="list-style-type: none">* How clearly their group members speak* Use of facial expressions that match what the speaker says• Focus students’ attention whole group. Explain to students that triads will perform their scripts for one another.• After a triad performs, the other triads will give feedback based on:<ul style="list-style-type: none">* Speaking clearly* Using appropriate facial expressions• Clarify any instructions as necessary. Pair up triads to perform their scripts for each other. Give students 7 to 10 minutes to perform and give feedback. Circulate to support as needed.• Once triads have performed their scripts, bring the entire class back for a whole group discussion. Ask:<ul style="list-style-type: none">* “How did creating a Readers Theater script of page 33 in <i>The Most Beautiful Roof in the World</i> help us learn more about the rainforest?”• Invite several students to share out. Listen for statements such as: “could ‘feel’ the height of the canopy when James says, ‘Oh man, oh man!’; James’s description of the beetle helped me ‘see’ it more clearly; how dangerous the rainforest can be, because Meg tells James not to touch things or keep climbing,” or similar ideas.	<ul style="list-style-type: none">• Consider providing hand mirrors for students to practice reading their portions of text before doing so with a partner.



Reading for Fluency:
Readers Theater about the Rainforest (Page 33)

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (5 minutes)</p> <ul style="list-style-type: none"> • Direct students' attention to the AQUA Biodiversity anchor chart. Ask: "What did you read about on page 33 about the rainforest that can be added to our AQUA chart?" • Record students' ideas in the U column of the chart and remind students to add ideas to the AQUA chart in their journals. • Ask students to take out (or distribute) their red, yellow, and green light sticks to use during the review of learning targets. Read through each of the learning targets. Pause after each for students to show a red, yellow, or green light, indicating their self-assessed level of mastery of the target. <p><i>Note students indicating red or yellow, because they may need more support or additional strategies to aid with comprehension of the text or new vocabulary.</i></p>	<ul style="list-style-type: none"> • For students needing additional supports producing language, consider offering a sentence frame, sentence starter, or cloze sentence to provide the structure required. • Be mindful of the possibility that some students may have red-green color blindness. Consider using three different shapes, rather than colors, for the sticks.
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> • Reread the poem at home with someone (or to yourself). Answer the following in your journal: <ul style="list-style-type: none"> * List at least six examples of biodiversity that the author writes about in the poem. Be sure to quote directly from the poem. • Reread page 33 of the text. • Identify at least three vocabulary words on page 33 that are either new to you or important to the gist of the text. Add these words to the appropriate glossary, either Science words or Academic words. 	<ul style="list-style-type: none"> • Audio recordings of text can aid students in comprehension. Students can pause and replay confusing portions while they follow along with the text. • For students who may have difficulty determining important words to add to their glossaries, consider prioritizing the following words for them: <i>fluency, clearly, appropriate</i>



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 11

Supporting Materials



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I Want to Be a Rainforest Scientist

I want to be a rainforest scientist.
Descending the columns, from
canopy to floor
Floating high above pavilion crowns
And sweeping through the air
Spying into the depths of foliage
To see what is there.

I want to be a rainforest scientist.
Within the branches of the canopy
Dangling from coiled rafts' ropes
Tracing the lace where lines entwine
To discover the connections
To this mysterious vine.

I want to be a rainforest scientist.
Spying on looping spider monkeys,
As macaws flash brilliantly through
the air
To forage in the nearby kapok tree.
As I stare in amazement
At the teeming life before me.

I Want to Be a Rainforest Scientist

I want to be a rainforest scientist.
Digging deep into the earth,
Sifting through the shrubbery,
And capturing insects in my net
To study these strange inhabitants
I haven't counted yet.

I want to be a rainforest scientist.
Peeking into the petals of orchids,
And fiery red bromeliad leaves
To see what lurks inside
And catch rare glimpses of the
creatures
Who only want to hide!

I want to be a rainforest scientist.
Exploring the unknown
And balancing my curiosity
With what I know is best.
To help preserve the world I study
Will be my greatest test.

Readers Theater Rubric

Name: _____

Individual Scores	1 – Needs Improvement	2 - Fair	3 – Good	4 - Excellent
Delivery	Student had difficulty reading the script and consistently did not use expression, eye contact, or props appropriately	Student read the script but had little expression, few gestures, little eye contact, or did not use props appropriately	Student read the script with some expression, gestures, eye contact, and use of props	Student read the script with confidence and expression, made gestures and good eye contact, and used props to add to the performance
Cooperation with group	Student did not work cooperatively together with group and could not agree on what to do. Student did not share responsibilities or ideas and wasted time	Student worked cooperatively with group in some aspects of the project but sometimes could not agree on what to do and wasted time	Student worked cooperatively with group in most aspects of the project and shared most responsibilities and ideas	Student worked cooperatively with the group in all aspects of the project and shared all responsibilities and ideas well

Group Members: _____

Group Scores	1 – Needs Improvement	2 - Fair	3 – Good	4 - Excellent
On-task Participation	Low level of active participation from majority of group members	Moderate level of on-task work or few of the group members actively participating	Majority of group members on-task and actively participating	High level of active, on-task participation from all group members



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 12

Comparing Two Main Ideas in an Informational Text: Meg Lowman's Methods for Researching the Rainforest (Pages 35–36)



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Comparing Two Main Ideas in an Informational Text:
Meg Lowman’s Methods for Researching the Rainforest (Pages 35–36)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
<p>I can explain what a text says using quotes from the text. (RI.5.1)</p> <p>I can determine the main idea(s) of an informational text based on key details. (RI.5.2)</p> <p>I can summarize an informational text. (RI.5.2)</p> <p>I can determine the meaning of academic words or phrases in an informational text. (RI.5.4)</p> <p>I can determine the meaning of content words or phrases in an informational text. (RI.5.4)</p>	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none"> • I can compare and contrast different research methods that Meg Lowman has used. • I can use quotes from the text as evidence in my answers to questions. • I can determine the meaning of new words in <i>The Most Beautiful Roof in the World</i>. 	<ul style="list-style-type: none"> • Journal (Meg Lowman KWL chart, AQUA Biodiversity chart, glossaries) • Text-dependent questions • Four Corners exit ticket



Comparing Two Main Ideas in an Informational Text:
Meg Lowman’s Methods for Researching the Rainforest (Pages 35–36)

Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Reviewing Homework and Engaging the Reader (10 minutes) 2. Work Time <ol style="list-style-type: none"> A. Guided Practice and Discussion: Comparing and Contrasting Research Methods (20 minutes) B. Group Read: Answering Text-Dependent Questions (15 minutes) C. New Vocabulary Work: Key Vocabulary to Deepen Understanding (10 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Debrief: Four Corners (5 minutes) 4. Homework 	<ul style="list-style-type: none"> • In this lesson, students again work with their regular group of four. • Review: Four Corners protocol (see Appendix 1). • In advance, prepare four sheets of paper for the Four Corners sheets (see materials note, below).

Lesson Vocabulary	Materials
<p>compare, contrast, methods, quotes, evidence, immense, inflatable, dirigible, pontoons, numerous, qualities, consumed, grueling, lurked (35), gondola, steer, linked, thorough (36)</p>	<ul style="list-style-type: none"> • World Map: Cameroon (one to display) • AQUA Biodiversity anchor chart (from Lesson 4) • <i>The Most Beautiful Roof in the World</i> (book; one per student) • Researching in the Rainforest three-column Note-catcher (one per student and one per group) • Researching in the Rainforest Three-Column Note-catcher (sample answers, for Teacher Reference) • Text-Dependent Questions: Researching in the Rainforest, Pages 35–36 (one per student) • Four Corners sheets: Walkways, Staples, Floating Raft, Crane (to display; see Teaching Note)



Comparing Two Main Ideas in an Informational Text:
Meg Lowman’s Methods for Researching the Rainforest (Pages 35–36)

Opening	Meeting Students’ Needs
<p>A. Reviewing Homework and Engaging the Reader (10 minutes) <i>Note: Prominently display the World Map: Cameroon.</i></p> <ul style="list-style-type: none">• Ask students to take out their journals. Ask students to share with a partner their homework from Lesson 11: examples of biodiversity they noted in the poem, the vocabulary words they chose, with what they think the words mean and the context clues used to make these determinations.• Cold call a few students to share out with the class some of their examples of biodiversity and add them to the AQUA Biodiversity anchor chart.• Say: “We have read a great deal about Meg Lowman’s research in the Blue Creek rainforest of Belize. But that is not the only place Meg Lowman conducts her studies. She also travels to different rainforests, found in other parts of the world. Today we’re going to read about how she conducts her research in two other locations, Cameroon and Panama.”• Display the world map. Point out Cameroon (in red). Ask the class: “Is Cameroon a place you would expect to find a rainforest? Why or why not?” Listen for suggestions such as: “Cameroon is located close to the equator, where many other rainforests are located in the world. The areas around the equator are warm and humid, with a lot of moisture (water).”• Remind students where Panama is located on the map. Ask students to turn and talk with a partner about what they remember reading about rainforests in Panama.• Ask a few students to share out whole group.	<ul style="list-style-type: none">• Visuals can help students comprehend questions and discussions. Chart main points in answers and post all questions asked to students.



Comparing Two Main Ideas in an Informational Text:
Meg Lowman’s Methods for Researching the Rainforest (Pages 35–36)

Work Time	Meeting Students’ Needs
<p>A. Guided Practice and Discussion: Comparing and Contrasting Research Methods (20 minutes)</p> <ul style="list-style-type: none"> • Ask students to join in their usual (for much of this unit) groups of four. Introduce the learning target: “I can compare and contrast different research methods that Meg Lowman has used.” • Ask several students to share out the meaning of the words <i>compare</i> (identify similarities) and <i>contrast</i> (identify differences). • Bring students’ attention to the word <i>methods</i>. Ask for suggestions about the meaning of this word. Listen for definitions such as: “ways to do things; process; techniques; system,” etc. • Direct students to turn to page 35 of <i>The Most Beautiful Roof in the World</i>. It begins with, “In Cameroon there ...” Say: “As I read these pages aloud, think about the following question: How does Meg Lowman’s research in Cameroon and Panama <i>compare</i> or <i>contrast</i> to her work in Blue Creek?” • Read aloud pages 35–36 as students follow along silently. • Give students 2 minutes to think on their own, and then briefly discuss the question with their group. • Invite several students to share out whole group. Listen for statements such as: “She uses an inflatable raft or construction crane instead of walkways; she researched the emergent tops of trees instead of columns from the floor to the understory; she is studying leaves and plants in these places too,” or similar ideas. • Explain to students that they now will reread small chunks of the text on their own. Their purpose is to look for the details that describe the research methods Meg Lowman uses in Cameroon and Panama. • Give students 3 to 4 minutes to first read paragraph 1 on page 35 (“In Cameroon there were no walkways...” through “... leaves in the middle of the crowns or within the canopy itself.”) • Then discuss: <ul style="list-style-type: none"> * “How did Meg Lowman conduct her research in Cameroon?” • Next, allow students 3 to 4 minutes to read the last paragraph on page 36. (This runs from “In Panama, at another site” through “... she found a single vine could lace together sixty-four different canopy trees.”) • Then discuss: <ul style="list-style-type: none"> * “How did Meg Lowman conduct her research in Panama?” 	<ul style="list-style-type: none"> • When possible, provide text or materials in students’ L1. This can help students understand materials presented in English. • Students needing additional supports may benefit from partially filled-in graphic organizers. • ELL language acquisition is facilitated by interacting with native speakers of English who provide models of language.



Comparing Two Main Ideas in an Informational Text:
Meg Lowman’s Methods for Researching the Rainforest (Pages 35–36)

Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none"> • Display the Researching in the Rainforest three-column Note-catcher and distribute one per student plus one sheet per group to fill out collectively. • Explain to students that they will work with their group members to fill out their own Note-catchers and then work together to gather the information onto one form. Students will have to look back at pages 14–15 to remind themselves of how Meg gets to the canopy in Belize (8–10 minutes). • Let students review the Note-catchers. Clarify any directions as necessary. • Circulate to support as needed. • After students have completed their charts, invite several students to share out the details they recorded whole group. • Now that students have examined the text more closely, once again pose the question: “How is Meg Lowman’s research in Cameroon and Panama different or similar to her work in the Blue Creek rainforest of Belize?” • Invite several students to share new ideas whole group. 	<ul style="list-style-type: none"> •
<p>B. Group Read: Text-Dependent Questions (15 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can use quotes from the text as evidence in my answers to questions.” • Ask several students to remind the class of the meaning of the words <i>quotes</i> (dialogue or speaking parts in a book, surrounded by quotation marks) and <i>evidence</i> (facts; details from the book; proof). • Distribute the Text-Dependent Questions: Researching the Rainforest, Pages 35–36 (one per student). • Ask students to read through the questions as a group and then work together to go back to pages 35–36 to find answers. After they have talked as a group, remind students to record answers on their individual Text-Dependent Questions: Researching the Rainforest, Pages 35–36. • Move throughout the room to offer support or clarification. Continue to remind students to go back into the text to find evidence. • Once students have completed their answers, cold call a few to share their responses with the whole group. • Ask students to hold on to their sheets; they will revise them during the next part of the lesson. 	<ul style="list-style-type: none"> • ELLs may be unfamiliar with Tier 2 vocabulary words (e.g., <i>use, text, answers, questions</i>). Clarify vocabulary with students as needed. • Consider giving students who struggle with language fewer questions. • Consider providing extra time for tasks and answering questions in class discussions. Some students need more time to process and translate information.



Comparing Two Main Ideas in an Informational Text:
Meg Lowman’s Methods for Researching the Rainforest (Pages 35–36)

Work Time (continued)	Meeting Students’ Needs
<p>C. New Vocabulary Work: Key Vocabulary to Deepen Understanding (10 minutes)</p> <ul style="list-style-type: none"> • Students remain in groups. Introduce the learning target: “I can determine the meaning of new words in <i>The Most Beautiful Roof in the World</i>.” • Ask students to share out a few strategies that they use to determine the meaning of new words. Listen for strategies such as: “use context clues; break the word into familiar parts; look at pictures on the page for clues,” etc. • List the following words on the board: <ul style="list-style-type: none"> * immense, inflatable, dirigible, pontoons, numerous, qualities, consumed, grueling, lurked, gondola, steer, linked, thorough • Remind students of the game Charades (from Module 1). Explain that each member of the group will choose a word from this list to silently perform for their group members to guess. Each member of the group should get a turn to act out at least one word. Clarify instructions as necessary. • Give the class 2 to 3 minutes to play Charades. Circulate to support as needed. • After students have acted out their words, review the following terms whole group. Ask several students to share out the meaning of the following words: <ul style="list-style-type: none"> * <i>immense</i>: huge; enormous * <i>inflatable</i>: can be filled with air * <i>dirigible</i>: blimp; airship * <i>pontoons</i>: floating supports * <i>numerous</i>: many; a large number of * <i>qualities</i>: characteristics; traits * <i>consumed</i>: eaten; used up * <i>grueling</i>: difficult; terrible; hard * <i>lurked</i>: lay in wait; prowled * <i>gondola</i>: cable car; wide-mouthed traveling container 	<ul style="list-style-type: none"> • Students needing additional supports may benefit from partially filled-in Double Bubble maps. • Consider allowing students who struggle with written language the opportunity to dictate their ideas to a partner or teacher. • Consider providing extra time for tasks and answering questions in class discussions. Some students need more time to process and translate information.



Comparing Two Main Ideas in an Informational Text:
Meg Lowman’s Methods for Researching the Rainforest (Pages 35–36)

Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none">* <i>steer</i>: guide; turn; maneuver* <i>linked</i>: connected; joined* <i>thorough</i>: careful; systematic; detailed• Then give students 1 to 2 minutes to work with group members to revise their answers to the text-dependent questions, based on new understandings.• As time allows, invite several students to share out answers their group revised and how they applied any new understandings about vocabulary to improve their responses.• Collect students’ text-dependent questions sheets. Read over to informally assess students’ ability to respond to the questions using key words and details from the text.	<ul style="list-style-type: none">•



Comparing Two Main Ideas in an Informational Text:
Meg Lowman’s Methods for Researching the Rainforest (Pages 35–36)

Closing and Assessment	Meeting Students’ Needs
<p>A. Debrief: Four Corners (5 minutes)</p> <ul style="list-style-type: none"> • Post the Four Corners sheets in different corners or areas of the room: Walkways, Staples, Floating Raft, Crane (see Teaching Note). • Bring the entire class together. Say: “You have read about the ways that Meg Lowman conducts research in the rainforest. Now you are going to ‘vote’ for your favorite method by participating in Four Corners. The four choices are: walkways, staples, floating raft, or crane.” • Direct students’ attention to the four categories listed around the room. Ask students to move to the corner for the method they choose. • Once students are in corners, ask them to talk with other students in that corner: <ul style="list-style-type: none"> * “Why did you choose this as your favorite method of research?” • Encourage students to refer to specific details (text or pictures) from the book to justify their method selection. Invite a few students to share out. 	<ul style="list-style-type: none"> • For students needing additional supports producing language, consider offering a sentence frame, sentence starter, or cloze sentence to provide the structure required.
Homework	Meeting Students’ Needs
<ul style="list-style-type: none"> • Reread pages 35–36 to someone (or yourself) at home. • Add any new learning about Meg Lowman to the Meg Lowman KWL chart in your journal. • Add any new understandings about biodiversity to the AQUA Biodiversity chart in your journal. • Add three words reviewed in class today to one of your glossaries. Choose from this list: compare, contrast, methods, quotes, evidence; immense, inflatable, dirigible, pontoons, numerous, qualities, consumed, grueling, lurked (35), gondola, steer, linked, thorough (36). 	<ul style="list-style-type: none"> • Audio recordings of text can aid students in comprehension. Students can pause and replay confusing portions while they follow along in the text. • For students who may have difficulty determining important words to add to their glossaries, consider prioritizing the following words for them: <i>methods, evidence, numerous.</i>



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 12

Supporting Materials



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World Map: Cameroon



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Researching in the Rainforest Three-Column Note-catcher
(Focus on pages 35-36 of *The Most Beautiful Roof in the World*)

Country	Research Method	Text That Describes the Research Method
Cameroon		
Panama		
Belize		



Researching in the Rainforest Three-Column Note-catcher
(Focus on pages 35-36 of *The Most Beautiful Roof in the World*)
(For Teacher Reference)

Country	Research Method	Text That Describes the Research Method
Cameroon	Inflatable raft (with dirigible)	Dirigible floats raft over canopy Raft settles on emergent crowns of canopy Hang over sides of raft on pontoons held by ropes Walk along pontoons
Panama	Construction crane (gondola)	Swings through the canopy on the crane Stands in gondola next to radio crane operator so he could steer her where she wanted to go
Belize	Walkways	Puts on a safety harness Climbs the metal ladders Climbs the staples (footholds) Clips the safety lines to the wires with each step Swings onto the platform



Text-Dependent Questions: Researching the Rainforest, Pages 35–36

1. According to the text, what is a *dirigible*? Support your answer with evidence from the text.

2. The author states, “As fun as this giant trampoline in the sky was, working from it was also *grueling*.” What does the word *grueling* mean in this sentence? Support your answer with evidence from the text.

3. On page 36, the author describes how when Meg Lowman stepped into a battalion of army ants, she *screamed bloody murder*. What does the expression *screamed bloody murder* mean? Why did Meg do this? Support your answer with evidence from the text.



Text-Dependent Questions: Researching the Rainforest, Pages 35–36

1. According to the text, what is a *dirigible*? Support your answer with evidence from the text.

A dirigible is like a blimp and is used to carry the inflatable raft to the canopy; the text says, “There was an immense inflatable raft that a dirigible floated over the rainforest canopy.” In the photograph above the paragraph, there is a picture of a blimp above the trees.

2. The author states, “As fun as this giant trampoline in the sky was, working from it was also *grueling*.” What does the word *grueling* mean in this sentence? Support your answer with evidence from the text.

Very hard or difficult; the text states it was grueling, then goes on to say the “sun slammed down on scientists like a sledgehammer,” and that temperatures reached 120 degrees every day.

3. On page 36, the author describes how when Meg Lowman stepped into a battalion of army ants, she *screamed bloody murder*. What does the expression *screamed bloody murder* mean? Why did Meg do this? Support your answer with evidence from the text.

It means to scream loudly; text says she “woke the entire camp” and that everybody thought that she had been bitten by the poisonous Gabon viper.



Walkways

Staples



**Floating
Raft**

Crane



Grade 5: Module 2A: Unit 2: Lesson 13

Interviewing Meg Lowman: What Does it Mean to be a Responsible Scientist? (Pages 37–39)



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Interviewing Meg Lowman:

What Does it Mean to be a Responsible Scientist? (Pages 37–39)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can make inferences using quotes from the text. (RI.5.1)
- I can determine the main idea(s) of an informational text based on key details. (RI.5.2)
- I can explain important relationships between people, events, and ideas in a historical, scientific, or technical text using specific details in the text. (RI.5.3)
- I can develop the topic with facts, definitions, details, and quotations. (W.5.2)
- I can use precise, content-specific vocabulary to inform or explain about a topic. (W.5.2)
- I can produce clear and coherent writing that is appropriate to task, purpose, and audience. (W.5.4)

Supporting Learning Targets

- I can explain what happened during the night walk.
- I can write interview questions for Meg Lowman about the rainforest spider from the point of view of a scientist, using scientific vocabulary.
- I can create answers to interview questions by inferring how Meg Lowman would answer them.
- I can revise interview question and answers, given feedback from my peers.

Ongoing Assessment

- Journal (Meg Lowman KWL chart, AQUA Biodiversity chart, glossaries)
- Interview



Interviewing Meg Lowman:

What Does it Mean to be a Responsible Scientist? (Pages 37–39)

Agenda	Teaching Notes
<p>1. Opening</p> <p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <p>2. Work Time</p> <p>A. Read-aloud and Rereading: The Night Walk (15 minutes)</p> <p>B. Writing a Short Interview with Meg Lowman (20 minutes)</p> <p>C. Critique and Feedback (15 minutes)</p> <p>3. Closing and Assessment</p> <p>A. Debrief (5 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none"> • In advance: Consider writing the vocabulary words on a large piece of chart paper beforehand to save time during the lesson. • In this lesson, students write interview questions that they would like to ask Meg Lowman about her research. This activity serves as an engaging way for them to reread and look back into text for the purpose of promoting deeper understanding of the topic. It also gives students the chance to revisit and enhance their understanding of both the structure and the purpose of interviews, and of how interviews are used to communicate scientific research. • Review: Praise-Question-Suggest and Fist to Five protocols in Checking for Understanding Techniques (see Appendix 1).

Lesson Vocabulary	Materials
<p>explain, point of view, scientific vocabulary, inferring; winching (37); identical, inhabitant, “the ends justify the means” (39)</p>	<ul style="list-style-type: none"> • <i>The Most Beautiful Roof in the World</i> (book; one per student) • Meg Lowman, Rainforest Scientist KWL anchor chart (from Lesson 1)



Interviewing Meg Lowman:

What Does it Mean to be a Responsible Scientist? (Pages 37–39)

Opening	Meeting Students' Needs
<p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <ul style="list-style-type: none">• Ask students to take out their journals and share with a partner their homework from Lesson 12: one thing each they added to the Meg Lowman KWL and AQUA charts, and an academic word and a scientific word from pages 35–36 that they selected for their glossaries, and why they chose those words.• Say: “Today you are going to write interview questions and answers from the perspective of scientists. Let’s think about the interviews with scientists we have read during this module.”• Ask several students to share out what they recall about the interviews (i.e., Bryson Voirin, sloth canopy researcher; Eve Nilson, studying frogs in the Amazon; four interview questions with Meg Lowman, rainforest scientist).• Ask students to consider: “What is the purpose of interviewing a scientist?” Invite students to share their ideas with a partner.• Allow several students to share out whole group. Listen for answers such as: “to learn about their research; learn about why they conduct research; how they research; where they research; communicate new discoveries,” or similar ideas.	<ul style="list-style-type: none">• Visuals can help students comprehend questions and discussions. Chart main points in answers and post all questions asked to students.



Interviewing Meg Lowman:

What Does it Mean to be a Responsible Scientist? (Pages 37–39)

Work Time	Meeting Students' Needs
<p>A. Read-aloud and Rereading: The Night Walk (15 minutes)</p> <ul style="list-style-type: none"> • Ask students to join their groups of four. • Introduce the learning target: “I can explain what happened during the night walk.” Ask a few students to share out the meaning of <i>explain</i> (give details; describe). • Say: “To learn more about Meg Lowman’s research in the rainforest, we are going to read about a night walk Meg Lowman went on with her sons James and Edward.” • Orient students to page 37 of <i>The Most Beautiful Roof in the World</i>. Ask them to follow along silently as page 37 to the middle of page 39 is read aloud. Beginning with “That night after supper . . .” through “What is permissible, or justifiable, is always a concern—do the ends justify the means?” • Then give students 3 to 5 minutes to reread the same text, independently, considering this question: “What happened during the night walk?” • After students have reread the pages, invite them to talk in their groups about what happened during the night walk. • Allow several students to share out whole group. Listen for answers such as: “They found a new species of spider—a slingshot spider; Meg Lowman collected the spider for study; her sons were worried she had killed the last spider of its kind,” or similar details. • Briefly review key vocabulary from these pages. Ask students to suggest definitions and share the strategies that they use to determine the meaning of: <ul style="list-style-type: none"> * <i>winching</i>: pulling in; cranking * <i>identical</i>: exactly the same * <i>inhabitant</i>: one who lives there; occupant * <i>the ends justify the means</i>: expression meaning: “If you do something bad to accomplish something good, then it is okay.” 	<ul style="list-style-type: none"> • Provide nonlinguistic symbols (e.g., a moon for <i>night</i>, a stick figure walking for <i>walk</i>) to assist struggling readers in making connections with vocabulary. These symbols can be used throughout the year. Specifically, they can be used in directions and learning targets. • Provide ELLs bilingual word-for-word translation dictionaries or online translation sources such as Google Translate to assist with comprehension. ELLs should be familiar with how to use glossaries or dictionaries. • All students developing academic language will benefit from direct instruction of academic vocabulary.



Interviewing Meg Lowman:

What Does it Mean to be a Responsible Scientist? (Pages 37–39)

Work Time (continued)	Meeting Students' Needs
<p>B. Writing a Short Interview with Meg Lowman (20 minutes)</p> <ul style="list-style-type: none"> • Place students in pairs. • Introduce the learning targets: “I can write interview questions for Meg Lowman about the rainforest spider from the point of view of a scientist, using scientific vocabulary,” and “I can create answers to interview questions by inferring how Meg Lowman would answer them.” • Ask several students to share the meaning of: <ul style="list-style-type: none"> * <i>point of view</i>: perspective; who is doing the thinking or talking * <i>scientific vocabulary</i>: words that name plants or animals; names of tools scientists use; names and steps of research methods * <i>inferring</i>: coming to a conclusion or forming an opinion based on evidence or reasoning • Say: “Now you will create interview questions for Meg Lowman. Pretend that you are Eve Nilson, the teenage scientist we read about in Unit 1. What questions would you want to ask Dr. Lowman? Writing from the <i>point of view</i> of a scientist like Eve Nilson helps us to think more deeply about why and how scientists conduct research.” • Give students 2 minutes to work with their partners to reread the first four sentences of paragraph 5 on page 39, starting with “Meg has an answer for her sons...” through “... it is responsible collection for identification that makes her a good scientist.” • Then prompt students to consider: “What are some questions a young scientist like Eve Nilson might want to ask expert scientist Meg Lowman about her research of the slingshot spider?” • Invite pairs to take 2 minutes to brainstorm potential interview questions. • Cold call several students to share out their possible questions. • Ask the class: “What makes a good interview question?” Invite students to share out ideas and list them on the board. • Listen for students to list some of the following: “asks for specific details; gets at <i>why</i> Meg Lowman researches; <i>why</i> she uses certain methods; helps us understand what makes her a ‘good’ scientist; helps us find out more about <i>what</i> she researches; will use scientific and academic vocabulary,” or similar ideas. • Suggest any of these criteria that students do not mention. 	<ul style="list-style-type: none"> • Consider providing either questions or answers for students who struggle and have them provide the corresponding question or answer. • Consider allowing students who struggle with writing to dictate their suggestions for questions and answers to a partner or teacher. • Consider partnering an ELL with a student who speaks the same L1 when discussion of complex content is required. This can let students have more meaningful discussions and clarify points in their L1. • Provide anchor charts for processes such as How to Write an Interview. This would include steps and criteria.



Interviewing Meg Lowman:

What Does it Mean to be a Responsible Scientist? (Pages 37–39)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Tell students that they will need to work with their partners to create four interview questions that Eve Nilson might ask Meg Lowman about her research of the slingshot spider. Ask them to include one question that specifically asks Dr. Lowman to justify why she took the slingshot spider to study. Students should write their interview questions and answers on one shared page. Clarify instructions as necessary.• Give students 5 minutes to write their questions. Circulate to support as needed. Remind students to refer to the criteria for good interview questions that they listed. Encourage them to use the scientific and academic vocabulary in the glossary.• Next, ask students to write answers from the <i>point of view</i> of Meg Lowman. Tell students: “You will need to <i>infer</i> what Meg Lowman’s answers would be, based on what you have read.” Clarify instructions as necessary.• Give students 5 minutes to write their answers.	<ul style="list-style-type: none">•



Interviewing Meg Lowman:

What Does it Mean to be a Responsible Scientist? (Pages 37–39)

Work Time (continued)	Meeting Students' Needs
<p>C. Critique and Feedback (15 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can revise interview questions and answers given feedback from my peers.” Ask several students to share what it means to <i>revise</i> (edit; improve; change). Then ask the class to define <i>feedback</i> (comments; questions; suggestions). • Say: “<i>Revising</i> work based on specific <i>feedback</i> helps us to improve our writing skills.” • Remind students of the Praise-Question-Suggest protocol that they have used previously. Explain that after they read their peers’ questions and answers, they will need to offer one praise, ask one question about the interview, and make one suggestion for revision. Clarify instructions as necessary. • Tell students that they will join another pair. Each pair will have 2 minutes to share with the other pair just one question and answer for which they most want feedback. • Each pair will share by reading one question and answer that they wrote. • One student reads the role of “Eve Nilson.” • One partner reads the role of “Dr. Meg Lowman.” • The other pair will use the Praise-Question-Suggest protocol to offer feedback. • Circulate to support as needed. • Once pairs have shared, give them 2 to 3 minutes to revise their interview question and answer. • Cold call several pairs to share out: <ul style="list-style-type: none"> * “What feedback did you find most useful?” * “How did your revisions improve your writing?” • Ask students to reflect on this activity: “How did writing questions and answers from scientists’ points of view help us to understand more about Meg Lowman’s research?” • Cold call students to share out their ideas. 	<ul style="list-style-type: none"> • Consider writing and breaking down multistep directions into numbered elements. Students can return to these guidelines to make sure they are on track.



Interviewing Meg Lowman:

What Does it Mean to be a Responsible Scientist? (Pages 37–39)

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (5 minutes)</p> <ul style="list-style-type: none"> • Ask: “What did you learn about Meg Lowman?” Add students’ ideas to L column of the Meg Lowman, Rainforest Scientist KWL anchor chart. • Read the learning targets aloud. Pause after each for students to show their level of mastery toward the target, using the Fist to Five protocol. <p><i>Note students showing a fist or 1, 2, or 3, as they may need more support or strategies to understand the text and new vocabulary.</i></p>	<ul style="list-style-type: none"> • For students needing additional supports producing language, consider offering a sentence frame, sentence starter, or cloze sentence to provide the structure required.
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> • Reread pages 37–39 and your interview to someone (or yourself) at home. Discuss with that person whether you would have taken the spider out of the forest, and why. • In your journal, write a brief response to the question: “As a scientist, would you take a new species out of the rainforest? Why or why not?” • Choose three academic words that we reviewed in class today to add to your glossaries. Choose from this list: explain, point of view, scientific vocabulary, inferring, winching (37), identical, inhabitant, “the ends justify the means” (39). 	<ul style="list-style-type: none"> • Audio recordings of text can aid students in comprehension. Students can pause and replay confusing portions while they follow along in the text. • For students who may have difficulty determining important words to add to their glossaries, consider prioritizing the following words for them: <i>explain, point of view, identical</i>.



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 14

Analyzing How Rainforest Scientists Communicate Their Research (Pages 39–42)



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Analyzing How Rainforest Scientists Communicate Their Research (Pages 39–42)

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can explain what a text says using quotes from the text. (RI.5.1)
- I can determine the main idea(s) of an informational text based on key details. (RI.5.2)
- I can summarize an informational text. (RI.5.2)
- I can determine the meaning of academic words or phrases in an informational text. (RI.5.4)
- I can determine the meaning of content words or phrases in an informational text. (RI.5.4)

Supporting Learning Targets

- I can explain how Meg Lowman communicates her research.
- I can explain biodiversity by using quotes from the text.
- I can determine ways to explain biodiversity to others.
- I can determine the meaning of new words in *The Most Beautiful Roof in the World*.

Ongoing Assessment

- Journal (Meg Lowman KWL chart, AQUA Biodiversity anchor chart, glossaries)



Analyzing How Rainforest Scientists Communicate Their Research (Pages 39–42)

Agenda	Teaching Notes
<p>1. Opening</p> <p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <p>2. Work Time</p> <p>A. Read-aloud and Rereading: How Does Meg Lowman Communicate Her Research? (15 minutes)</p> <p>B. Group Work: Explaining Biodiversity (25 minutes)</p> <p>C. Key Vocabulary to Deepen Understanding (10 minutes)</p> <p>3. Closing and Assessment</p> <p>A. Debrief and Looking Ahead (5 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none"> • During Work Time Part B, groups will work on task cards. Each group will need another group to share with at the end of Part B.

Lesson Vocabulary	Materials
<p>communicate, explain, determine, synthesize, taking action; balance, conservation, concern, traces (39), illuminated, enter, figures (41), pondering (42)</p>	<ul style="list-style-type: none"> • <i>The Most Beautiful Roof in the World</i> (book; one per student) • Meg Lowman, Rainforest Scientist KWL anchor chart (from Lesson 1) • What Is Biodiversity? task cards (1–5, one per group) • AQUA Biodiversity anchor chart (from Lesson 4) • Sticky notes for evidence flags (for Part B of Work Time and homework)



Analyzing How Rainforest Scientists Communicate Their Research (Pages 39–42)

Opening	Meeting Students' Needs
<p>A. Reviewing Homework and Engaging the Reader (5 minutes)</p> <ul style="list-style-type: none"> • Ask students to take out their journals. Direct students to share with a partner their homework from Lesson 13: the three new academic words from pages 37–39 and their written response to the question: “As a scientist, would you take a new species out of the rainforest? Why or why not?” • Explain to students: “Today we are going to read the final pages of our book about Meg Lowman, <i>The Most Beautiful Roof in the World</i>. We will also look back at some of the passages to help us confirm our understanding of what biodiversity is.” 	<ul style="list-style-type: none"> • Consider partnering an ELL with a student who speaks the same L1 when discussion of complex content is required. This can let students have more meaningful discussions and clarify points in their L1.
Work Time	Meeting Students' Needs
<p>A. Read-aloud and Rereading: How Does Meg Lowman Communicate Her Research? (15 minutes)</p> <ul style="list-style-type: none"> • Ask students to join their groups of four. • Introduce the learning target: “I can explain how Meg Lowman communicates her research.” Invite several students to offer definitions for the word <i>communicate</i> (share; make public). • Say: “As I read these final pages aloud, think about how Meg Lowman <i>communicates</i> her research.” • Orient students to page 39, and tell them to follow along silently as pages 39–42 are read aloud, beginning with “But we have to take it back. I’m going to send it to the Smithsonian for identification,” through to the last page. • Give students 3 to 4 minutes to discuss: “How does Meg Lowman <i>communicate</i> her research?” • Direct students’ attention to the Meg Lowman, Rainforest Scientist, KWL anchor chart. Invite several students to share out their response to the question. Record ideas in the L column of the chart (as students record ideas in their own KWL). • Listen for ideas such as: “She allowed the author of this book to write about her work in the rainforests; she collects samples to send back to other scientists or the Smithsonian; she records, sketches, traces her findings; records her figures/data on her computer.” 	<ul style="list-style-type: none"> • Visuals can help ELLs and other students comprehend questions and discussions. Chart main points in answers and post all questions asked to students.



Analyzing How Rainforest Scientists Communicate Their Research (Pages 39–42)

Work Time (continued)	Meeting Students' Needs
<p>B. Group Work: Explaining Biodiversity (25 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can explain biodiversity by using quotes from the text.” • Cold call several students to share what they recall about the meaning of the word <i>explain</i> (give details; make clear; describe). • Tell students that they are going to begin to <i>synthesize</i> what they have learned from all of their readings about biodiversity by explaining what biodiversity is. Say to students: “Remember that to <i>synthesize</i> something means to combine all your thinking and learning about a topic. Tomorrow, you will have a chance to write about rainforest scientist Meg Lowman, so it is important that today you continue to listen carefully and take good notes.” • Distribute one What Is Biodiversity? task card to each group. • Explain the directions to students: “Each group has a task card. As a group, you will do the following: <ul style="list-style-type: none"> * Reread the section of text noted on the card. * Record quotes from the text that help explain what biodiversity is. * Review Understandings from the AQUA Biodiversity anchor chart. * Discuss what you think biodiversity is based on the quotes you chose. * Write a sentence that explains what biodiversity is.” • Clarify directions as necessary. • Give students 10 minutes to work in their group on their task cards. Circulate to support as needed. • Then ask each group to find one other group that has a different task card. • In these new combined groups, give students 10 minutes to do the following: <ul style="list-style-type: none"> * Share the sentence you wrote to explain biodiversity. • Discuss: <ul style="list-style-type: none"> * What page from the text did you reread? * What quotes from the text helped to explain biodiversity? * How were our sentences about biodiversity similar? * How were our sentences different? 	<ul style="list-style-type: none"> • Students needing additional supports may benefit from partially filled-in task cards. • Consider writing and breaking down multistep directions into numbered elements. ELLs can return to these guidelines to make sure they are on track. • Consider providing extra time for tasks and answering questions in class discussions. Some students need more time to process and translate information.



Analyzing How Rainforest Scientists Communicate Their Research (Pages 39–42)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Circulate to support as needed.• As time allows, invite several students to share out biodiversity sentences they heard from another group that they think clearly explain what biodiversity is.• Ask students to return to their regular groups of four.• Introduce the learning target: “I can determine ways to explain biodiversity to others.”• Cold call students to explain what it means to <i>determine</i> (decide; choose).• Direct the class’s attention to the Action column (last A) of the AQUA Biodiversity anchor chart.• Ask students to briefly discuss with their groups: “What is <i>taking action</i>?” Invite several students to share out whole group. Listen for ideas such as: “doing something; achieving a goal,” etc.• Give students 3 minutes to brainstorm in their groups about ways they could “take action” to explain biodiversity to others (peers, family members, friends, community members, etc.).• Cold call students to share their ideas. List students’ ideas in the last A column of the AQUA chart. Ask students to record ideas on the AQUA chart in their journals. Remind them that these notes may be very helpful for them during their assessment in the next lesson.• Distribute sticky notes to use as evidence flags (students should be familiar with these from Module 1). Ask students to place a flag on each of the pages from the task cards, since they may want to refer to these during the assessment: pages 12, 13, and 30.	<ul style="list-style-type: none">•



Analyzing How Rainforest Scientists Communicate Their Research (Pages 39–42)

Work Time (continued)	Meeting Students' Needs
<p>C. Key Vocabulary to Deepen Understanding (10 minutes)</p> <ul style="list-style-type: none"> • Students remain in their groups of four. • List the following words on the board: <ul style="list-style-type: none"> * balance, conservation, concern, traces, illuminated, enter, figures, pondering • Review the learning target: “I can determine the meaning of new words in <i>The Most Beautiful Roof in the World</i>.” • Say: “We have learned a lot about Meg Lowman through our close reading of <i>The Most Beautiful Roof in the World</i>. The words I have listed focus on two things we have learned about her: <ul style="list-style-type: none"> * How Meg Lowman communicates her research * How she takes action to preserve biodiversity.” • Ask students to spend 3 to 4 minutes to discuss in groups: <ul style="list-style-type: none"> * Which words relate to communicating research? * Which words relate to taking responsible actions? • Encourage them to look back at pages 39–42 for context clues to help them determine the meaning of any unknown words. • After student groups have sorted the words, gather students’ attention whole group for a brief discussion about the meaning of each word. Listen for students to make suggestions such as: <ul style="list-style-type: none"> * <i>balance</i> (v): make things equal; keep steady (academic) * <i>conservation</i>: protection; preservation (scientific) * <i>concern</i>: worry; fear (academic) * <i>traces</i>: outlines; tracks (academic) * <i>illuminated</i>: lit up; supplied with light (academic) * <i>enter</i>: input; type in (academic) * <i>figures</i>: totals; numbers (academic) * <i>pondering</i>: thinking about; considering (academic) • 	<ul style="list-style-type: none"> • All students developing academic language will benefit from direct instruction of academic vocabulary. • Consider providing visuals of each vocabulary word to facilitate vocabulary acquisition for students who struggle with language.



Analyzing How Rainforest Scientists Communicate Their Research (Pages 39–42)

Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask groups to briefly discuss whether they now would move any words to the other category, based on new understandings.• Cold call individuals to share out a word they determined should go in each category and why that word fits in that category.	<ul style="list-style-type: none">•



Analyzing How Rainforest Scientists Communicate Their Research (Pages 39–42)

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (5 minutes)</p> <ul style="list-style-type: none"> • Ask students to think about the two big ideas they have discussed today: <ul style="list-style-type: none"> * How Meg Lowman communicates her research * What actions Meg Lowman takes to conserve biodiversity • Invite several students to share their ideas whole group. Add to the L column of the KWL anchor chart. (Students should record ideas in their journal KWL.) • Congratulate students on completing their close read about rainforest scientist Meg Lowman. Remind them that tomorrow they will have an opportunity to share through writing all they have learned about Meg Lowman and her exciting work. • Read the learning targets aloud. Pause after each for students to show a thumbs-up (I got it!), thumbs-sideways (sort of have it), or thumbs-down (didn't get it) for each target. • Distribute more sticky notes for the class to use as evidence flags for tonight's homework. 	<ul style="list-style-type: none"> • For students needing additional supports producing language, consider offering a sentence frame, sentence starter, or cloze sentence to provide the structure required.
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> • Reread pages 39–42 to someone (or yourself) at home. As you read, use evidence flags to mark the following passages: <ul style="list-style-type: none"> * Describe how Meg Lowman conducts research * Describe what Meg Lowman researches • 2. Add four vocabulary words from pages 39–42 to the glossaries in your journal: <ul style="list-style-type: none"> * Two “academic” words that describe Meg Lowman’s thoughts or feelings about her research * Two “scientific” words that describe what Meg Lowman studies <p><i>Note: In Lesson 15, students will complete the End of Unit 2 On-Demand Assessment.</i></p>	<ul style="list-style-type: none"> • Audio recordings of text can aid students in comprehension. Students can pause and replay confusing portions while they follow along with the text.



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 14

Supporting Materials



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What Is Biodiversity? Task Cards (1–5)

TASK CARD #1

READ On page 12, read the last two sentences of paragraph 1 (starting with: “In this shadowed world ...”) and all of paragraph 2 (ending with “... high above the forest floor in the tanks of bromeliads”).

QUOTES Record quotes from the text that help to explain biodiversity.

REVIEW Look back at the AQUA Biodiversity anchor chart for ideas about biodiversity.

EXPLAIN Write one sentence to explain what biodiversity is.



What Is Biodiversity? Task Cards (1–5)

TASK CARD #2

READ On page 12, read all of paragraph 3 (starting with the phrase “The rainforest is a timeless ...” and ending with “... a rush of opportunistic species to fill the gaps”).

QUOTES Record quotes from the text that help to explain biodiversity.

REVIEW Look back at the AQUA Biodiversity anchor chart for ideas about biodiversity.

EXPLAIN Write one sentence to explain what biodiversity is.



What Is Biodiversity? Task Cards (1–5)

TASK CARD #3

READ On page 13, read all of paragraph 1 (starting with “Meg Lowman believes ...” and ending with “... how it will have an impact”).

QUOTES Record quotes from the text that help to explain biodiversity.

REVIEW Look back at the AQUA Biodiversity anchor chart for ideas about biodiversity.

EXPLAIN Write one sentence to explain what biodiversity is.



What Is Biodiversity? Task Cards (1–5)

TASK CARD #4

READ On page 13, read all of paragraph 2 (starting with “When Meg wants to have a close look ...” and ending with “How many species can be removed before it will break?”).

QUOTES Record quotes from the text that help to explain biodiversity.

REVIEW Look back at the AQUA Biodiversity anchor chart for ideas about biodiversity.

EXPLAIN Write one sentence to explain what biodiversity is.



What Is Biodiversity? Task Cards (1–5)

TASK CARD #5

READ On page 30, read all of paragraph 2 (starting with “Continuing to count ...” and ending with “... and at the most thirty different species”).

QUOTES Record quotes from the text that help to explain biodiversity.

REVIEW Look back at the AQUA Biodiversity anchor chart for ideas about biodiversity.

EXPLAIN Write one sentence to explain what biodiversity is.



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 15

End of Unit Assessment: On-Demand Analysis of Meg Lowman's Research in the Rainforest



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End of Unit Assessment:
On-Demand Analysis of Meg Lowman's Research in the Rainforest

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can write informative/explanatory texts. (W.5.2)

I can use precise, content-specific vocabulary to inform or explain about a topic. (W.5.2)

I can choose evidence from informational texts to support analysis, reflection, and research. (W.5.9) (W.5.4)

Supporting Learning Targets

- I can analyze Meg Lowman's research in the rainforest.
- I can justify my analysis by citing evidence from the text.
- I can use academic and scientific vocabulary accurately in my writing.
- I can reflect on my learning.

Ongoing Assessment

- End of Unit 2 Assessment
- Tracking My Progress, End of Unit 2 recording form



End of Unit Assessment:
On-Demand Analysis of Meg Lowman’s Research in the Rainforest

Agenda	Teaching Notes
<p>1. Opening</p> <p style="padding-left: 20px;">A. Reviewing Homework and Engaging the Reader (10 minutes)</p> <p>2. Work Time</p> <p style="padding-left: 20px;">A. End of Unit Assessment: Analyzing Meg Lowman’s Research in the Rainforest (40 minutes)</p> <p style="padding-left: 20px;">B. Learning Target Reflection (5 minutes)</p> <p>3. Closing and Assessment</p> <p style="padding-left: 20px;">A. Debrief (5 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none"> • Students will take the End of Unit 2 Assessment: On-Demand Analysis of Meg Lowman’s Research in the Rainforest today. They will need to write a two-paragraph essay explaining what and how Meg Lowman researches in the rainforest. Later, in Unit 3, students will revisit the other guiding question about how scientists communicate their findings. • Use the Extended Response (4-Point) Rubric to score student assessments.

Lesson Vocabulary	Materials
analyze, cite, evidence, accurately	<ul style="list-style-type: none"> • <i>The Most Beautiful Roof in the World</i> (book; one per student) • Meg Lowman, Rainforest Scientist KWL anchor chart (from Lesson 1) • AQUA Biodiversity anchor chart (from Lesson 4) • End of Unit 2 Assessment: On-Demand Analysis of Meg Lowman’s Research in the Rainforest (one per student) • Accordion graphic organizer for paragraph writing (2 per student) • Tracking My Progress, End of Unit 2 recording form (one per student) • Extended Response (4-Point) Rubric (for teacher reference)



End of Unit Assessment:
On-Demand Analysis of Meg Lowman’s Research in the Rainforest

Opening	Meeting Students’ Needs
<p>A. Reviewing Homework and Engaging the Reader (10 minutes)</p> <ul style="list-style-type: none"> • Ask the class to take out their journals. Direct students to share with a partner their homework from Lesson 14, pages 39–42: <ul style="list-style-type: none"> * Two “academic” words that describe Meg Lowman’s thoughts or feelings about her research * Two “scientific” words that describe what Meg Lowman studies • Prompt partners to discuss how they determined whether the word was “academic” or “scientific.” • Ask students to take out <i>The Most Beautiful Roof in the World</i> with evidence flags from Lesson 14 homework. • Say to students: “Today you are going to complete the end of unit assessment. You will have time to plan, and then will write two separate paragraphs about how Meg Lowman explores the rainforest canopy, and what she learns about biodiversity. Review the passages from pages 39–42 that you marked with evidence flags describing how Meg Lowman conducts research and what she researches.” • Direct students to read through the Meg Lowman, Rainforest Scientist KWL anchor chart and AQUA Biodiversity anchor charts to review what they have learned about Meg Lowman as a scientist. • Ask students to consider: <ul style="list-style-type: none"> * What does Meg Lowman study? * How does she conduct her research? • Invite students to Pair-Share what they have learned about Meg Lowman. • Cold call students to share out whole group. 	<ul style="list-style-type: none"> • Consider partnering an ELL with a student who speaks the same L1 when discussion of complex content is required. This can let students have more meaningful discussions and clarify points in their L1.



End of Unit Assessment:
On-Demand Analysis of Meg Lowman’s Research in the Rainforest

Work Time	Meeting Students’ Needs
<p>A. End of Unit Assessment: Analyzing Meg Lowman’s Research in the Rainforest (40 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning targets: “I can analyze Meg Lowman’s research in the rainforest,” “I can justify my analysis by citing evidence from the text,” and “I can use academic and scientific vocabulary accurately in my writing.” • Ask several students to define: <ul style="list-style-type: none"> * <i>analyze</i>: examine, consider, evaluate * <i>cite evidence</i>: use quotes from the text; use details from the book * <i>accurate</i>: correct, true • Distribute the End of Unit 2 Assessment: On-Demand Analysis of Meg Lowman’s Research in the Rainforest and the Accordion graphic organizer for paragraph writing (two per student). • Invite students to quickly skim the assessment. • Point out to students that this will be a two-paragraph essay. Direct them to focus on the Criteria for Success listed at the bottom of the assessment. Ask students to pay particular attention to the fact that this is a two-part question. They will need to write a paragraph addressing each part of this question to fully respond to the prompt. Review with students the criteria for a good paragraph (topic sentence, correct punctuation and grammar, complete sentences that stay on topic, and concluding sentence). Address any clarifying questions. • Tell students they will have 30 minutes, broken into two sessions (planning and writing), to complete their essays. Inform students that this essay is on-demand: They should do their best in the time they have. They will need to use their books, journals, and anchor charts as references during the assessment. Clarify any instructions as necessary. • Part 1: Planning (15–20 minutes) • Ask students to begin planning their two paragraphs: <ul style="list-style-type: none"> * Skim the assessment prompt once again. * Locate information that addresses both parts of the prompt question from <i>The Most Beautiful Roof in the World</i>, their journals, and anchor charts. * Complete one Accordion graphic organizer for each paragraph. 	<ul style="list-style-type: none"> • Consider providing a modified assessment with fewer criteria for students who struggle with language. • Students needing additional supports may benefit from partially filled-in graphic organizers. • Consider allowing students who struggle with writing to dictate their assessment to a teacher. • Consider providing extra time for tasks and answering questions in class discussions. Some students need more time to process and translate information. ELLs receive extended time as an accommodation on NY State assessments.



End of Unit Assessment:
On-Demand Analysis of Meg Lowman’s Research in the Rainforest

Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none"> • Circulate to supervise; because this is a formal on-demand assessment, do not provide support other than formally approved accommodations. • Part 2: Writing the Essay (20–25 minutes) • Prompt students to begin writing. Encourage students to: <ul style="list-style-type: none"> * Reread the essay prompt. * Determine the sequence of their paragraphs. * Review the Criteria for Success. * Refer to the book, their journals, and anchor charts as needed. • Continue to circulate to supervise. • If students finish the assessment early, they may read independently. 	<ul style="list-style-type: none"> •
<p>B. Learning Target Reflection (5 minutes)</p> <ul style="list-style-type: none"> • Introduce the learning target: “I can reflect on my learning.” • Focus on the word <i>reflect</i>, and ask students for suggestions about what this means. Listen for students to share ideas such as: “look back at my work to think about what I did; how I did; what I am having trouble with; what I am doing well,” etc. • Distribute the Tracking My Progress, End of Unit 2 recording form to students. Explain that this is a self-assessment, exactly like the Tracking My Progress they completed at the end of the Mid- and End of Unit 1 Assessments. They will reflect on their progress toward the learning targets. Read through the tracker and provide clarification as necessary for students. • Ask students to independently complete their Tracking My Progress. Ask them to hold on to this sheet to refer to during the lesson debrief. 	<ul style="list-style-type: none"> • Consider allowing students who struggle with written language to dictate their reflections to a partner or teacher.



End of Unit Assessment:
On-Demand Analysis of Meg Lowman's Research in the Rainforest

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (5 minutes)</p> <ul style="list-style-type: none">• Congratulate students on completing their close read about and analysis of rainforest scientist Meg Lowman.• Pair up students. Ask them to share the reflections on their Tracking My Progress, End of Unit 2 recording form.• Invite several students to share out with the whole group.• Collect students' Tracking My Progress forms to review.• Collect students' journals to review before starting Unit 3.	<ul style="list-style-type: none">• For students needing additional supports producing language, consider offering a sentence frame, sentence starter, or cloze sentence to provide the structure required.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• None	<ul style="list-style-type: none">•



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 2: Lesson 15

Supporting Materials



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End of Unit 2 Assessment: On-Demand Analysis of Meg Lowman’s Research in the
Rainforest

Name:

Date:

Instructions:

- Read the essay prompt below.
- Refer to your book, journal, and anchor charts to locate information that helps you respond to the prompt.
- Use the two Accordion graphic organizers for paragraph writing (one for each paragraph) to arrange the “details” and “explains” you will include in your essay.
- Write a two-paragraph essay that responds to the prompt below.
- Use *The Most Beautiful Roof in the World*, your journals, and anchor charts as references during the assessment.
- Make sure to cite evidence from the text to support your answer.
- Use both academic and scientific vocabulary in your essay.

How does Meg Lowman explore the rainforest canopy, and what does she learn about biodiversity? After reading and analyzing *The Most Beautiful Roof in the World*, about rainforest scientist Meg Lowman, write an essay in which you address the question and analyze Meg Lowman’s research of biodiversity in the rainforests, providing examples to clarify your analysis.

Criteria for Success and Self-Assessment:

- Write two high-quality paragraphs that have:
 - * A topic sentence
 - * Correct punctuation
 - * Correct grammar
 - * Complete sentences that stay on topic
 - * A concluding sentence
- Include one paragraph on each of the following:
 - * How Meg Lowman conducts her research in the rainforest
 - * What Meg Lowman learns about biodiversity
- Use academic and scientific vocabulary accurately.



Accordion Graphic Organizer for Paragraph Writing

Use this graphic organizer to help you plan one paragraph of your essay about Meg Lowman.

Paragraph Topic:

Detail:

Explain:

Detail:

Explain:

Tracking My Progress, End of Unit 2

Name:

Date:

Learning Target: I can determine the meaning of new words in *The Most Beautiful Roof in the World*.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:

Tracking My Progress, End of Unit 2

Name: _____

Date: _____

Learning Target: I can determine the gist of a selection of text from
The Most Beautiful Roof in the World.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



End of Unit Assessment:
On-Demand Analysis of Meg Lowman's Research in the Rainforest

Name:

Date:

Tracking My Progress, End of Unit 2

Learning Target: I can synthesize what I read in *The Most Beautiful Roof in the World*.

1. The target in my own words is:

2. How am I doing? Circle one.

**I need more help
to learn this.**

I understand some of this.

I am on my way!

3. The evidence to support my self-assessment is:

Extended Response (4-Point) Rubric
(For Teacher Reference)

New York State Grade 4-5 Expository Writing Evaluation Rubric

CRITERIA	SCORE				Essays at this level:	Essays at this level:	Essays at this level:	Essays at this level:
	4	3	2	1				
<p>CONTENT AND ANALYSIS: the extent to which the essay conveys ideas and information clearly and accurately in order to support an analysis of topics or texts</p> <p>COMMAND OF EVIDENCE: the extent to which the essay presents evidence from the provided texts to support analysis and reflection</p>	<p>CCLS</p> <p>W.2 R.1-9</p>	<p>Essays at this level:</p> <ul style="list-style-type: none"> —clearly introduce a topic in a manner that follows logically from the task and purpose —demonstrate insightful comprehension and analysis of the text(s) —develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples from the text(s) —sustain the use of varied, relevant evidence —exhibit clear, purposeful organization 	<p>Essays at this level:</p> <ul style="list-style-type: none"> —clearly introduce a topic in a manner that follows from the task and purpose —demonstrate grade-appropriate comprehension and analysis of the text(s) —develop the topic with relevant facts, definitions, details, quotations, or other information and examples from the text(s) —sustain the use of relevant evidence, with some lack of variety —exhibit clear organization 	<p>Essays at this level:</p> <ul style="list-style-type: none"> —introduce a topic in a manner that follows generally from the task and purpose —demonstrate a literal comprehension of the text(s) —partially develop the topic of the essay with the use of some textual evidence, some of which may be irrelevant —use relevant evidence inconsistently —exhibit some attempt at organization 	<p>Essays at this level:</p> <ul style="list-style-type: none"> —introduce a topic in a manner that does not logically follow from the task and purpose —demonstrate little understanding of the text(s) —demonstrate an attempt to use evidence, but only develop ideas with minimal, occasional evidence which is generally invalid or irrelevant —exhibit little attempt at organization, or attempts to organize are irrelevant to the task 	<p>Essays at this level:</p> <ul style="list-style-type: none"> —demonstrate a lack of comprehension of the text(s) or task —provide no evidence or provide evidence that is completely irrelevant 		
<p>COHERENCE, ORGANIZATION, AND STYLE: the extent to which the essay logically organizes complex ideas, concepts, and information using formal style and precise language</p>	<p>W.2 L.3 L.6</p>	<ul style="list-style-type: none"> —link ideas using grade-appropriate words and phrases —use grade-appropriate precise language and domain-specific vocabulary —provide a concluding statement that follows from the topic and information presented —demonstrate grade-appropriate command of conventions, with occasional errors that do not hinder comprehension 	<ul style="list-style-type: none"> —inconsistently link ideas using words and phrases —inconsistently use appropriate language and domain-specific vocabulary —provide a concluding statement that follows generally from the topic and information presented —demonstrate emerging command of conventions, with some errors that may hinder comprehension 	<ul style="list-style-type: none"> —lack the use of linking words and phrases —use language that is imprecise or inappropriate for the text(s) and task —provide a concluding statement that is illogical or unrelated to the topic and information presented —demonstrate a lack of command of conventions, with frequent errors that hinder comprehension 	<ul style="list-style-type: none"> —exhibit no use of linking words and phrases —use language that is predominantly incoherent or copied directly from the text(s) —do not provide a concluding statement —are minimal, making assessment of conventions unreliable 			
<p>CONTROL OF CONVENTIONS: the extent to which the essay demonstrates command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling</p>	<p>W.2 L.1 L.2</p>	<ul style="list-style-type: none"> —demonstrate grade-appropriate command of conventions, with few errors 	<ul style="list-style-type: none"> —demonstrate grade-appropriate command of conventions, with some errors that may hinder comprehension 	<ul style="list-style-type: none"> —provide a concluding statement that follows generally from the topic and information presented —demonstrate a lack of command of conventions, with frequent errors that hinder comprehension 	<ul style="list-style-type: none"> —do not provide a concluding statement —are minimal, making assessment of conventions unreliable 			

- If the prompt requires two texts and the student only references one text, the response can be scored no higher than a 2.
- If the student writes only a personal response and makes no reference to the text(s), the response can be scored no higher than a 1.
- Responses totally unrelated to the topic, illegible, incoherent, or blank should be given a 0.
- A response totally copied from the text(s) with no original student writing should be scored a 0.