



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.*



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<b>Mid-Unit Assessment</b>	<b>Mid-Unit 2 Assessment: <i>The Most Beautiful Roof in the World</i> Quiz</b> 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.
<b>End of Unit Assessment</b>	<b>On-Demand Analysis of Meg Lowman’s Research in the Rainforest</b> 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.



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



Unit-at-a-Glance

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



Unit-at-a-Glance

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



Unit-at-a-Glance

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



Unit-at-a-Glance

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



Unit-at-a-Glance

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



Unit-at-a-Glance

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



Unit-at-a-Glance

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

**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).