



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



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Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Reviewing Homework and Engaging the Reader (10 minutes)Work Time<ol style="list-style-type: none">Read-aloud and Taking Notes: Meg Lowman Experiments in the Rainforest (15 minutes)Group Read: Rereading, Revising, and Sharing to Music (20 minutes)Key Vocabulary to Deepen Understanding (10 minutes)Closing and Assessment<ol style="list-style-type: none">Debrief and Review Learning Targets (5 minutes)Homework	<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.Please bear in mind that Youtube, social media video sites, and other website links may incorporate inappropriate content via comment banks and ads. While some lessons include these links as the most efficient means to view content in preparation for the lesson, be sure to preview links, and/or use a filter service, such as www.safeshare.tv, for actually viewing these links in the classroom.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 Protocol and Milling to Music strategy (see Appendix).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.



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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)



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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.



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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.



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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.



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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.



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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</i>, <i>conducted</i>, <i>process</i> (academic); <i>snapshots</i>, <i>barrier</i> (scientific).



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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



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