



EXPEDITIONARY
LEARNING

Grade 5: Module 2A: Unit 3: Lesson 1

How to Write Like a Scientist in the Field:

Introduction to the Elements of Field Journals



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How to Write Like a Scientist in the Field:
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Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can compare and contrast the organizational structure of different informational texts. (RI.5.5)
- I can compare and contrast multiple accounts of the same event or topic. (RI.5.6)
- I can analyze how visual elements add to the meaning, tone, or beauty of literary text. (RL.5.7)
- I can effectively engage in discussions with diverse partners about fifth-grade topics and texts. (SL.5.1)

Supporting Learning Targets

- I can describe the features of a field journal.
- I can compare and contrast an informational text and a field journal.
- I can describe how authors of field journals use a combination of drawings and text to communicate about their research.
- I can describe how field journals include a blend of informational and narrative writing.
- I can follow our classroom norms for collaboration when I examine field journals with a partner.

Ongoing Assessment

- Field Journal Note-catchers
- Venn diagram
- Exit tickets



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Agenda	Teaching Notes
<p>1. Opening</p> <p>A. Mystery Text: I Notice/I Wonder (5 minutes)</p> <p>B. Introduce Learning Targets (5 minutes)</p> <p>2. Work Time</p> <p>A. Examining Examples of Field Journals (20 minutes)</p> <p>B. Features of Informational Texts: Adding to the Anchor Chart (10 minutes)</p> <p>C. Comparing The Most Beautiful Roof in the World to a Field Journal (15 minutes)</p> <p>3. Closing and Assessment</p> <p>A. Debrief: Why Do Scientists Keep Field Journals? (5 minutes)</p> <p>4. Homework</p>	<ul style="list-style-type: none">• The focus of this unit is on building students' ability to write from sources and use the vocabulary they have learned during Units 1 and 2. Although the content of the unit is intended to align with NYS Science Standards for fifth grade, the students will still require separate science lessons.• Each unit in this module is accompanied by an extensive list of Recommended Texts at a variety of reading levels. Students should obtain books at their independent reading levels about the topics under study from their classroom, school, or local library.• These books can be used in a variety of ways—as independent and partner reading in the classroom whenever time allows, as read-alouds by the teacher to entice students into new books, and as an ongoing homework expectation. During this unit, let students know that you expect them to read at home from a related book at their independent reading level. In addition, students may be assigned additional work, such as rereading complex text or completing a writing task. Either during this lesson or at some other point during the school day, introduce students to the Recommended Texts list for Unit 3.• This lesson launches students' work on their final performance task. See separate document: Module 2A Performance Task.• The performance task is a field journal entry. Typical field journals include three components: direct observations of the natural world, the scientist's narrative comments and opinions, and the scientist's research notes. In this module, students do not do direct observation of the rainforest, but rather work with images from <i>The Most Beautiful Roof in the World</i>. This is for obvious logistical reasons as well as to ensure that students' writing is grounded in evidence from text, a demand of the CCSS Instructional Shifts. Students do, however, get to practice observing the natural environment closely and writing from direct experience as a part of their regular homework in this unit. Consider adding an extension to this unit in which students create a fully developed field journal page about their own environment, in addition to their field journal about the rainforest.• This lesson involves students looking at a variety of field journals. Gather these in advance. If this is not feasible, then consider the Option B notes throughout this lesson.



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	Teaching Notes (continued)
	<ul style="list-style-type: none"> • The opening of this lesson is meant to be a mystery to provoke student interest, so do NOT tell students in advance what type of text they will be looking at. • For the opening of this lesson, prepare to display a field journal page from the following link: http://www.hup.harvard.edu/features/canfie/ (second image) • This lesson requires collaboration. Be sure to pair students strategically and remind them of norms for collaborative work. • Review: Fist To Five strategy (Appendix).

Lesson Vocabulary	Materials
<p>field journal, informational text, features, blend, describe, compare, contrast, text</p>	<ul style="list-style-type: none"> • Field journal page (second in the sequence) from www.hup.harvard.edu/features/canfie/ (Include both pictures and written notes) • Chart paper (optional) • <i>The Most Beautiful Roof in the World</i> (book; one per student) • Teaching Resource: Model Field Journal Books and Internet Links (a variety of field journals or [as Option B] pages from field journals printed from the Internet) (see supporting materials) • Field Journal Note-catcher (one per student) • Features of Informational Text anchor chart (from Unit 1) • 3"x5" index cards or larger sticky notes (one per student) • Text Features Venn Diagram (one per student)



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Opening	Meeting Students' Needs
<p>A. Mystery Text: I Notice/I Wonder (5 minutes)</p> <ul style="list-style-type: none">• Do NOT tell students what type of text they will be looking at.• Display page from a field journal page. Ask:<ul style="list-style-type: none">* “What do you notice about this page?”* “What do you wonder about it?”• On the board or a piece of chart paper, record their responses in a two-column format (I NOTICE on the left, and I WONDER on the right).	<ul style="list-style-type: none">• Provide nonlinguistic symbols for these words (a pair of eyes for <i>notice</i>; a question mark for <i>wonder</i>). These symbols can be used throughout the year.



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Opening (continued)	Meeting Students' Needs
<p>B. Introduce Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Share the first learning target: “I can describe the features of a field journal.” Circle the word <i>features</i>, and clarify its meaning by eliciting or providing synonyms. Circle the words <i>field journal</i>. Ask the students where they have seen or heard of a field journal before, and see if they recall reading that Meg Lowman keeps a field journal.• Tell students that they just looked at a page from a field journal, and that during today’s lesson they will learn about field journals. Preview for students that scientists such as Meg Lowman keep journals like these when they are exploring the natural world. Generate excitement in the class by telling them that during the next lesson they will be receiving their own field journals and learning to take notes on the world around them just as scientists do.• Share the next three learning targets: “I can compare and contrast an informational text and a field journal,” “I can describe how authors of field journals use a combination of drawings and text to communicate about their research,” and “I can describe how field journals include a blend of informational and narrative writing.” Be sure that students understand the meaning of the word text in this context: the words on the page.• Ask students:<ul style="list-style-type: none">* “What is the distinction between <i>informational</i> and <i>narrative</i> texts?”• Elicit from the class that informational texts are those, such as <i>The Most Beautiful Roof in the World</i>, that provide readers with information about the real world, while narrative texts tell a story.• Ask students to turn and share with a partner what they think the word <i>blend</i> means. Invite a few pairs to share out, listening for comments such as: “to mix things; two things put together; like when you cook and make something.” Make sure students understand that field journals will have features of both narrative and informational text, and that they could be on the same page.	<ul style="list-style-type: none">• All students developing academic language will benefit from direct instruction of academic vocabulary in learning targets.• Some students may be unfamiliar with Tier 2 vocabulary words (e.g., <i>explain, compare, contrast, drawings, authors, describe, blend</i>). Clarify vocabulary with students as needed.



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Work Time	Meeting Students' Needs
<p>A. Examining Examples of Field Journals (20 minutes) <i>Note: Refer to the Teaching Resource: Model Field Journal Books and Internet Links. Have many field journals available for students to browse. If this is not feasible, follow the alternative steps listed in parentheses as Option B.</i></p> <ul style="list-style-type: none"> • Explain to the students that they are going to look at many different field journals in order to learn about their features. (Option B: Narrow it down to pages from just a few field journals.) • Focus the class again on the displayed field journal example. Tell students that they will be taking notes about the various field journals they look at. • Draw a large version of the Field Journal Note-catcher on the board or on chart paper. Ask the students what they notice about the displayed field journal example. Listen for somebody to offer an observation such as: "The drawings and the words (text) are mixed together on the page." Model how to complete the Note-catcher: Write this observation in the top left-hand box of the large version of the Note-catcher. • Remind students about classroom norms for collaborative work by directing students to the learning target about this expectation. • Ask students to work in pairs. Give each pair one book (Option B: one page from a website) from the collection of field journal books and a Field Journal Note-catcher. • Give students 10 minutes to examine the books and complete the left-hand column of the Note-catchers with their partners. • Then ask students to switch books (Option B: pages from websites) with another pair. Ask them to complete the right-hand column of the Note-catcher. • Collect the books (Option B: pages). Ask students to remain with their partner but to focus on the whole group for the next instruction. 	<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. • Students needing additional support may benefit from a partially filled-in Field Journal Note-catcher.



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Work Time (continued)	Meeting Students' Needs
<p>B. Features of Informational Texts: Adding to the Anchor Chart (10 minutes)</p> <ul style="list-style-type: none">• Refer students to the Features of Informational Text anchor chart (the three-column chart they created during Lesson 2 of Unit 1). Ask students to refer back to their journals and locate their notes with the same title. Briefly review the existing list with students. Give students 5 minutes to record FEATURES OF FIELD JOURNALS (Column 2) and HOW DO THOSE FEATURES HELP THE READER? (Column 3) in their charts.• Ask the class: “What are the features of a field journal?” Record their answers on the Features of Informational Text anchor chart. Be sure that responses include points similar to the following:<ul style="list-style-type: none">* Author’s observations* Factual scientific information* Precise descriptions* Sensory details* Personal information* Pictures* Text* Pictures and text are woven together* Is written in the first person (“I” statements)* Date and location are specified• Refer students again to the third column of their Note-catcher. Ask students to share their responses to: “How do these features help the reader?”• Record on the anchor chart responses such as: “The labels help me understand the drawings better; the pictures help me get the meaning of scientific terms; I get drawn in by the personal details,” etc.• Collect students’ Field Journal Note-catchers.	<ul style="list-style-type: none">• Consider allowing students to draw their observations, ideas, or notes about informational texts when appropriate. This allows all students to participate in a meaningful way.• For students who struggle with language, draw a visual for each feature noted on the anchor chart.



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Work Time (continued)	Meeting Students' Needs
<p>C. Comparing <i>The Most Beautiful Roof in the World</i> to a Field Journal (15 minutes)</p> <ul style="list-style-type: none">• Ask the students to trade the field journal books/pages with other pairs one more time, so each pair has a book (page) that is new to them. Distribute <i>The Most Beautiful Roof in the World</i> to each pair.• Distribute Text Features Venn Diagram.• Ask the class to use the Venn Diagram to compare and contrast the text features of the two texts. Remind students to record features that the two texts have in common in the middle and unique features in the separate parts of the two circles.• Circulate to listen in and support as needed.	<ul style="list-style-type: none">• Consider providing some students with a Venn diagram graphic organizer rather than asking them to draw it themselves.• Some students may need the teacher to model filling out the Venn diagram on either a document camera or a piece of chart paper.



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Closing and Assessment	Meeting Students' Needs
<p>A. Debrief: Why Do Scientists Keep Field Journals? (5 minutes)</p> <ul style="list-style-type: none">• Distribute an index card or sticky note to each student for use as an exit ticket. Ask for a response to the question:<ul style="list-style-type: none">* “Why do scientists keep field journals?”• Have students share with a partner what they wrote. Then cold call a few students to share with the whole class. Listen for ideas such as: “So they can record the specific details of what they see; it helps them to remember; they can use their observations to think about how the natural world works,” etc. Point out to students that, typically, field journals involve direct observation of the natural world, the scientist’s comments and opinions, and the scientist’s research notes.• Use the Fist to Five strategy to assess students’ progress toward meeting the learning targets.• Tell students: “It is important for you to learn all about field journals because later in this unit you will get to be research scientists and make your own field journal pages to share with others all the things you observe and learn from the natural world.” Point out that they will be doing regular homework observing their own natural world to practice writing direct observations. They will also be writing a field journal page about the rainforest, based more on research.• Collect exit tickets.	<ul style="list-style-type: none">• Consider allowing students who struggle with written language to dictate their exit ticket to a partner or teacher.



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Homework	Meeting Students' Needs
<ul style="list-style-type: none"> • Continue your independent reading book for this unit at home. • <p><i>Note: For Lesson 2, create a blank field journal for each student. Either purchased or teacher-created, these simple notebooks contain at least 20 sheets of unlined paper. Students will turn in their field journals once a week for you to review as an ongoing assessment. Write a question or comment to the students, praising their work (“Your details make this description come to life!”), asking them a thought-provoking question (“What kind of tree was it? How could you find out?”), or perhaps making a suggestion (“Maybe you could label the parts of the tree.”).</i></p> <p><i>Lesson 2 involves taking the class outside to observe the natural environment, unless school conditions make this unfeasible. In advance, scout out a piece of the natural world that is right outside your school building. This can be very modest; a tree, a shrub, or a small plot of grass would be fine. Or, if going outside is not an option, find some objects from nature, such as leaves, branches, berries, pine cones, etc., to bring into the classroom. Or if the class has a terrarium or fish tank, students could observe those closely as well.</i></p> <p><i>In Lesson 6, students begin research on ants and butterflies of the rainforest. Central texts for these lessons are provided. But students may need additional resources on these arthropods. Begin collecting books for a classroom library for the research lessons (see Recommended Texts).</i></p> <p><i>Review students’ Field Journal Note-catchers and exit tickets to check for understanding. Note who was unable to complete the exit ticket correctly; these students need additional support toward an understanding of the purpose of field journals.</i></p>	<ul style="list-style-type: none"> • Students who cannot yet read independently at any level will benefit from hearing books read to them, either by a caregiver or through audio recordings. Hearing books/texts can be an ongoing assignment for these students. • In addition, www.novelnewyork.org has a free, searchable database of content-related texts that can be played as audio files on a home or library computer. Texts on this site can also be translated into many languages. Use the database to provide at-home reading of related texts to ELLs and their families in their native languages.



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Supporting Materials



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Teaching Resource:
Model Field Journal Books and Internet Links

Teacher Directions: Gather enough copies of the books listed below, or other examples of illustrated field journals, so that each pair of students can have one book to examine:

- *The Country Diary of an Edwardian Lady*, Edith Holden
- *Drawn to Nature: Through the Journals of Clare Walker Leslie*, Clare Walker Leslie
- *The Field Guide to Rainforest Animals: Explore the Amazon Jungle*, Nancy Honovich
- *The Field Guide to Safari Animals: Explore Exotic Africa*, Paul Beck
- *Field Notes on Science & Nature*, Michael R. Canfield
- *Keeping a Nature Journal: Discover a Whole New Way of Seeing the World around You*, Clare Walker Leslie
- *Linnea’s Almanac*, Christina Bjork, and Lena Anderson (illustrator)
- *A Nature Diary*, Richard Adams
- *Nature in the Neighborhood*, Gordon Morrison
- *The Robin Makes a Laughing Sound: A Birder’s Journal*, Sallie Wolf
- *A Trail Through Leaves: The Journal as a Path to Place*, Hannah Hinchman (bookmark pages 6, 18, 47, 57, 66, 76, 82, 99, 102, 118, 128–129, 133, 139, 146, 151, 158, 163, 181, 185, and 191)
- *The Tree of Life: Charles Darwin*, Peter Sis

Option B: Display or print out various pages that include both text and illustrations from the following sites. You will need enough copies so that a third of the class can examine pages from the same website at the same time.

www.hup.harvard.edu/features/canfie/ (Include both pictures and written notes; see second image in slideshow)

<http://www.gutenberg.org/files/7353/7353-h/7353-h.htm#II>

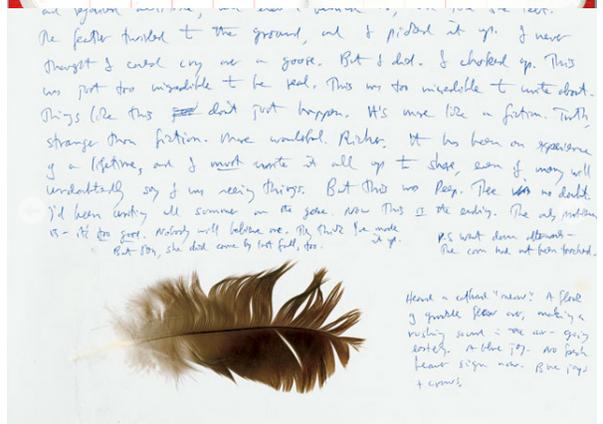
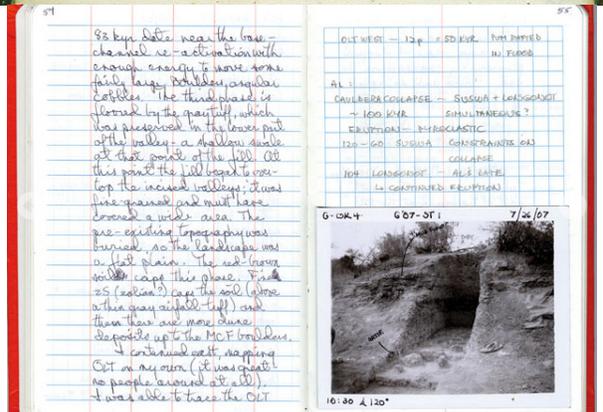
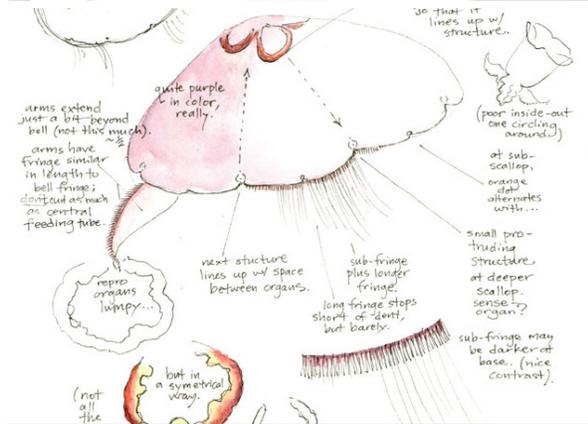
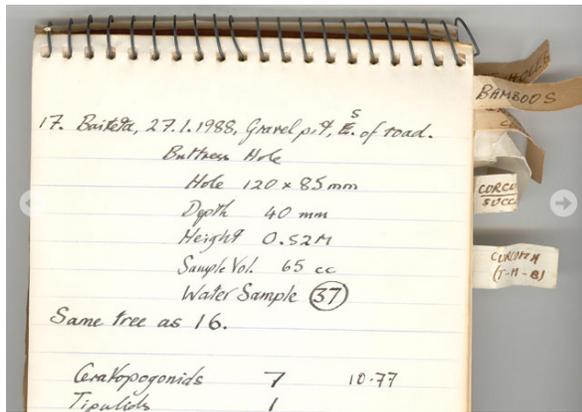
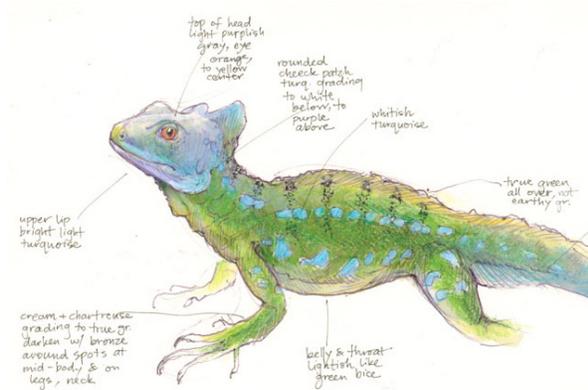
<http://digitalcollections.pacific.edu/cdm/search/collection/muirjournals> (This is a link to the journals of naturalist John Muir. Click on the cover of any journal to see inside and then select a page with drawings and text.)

www.nmnh.si.edu/naa/features/strong.htm



Teaching Resource:
Model Field Journal Books and Internet Links

Image Samples from www.hup.harvard.edu/features/canfie/



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NOTES ON SCIENCE AND NATURE, edited by Michael R. Canfield, p. 171.
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Field Journal Note-Catcher
Introduction to the Elements of Field Journals

.....
Name:
.....

Date:
.....

Name of First Book:	Name of Second Book:
What are three things you notice about the drawings?	
What are three things you notice about the text?	
What are three things you notice about how the pictures and text are connected to each other?	



Text Features Venn Diagram

Informational Texts

Features of BOTH

Field Journal

